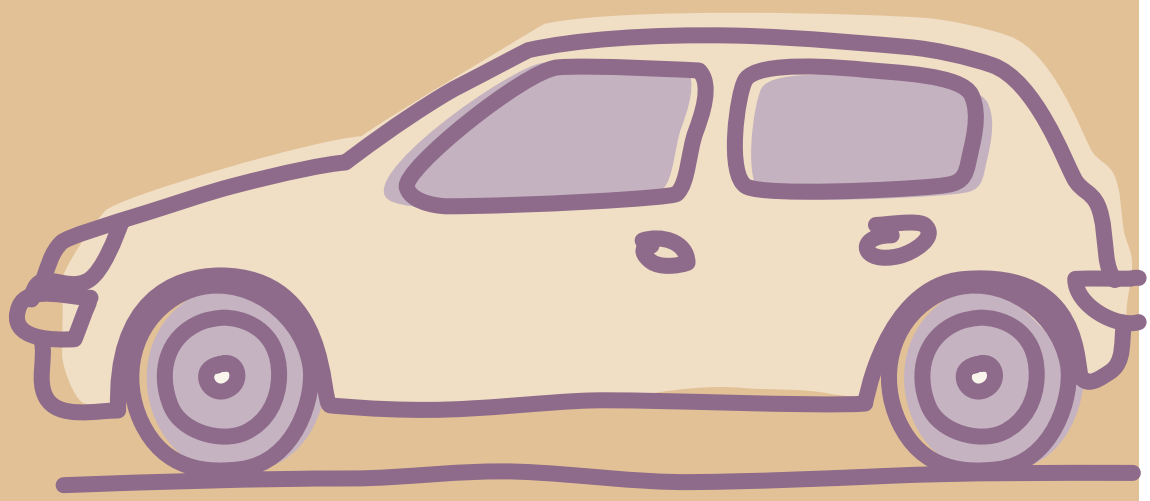
BBVA Finanzia

Consumption Watch

BBVA Economic Research Department

Second half 2008



Consumption: stagnation in 2009

Financing: slowdown in consumer credit, converging with other european countries

Auto industry: in the face of weak demand, identifying potential buyers becomes crucial

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1. Summary

In the four months since we last published the past report, the economic scenario has continued to deteriorate, more rapidly and more intensely than expected at the time. The financial crisis has worsened, spreading to new countries and market segments. Even more so since the collapse of investment bank Lehman Brothers, which triggered an unprecedented increase in risk aversion. Governments and central banks have reacted rapidly, adopting measures aimed at easing the lack of liquidity and reactivating interbank lending. In addition to rate cuts, central banks have also increased the supply of liquidity and guarantees on bank deposits. They have injected public funds directly into banks, approved new public debt guarantees and set up funds for the temporary acquisition of financial assets from troubled entities. Despite the speed at which these measures have been adopted, that they are being coordinated on an international level for the first time and the significant sums of public money involved, there are still enormous uncertainties regarding how deep the crisis will be and how long it will last.

Such an adverse global backdrop is exacerbating the Spanish economic slowdown, as reflected by the deterioration in various economic indicators. GDP contracted 0.2% yoy in 3Q08, its first quarterly drop since 1993. The downturn should continue in the coming quarters, at least until the middle of 2009, but if one things stands clear, it's that there is a great deal of uncertainty regarding the intensity and duration of this downturn. Accordingly, there is a fairly wide range of growth forecasts for 2009. If the financial crisis were resolved relatively quickly, we estimate that the drop in GDP could be limited to a mere 0.1%. If, on the contrary, the financial markets remain closed and the measures to improve financial entities' liquidity fail to have the desired effects on the availability of credit, GDP could contract by as much as 1.5%.

Against this backdrop, Spanish consumption is falling faster, dragged down by the global financial crisis. Household wealth suffering from by dwindling asset prices, both financial and real estate. In addition, household income is heavily affected by the downturn in the labour market; estimates point to over 600k job losses in 2009. This will clearly curb disposable income growth, which up to now had been supported by the wage increases of 2008 and the fiscal policy measures implemented over the course of the year. Furthermore, as confidence erodes, consumers' precautionary savings levels will rise. These savings will be needed to finance the growth of the Spanish economy given the difficulty of raising financing abroad.

However, there are support elements that could mitigate the drop in consumption. For instance, the easing of European monetary policy should water down to lower market interest rates. The reduction in the financial burden on households could trigger an increase in household disposable income of 6 billion€, some 0.8% of the total. Meanwhile, oil prices have decreased from mid-year levels, giving an additional boost to household income of 7.2 billion €, or about 1% of the total. All this considered, our forecasts point towards a contraction in consumption of between 0.8% and 1.3% in 2009, depending on how the economic crisis unfolds next year.

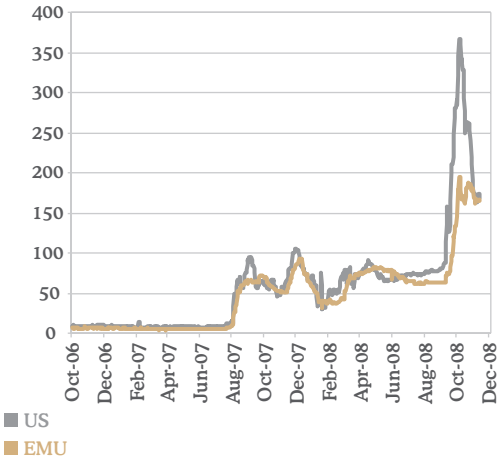
In a difficult economic environment, made worse by the international financial crisis, and with consumer confidence levels at all time lows, the slowdown in consumer credit in Spain is heightening. In fact, it is now growing at a rate similar to that of the euro zone of barely 4.6% yoy YTD. This is due both to demand behaviour, and, more recently, to supply-side factors. Loans available are more expensive, since the spike in the risk premium triggered by the international financial crisis has nudged up consumer finance rates. In short, after several years where lending significantly outstripped the economy's nominal

growth, we will probably enter a period for lacklustre credit growth, lagging nominal GDP.

The auto sector is a clear reflection of the overall situation, with households postponing expenditure on durable goods. Lower growth in disposable income and wealth, difficulty obtaining credit and high interest rates have all caused a steeper-than-expected decline in auto sales. Looking ahead, cuts in official interest rates in Europe, the probable decline in liquidity and risk premiums from recent highs and ongoing constraint of automobile prices could lend support, taking our indicator of household access to auto financing (EFCA indicator) back to pre-financial crisis levels. Despite this, however, the fall in income and wealth is bound to continue weighing on the industry, with forecasts pointing to a drop of over 25% in 2008 and further declines in 2009. Right now, the number of vehicles on the road per capita has still not completely converged with European levels. The 47 cars on the road for every 100 Spaniards remains considerably less than the 57 cars on the road for every 100 Germans and the 69 for every 100 Italians. This indicates that there is still room for growth in new car sales in the future.

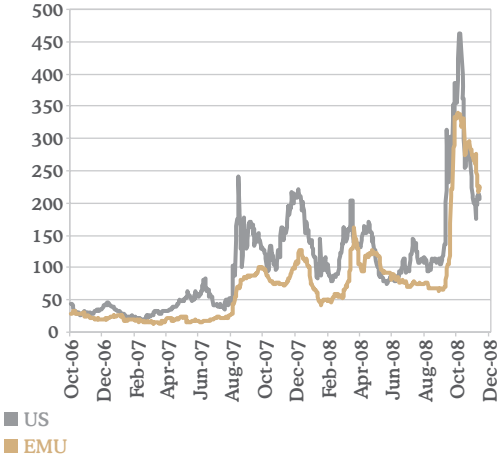
After several boom years in the auto industry, in the coming months it will be crucial to identify those households which are able and willing to buy a car. The last section of this report contains a profile of buyers of both of new and used cars based on the Household Budget Survey. Studies indicate that young households, with large families, with a good economic situation–including home ownership- and where the main household income comes from a is a young man of foreign nationality are the ones that are the most likely to buy a car. In this subgroup, households with higher incomes, those with large families and that that own their homes are most likely to opt for a new care. And in terms of money spent, the expenditure is highest in households with fewer family members, higher incomes, and where the head of household is a Spanish male, but not foreign. Looking ahead, the slowdown in immigrant inflows, the fall is household income and, over the longer term, the aging population should cause a slowdown in demand for cars.

Chart 2.1.
US vs. EMU index of Interbank liquidity pressure: 3-month LIBOR-OIS spread



Source: BBVA Economic Research Department and Bloomberg

Chart 2.2.
US vs. EMU index of Interbank liquidity pressure: 3-month Treasury bills-Euribor spread



Source: BBVA Economic Research Department and Bloomberg

2. An uncertain economic environment

The extreme volatility across the markets is a reflection of the ongoing liquidity crunch and prevailing global financial and economic uncertainty.

Just a few months ago, the international financial crisis was closely linked to the sequence of events unfolding in the US. However, 12 September -the day Lehman Brothers went under- marked a turning point worldwide. Investor uncertainty and strong risk aversion became globally widespread, primarily contaminating Europe, but also emerging markets.

Unlike the events with Bear Stearns, AIG or the US government mortgage agencies, the Lehman bankruptcy shook the markets. Sharp credit spread widening drove liquidity costs to unprecedented and unsustainable levels. And just as financial tensions were heightening, the banking crisis escalated, not only in the US, but also across Europe.

Equity markets globally have notched up historic losses, with the main developed markets down by around 40% YTD. In emerging nations, the range of corrections is broader, going from 17% in Chile to 76% in Russia. Meanwhile, risk aversion is at an extreme. This risk aversion, together with expectations of additional rate cuts, explains the average reduction in October in 2-year bond yields of 60bp in the US and of 100bp in the EMU since the Lehman Brothers bankruptcy.

The initial wave of unilateral rescue packages has since given way to unified criteria across the developed economies devised to address the global crisis.

The central banks have injected vast sums of liquidity into the market with a intention of alleviating the financial standstill, although these measures have yet to have a decisive impact. The US Federal Reserve (FED) has virtually doubled the amounts auctioned off via its TAF programme to 300 billion US$, having also increased the dollar swap lines in place for other central banks by more than 500 billion US$. The European Central Bank (ECB) has also taken extraordinary measures in terms of the scale, currencies and maturities of its auctions. The most recent ECB initiative has been to launch full allotment auctions with the goal of alleviating short-term financing requirements.

The various economic and monetary authorities are faced with an unparalleled financial crisis, which is being amplified by the risk aversion phenomenon. Initially, the various governments passed different measures aimed at restoring citizens' confidence in their financial institutions by guaranteeing deposits and at ensuring normalityl in the financial markets, but with limited effect. The main reason these partly failed was the market's perception of a total lack of coordination among administrations and that the measures being taken were put in place reactively to put out fires as the various entities stumbled.

At the beginning of October, however, more coordinated action was taken. Firstly, the Fed, the ECB, the Bank of England and the central banks of Switzerland, Sweden and Canada cut their benchmark rates simultaneously by 50bp, accompanying the move with a joint press release. Shortly after, the European governments struck a timely

agreement to jointly address the crisis in a coordinated manner, announcing a raft of potential measures fashioned around guarantees and capital injections. Although the immediate impact was limited, the joint efforts probably prevented an even more serious financial crisis.

These efforts culminated with the G-20 Summit in Washington. is the mayor outcome of the summit, with a number of firm agreements reached, was the international community's firm desire to tackle the unfolding economic and financial crisis in a coordinated fashion, combining multilateral initiatives and measures with national policies previously ratified and vetted by all summit participants. This is significant, as it should mean preventing certain mistakes in the past -where unilateral national responses, on occasion purely protectionist in nature, only served to accelerate the recession- from recurring. It is also worth highlighting the fact that the announced list of measures is ambitious and stems from an accurate diagnosis of the causes of the current crisis, and why it subsequently spread and gathered pace so rapidly.

Low growth, inflation and interest rates and a strong dollar.

Considering that the pressures on the financial markets are not likely to remit over the short term and that the international financial crisis will make it more difficult for both households and corporates to access credit, our growth estimates for the US and EMU point to a deeper economic downturn. We believe that both US consumption and residential and non-residential investment will continue to fall, thereby continuing to erode economic growth in that country. Meanwhile, in terms of the trade balance, imports look set to continue to fall, driven by the weak economy. Exports should continue to grow, albeit at a far slower pace due to a stronger dollar and global economic weakness. This means that on a net basis, trade will not prove a very solid crutch for growth. In sum, we expect US GDP to contract by 0.8% next year. In the EMU,, we expect GDP to narrow around 0.5%. Despite the existence of a few somewhat favourable factors, such as substantially lower benchmark interest rates and a weaker euro relative to the dollar, the effectiveness of the rescue packages designed by the various governments will be key to preventing a sharper recession.

Meanwhile, we expect inflation to continue to decrease significantly. For 2009 we are forecasting an average headline inflation in the US of 0.8% and in the EMU of around 1.7%. These realigned expectations are underpinned by the correction in oil and other commodity prices, combined with the outlook for slower global growth. In addition, low inflation will enable the central banks to continue to cut rates in order to reactivate economic growth. The ECB and the Fed have recently cut rates by half a point to 3.25% and 1.0%, respectively. Our forecast for official interest rates are as follows: we think the FED will cut benchmark rates to 0.5% in 2009, while the ECB will cut its official rate to 1.5% early next year. This underpins our forecast for a stable dollar, trading at around $1.25/€ through the end of 2008. In 2009, we expect the dollar to further strengthen towards the $1.15/€ mark, although, if anything, the risk is biased towards stronger appreciation.

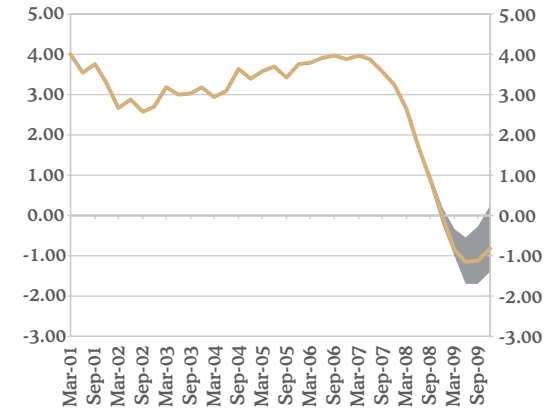
Taking our base case scenario for central bank rates, we are forecasting a stable yield on 10-year US Treasury bonds of 3.80% by

Table 2.1. Stock Markets

		2008 (ene-nov)
US	S&P500	-46%
Spain	IBEX35	-47%
UK	FTSE100	-38%
France	CAC40	-47%
Germany	DAX30	-48%
EMU	STOXX	-50%
Japan	NIKKEI 225	-50%
China	Shanghai SE 180	-64%
Hong Kong	HANG SENG	-56%
Brazil	BOVESPA	-48%
Mexico	MXSE IPC Gral.	-38%
Argentina	MERVAL 25	-59%
Chile	SASE Gral Index	-17%
Russia	IRTS	-76%

Source: Reuters

Chart 2.3.
Spain: GDP
(% Chg, YOY)



Source: INE and BBVA Economic Research Department

the end of 4Q08. Looking to 2009, we expect yields to start the year at around 3.70%, falling throughout the year to end at closer to 3.40%. For the EMU, we expect 10y yields to end 2008 at 3.80%, falling to 3.50% in 1Q09 and falling as the year progresses to 3.10% in the fourth quarter of 2009.

Looking to the months ahead, the direction taken by and effectiveness of government policies designed to restore financial stability and jump-start the markets will be crucial to injecting confidence, breaking the liquidity-solvency vicious circle and bringing the markets back to normal.

This extremely hostile environment dampens the outlook for the Spanish economy through a credit crunch and weaker external demand

Such an adverse global back is intensifying the Spanish economic slowdown, as reflected by the deterioration in several economic indicators. GDP contracted 0.2% yoy in 3Q08, the first quarterly drop since 1993 (+0.9% yoy). The downturn should continue in the coming quarters, at least until the middle of 2009, but if one thing is clear, it's that there is a great deal of uncertainty regarding how much the economy will slow down and how long this will last.

Because of the widespread uncertainty regarding the scope of the financial crisis and the effectiveness of the measures adopted by authorities (governments and central banks) to combat it, our growth forecast for 2009 falls within a fairly wide range. If the financial crisis were resolved relatively quickly, we estimate that the drop in GDP could be limited to a mere 0.1%. If, on the contrary, the financial markets remain closed and measures to improve financial entities' liquidity levels fail to have the desired effects on the availability of credit, GDP could contract by as much as 1.5%.

The expected drop in GDP in 2009 -the first since 1993- is due to the impact of the extremely negative global scenario on the Spanish

Table 2.2. Spain, macroeconomic indicators

% Chg, YOY	1Q06	2Q06	3Q06	4Q06	1Q07	2Q07	3Q07	4Q07	1Q08	2Q08	3Q08	2001	2002	2003	2004	2005	2006	2007
Household consumption	4.1	3.8	3.7	3.9	3.8	4.1	3.0	2.9	2.1	1.1	0.1	3.4	2.8	2.9	4.2	4.2	3.9	3.4
Public consumption	4.9	4.3	4.6	4.5	5.3	5.0	4.8	4.4	3.6	4.9	5.9	3.9	4.5	4.8	6.3	5.5	4.6	4.9
Fixed gross capital formation	7.4	6.9	7.7	6.5	6.6	5.8	4.6	4.5	2.8	-0.2	-3.2	4.8	3.4	5.9	5.1	7.0	7.1	5.3
Capital goods and other	8.3	8.1	10.2	9.4	9.1	8.4	6.7	6.7	6.0	2.7	0.9	1.8	0.0	5.3	4.6	8.4	9.0	7.7
Capital goods	7.9	9.2	11.3	12.3	13.3	11.3	8.5	7.1	5.7	2.2	-0.6	-0.3	-2.9	4.1	5.1	9.2	10.2	10.0
Other products	9.0	6.4	8.4	4.6	2.4	3.7	3.6	6.0	6.6	3.7	3.5	5.8	5.0	7.2	3.8	7.1	7.1	3.9
Construction	6.7	6.1	6.1	4.7	5.1	4.2	3.3	2.9	0.4	-2.3	-6.4	7.6	6.3	6.2	5.4	6.1	5.9	3.8
Housing	7.7	5.7	5.8	4.9	5.3	4.2	3.2	2.5	-1.4	-6.4	-13.4	7.5	7.0	9.3	5.9	6.1	6.0	3.8
Other	5.6	6.6	6.3	4.5	4.9	4.1	3.3	3.4	2.4	2.0	1.2	7.7	5.6	3.5	5.0	6.2	5.7	3.9
Change in stocks (*)	0.0	0.2	0.5	0.2	-0.1	-0.1	-0.1	0.0	0.1	0.0	-0.1	-0.1	0.0	-0.1	0.0	-0.1	0.2	-0.1
Domestic demand (*)	**5.5**	**5.2**	**5.5**	**5.2**	**5.1**	**4.9**	**3.9**	**3.8**	**2.8**	**1.5**	**0.1**	**3.9**	**3.3**	**3.9**	**4.9**	**5.3**	**5.3**	**4.4**
Exports of goods and services	6.7	7.4	5.6	7.2	3.3	3.9	8.2	4.0	4.4	4.2	1.5	4.2	2.0	3.7	4.2	2.5	6.7	4.9
Goods	7.3	7.7	6.2	5.6	2.5	4.0	6.0	4.6	4.1	4.7	3.0	4.0	3.7	5.2	5.1	1.1	6.7	4.3
Imports of goods and services	11.2	10.4	9.6	10.0	6.1	6.2	7.6	4.9	4.0	2.4	-1.1	4.5	3.7	6.2	9.6	7.7	10.3	6.2
Goods	11.1	10.0	10.6	9.5	5.3	4.9	5.7	3.5	4.7	2.9	-1.0	3.9	4.2	6.7	9.7	7.3	10.3	4.8
Trade balance (*)	**-1.7**	**-1.3**	**-1.5**	**-1.3**	**-1.1**	**-1.0**	**-0.3**	**-0.5**	**-0.2**	**0.3**	**0.8**	**-0.2**	**-0.6**	**-0.8**	**-1.7**	**-1.7**	**-1.5**	**-0.8**
GDP at mkt. Prices	**3.8**	**3.9**	**4.0**	**3.9**	**4.0**	**3.9**	**3.6**	**3.3**	**2.6**	**1.8**	**0.9**	**3.6**	**2.7**	**3.1**	**3.3**	**3.6**	**3.9**	**3.7**
Quarterly rate	**0.9**	**1.1**	**0.9**	**0.9**	**1.0**	**1.0**	**0.6**	**0.6**	**0.3**	**0.1**	**-0.2**							
Balance-sheet data																		
GDP w/o housing investment	3.1	3.5	3.5	3.6	3.8	3.8	3.6	3.3	3.0	2.7	2.6	3.4	2.4	2.6	2.8	3.1	3.4	3.6
GDP w/o construction	2.9	3.2	3.3	3.5	3.7	3.8	3.6	3.3	3.1	2.7	2.7	3.0	2.1	2.5	2.6	2.8	3.2	3.6
Total employment (EPA)	4.9	4.2	3.7	3.6	3.4	3.4	3.1	2.4	1.7	0.3	-0.8	4.1	3.0	4.0	3.9	5.6	4.1	3.1
Of which: construction	7.3	7.8	8.1	8.3	9.4	7.6	4.9	2.7	-1.7	-7.9	-13.0	8.9	5.5	6.1	7.2	4.6	7.9	6.1
Other sectors	4.6	3.7	3.0	2.9	2.6	2.8	2.8	2.3	2.2	1.5	1.1	3.5	2.7	3.7	3.4	5.7	3.5	2.6
Unemplyoment rate (% act. pop.)	9.1	8.5	8.1	8.3	8.5	8.0	8.0	8.6	9.6	10.4	11.3	10.6	11.5	11.5	11.0	9.2	8.5	8.3

(*) Contribution to growth
Source: INE and BBVA forecasts

economy. Global economic weakness will dampen the export of goods and services, not to mention business investment. Especially relevant for the Spanish economy is the recession expected to hit the whole euro zone. In 2009, both non-residential investment and exports are expected to decline. Furthermore, a credit squeeze will affect businesses' investment plans and decisions to finance consumption and housing.

Household consumption, caught in the squeeze

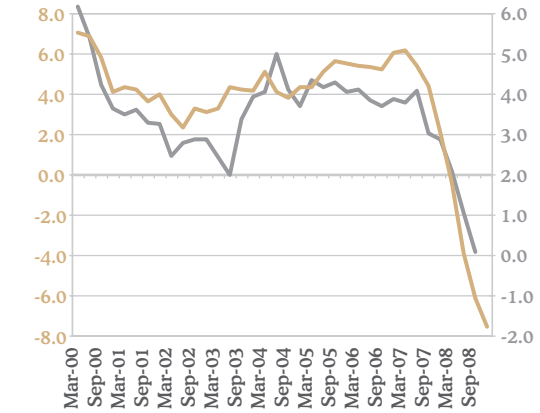
Since the previous edition of the *Consumption Watch*, household consumer spending indicators have registered progressively sharper drops, especially in durable goods. National Accounting data reflect the severity of the downturn, showing a 1% yoy drop in 3Q08. This fall is due to the sudden worsening in fundamental consumption indicators. In a recession or contraction phase, the drivers of consumption (income, interest rates and wealth) are adversely affected, causing growth rates to decline. In addition, the severity of the downturn in the Spanish economy has caused the impact on consumer fundamentals to be greater than what was expected several months ago, with consumption levels in 2008 hit harder than previously predicted. This situation has been made even worse by the erosion in household confidence levels, a reflection of the extraordinary developments in the financial markets in the second half of 2008 and the rapid deterioration of the labour market.

Some of the key factors shaping consumption will be hurt in the coming quarters by the further deterioration of the Spanish economy. Household wealth will be most affected. The financial markets are currently characterised by high volatility and falling asset prices –a situation that is likely to continue into 2009- and this negatively affects household financial wealth levels. Meanwhile, growth in real estate wealth (which accounts for 80% of total household wealth) will be limited by the nominal fall in housing prices we will probably see in 2009.

The sharp fall in employment will effect household incomes…

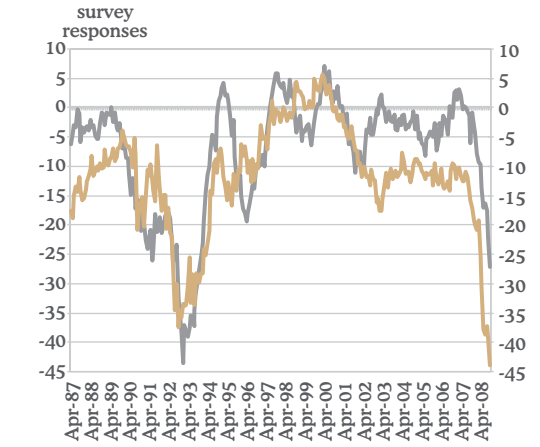
The key driver for consumption, household income, will be impacted by several developments. One key factor, the labour market, will be especially affected by the economic downturn. Its current performance hinges on two very different phenomena. First, employment creation will not only decline as the Spanish economy struggles, but it should actually be somewhat worse, due to the severe slowdown in the construction sector, which is relatively more labour-intensive. In 2009, slightly over 600k jobs will be destroyed in Spain (as measured by the EPA) over half of which will be in the construction sector. Second, in the labour market, while the economy is contracting the active population is still growing at rate that would be more in line with an expansion phase. This will drive up the unemployment rate, which could reach an average of 15.4% of the active population in 2009 vs. the 11% expected for 2008. This deterioration in the labour market will slow the growth of disposable income, which up to now has been supported by the wage increases of 2008 and by the fiscal policy measures implemented over the course of the year.

Chart 2.4.
Spain: Consumer spending and synthetic consumption indicator



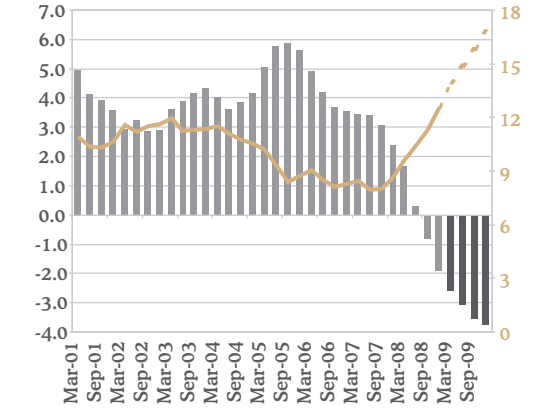
Source: BBVA Economic Research Department

Chart 2.5.
Spain: Industrial and consumer confidence



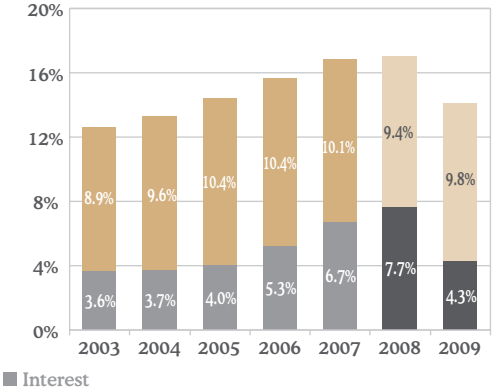
Source: European Commission

Chart 2.6.
Employment and unemployment



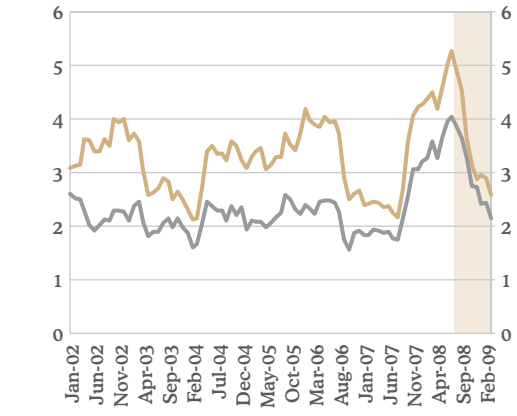
Source: INE and BBVA Economic Research Department
Note: 2005 skew based on INE methodology

Chart 2.7.
Spain: Household financial burden



Source: BBVA Economic Research Department

Chart 2.8.
Inflation
(% Chg, YOY)



Source: BBVA Economic Research Department

...but expected interest rate cuts and lower inflation should help cushion the negative impact on income and consumption

However, there are two factors that could help ease the drop in consumption in 2009: interest rates and oil prices. Both of these sharply eroded consumers' income leading up to the first half of 2008. As commented earlier, the ECB's campaign of monetary easing (which should bring official rates in the euro zone down to 1.5% in the first half of 2009) is expected to gradually spread to market interest rates. The sharper these cuts, the greater the pressure in financial markets will diminish. This should reduce the financial burden on households, triggering an increase in household disposable income of 6 billion €, 0.8% of the total. Meanwhile, oil prices have started to ease from mid-year levels. After reaching all-time highs in July in both nominal and real terms, oil prices have reversed trend. Although they should remain somewhat high for some time (our current forecast gives an average price of 74.3 US$/bbl in 2009), the improvement expected in 2009 vs. 2008 should provide an additional boost to household incomes to the tune of 7.2 billion €, or about 1% of the total.

This decline in energy prices (and commodity prices in general) and the expected scale of the economic downturn in Spain should lead to a sharp fall in inflation. In fact, oil prices and the favourable basis for comparison of current levels with the soaring prices at the end of 2007 explain why inflation has fallen 1.7pp in Spain in barely three months. According, the outlook for inflation is bearish. Headline inflation looks set to continue to fall and should end the year below 3% (leaving the 2008 average at 4.3%), reaching around 2.3% in 2009.

Taking all of this into account, we expect consumption to be weak in 2009.

All these factors point to a slowdown in household nominal income growth in 2009 to below 3% (from the slightly over 5% growth expected for 2008). In addition, as something that generally occurs in recessions, consumers are expected to increase their precautionary savings, which could push the savings rate up to 12.8% from the 11.6% forecast for 2008.

As a result of all these factors, our scenario envisages declines in the yoy rate of real consumption growth according to National Accounts. These falls would start in the fourth quarter of 2008 and would continue through all of 2009. Uncertainty as to how events will unfold in the economy in 2009 leads us to forecast a fall of between 0.8% and 1.3% for next year.

The Basque Country, a less marked downturn than the nation as a whole, and facing two challenges: demographics and productivity"

Robust performance of GDP per capita, but hindered by unfavourable demographic trends

Between 1996 and 2007, average annual GDP growth per capita in real terms stood at 3.5%, outstripping the rest of Spain, where per capita income grew an average of 2.6%. This puts per capita GDP in the Basque Country at over 30% higher than the national average (vs. 18% in 1996), making it the top performing autonomous region in 2007.

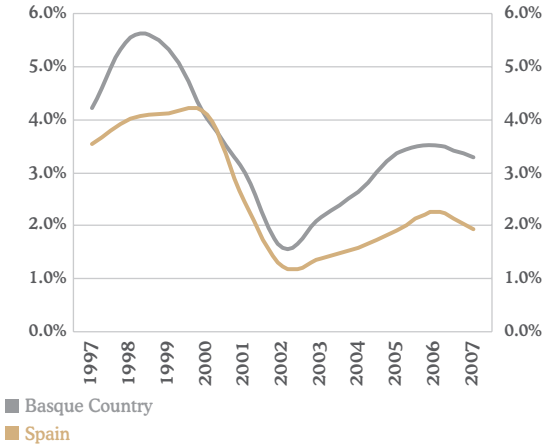
A more in-depth analysis of per capita income growth[1] shows that the performance of per capita GDP has an extremely high correlation to employment growth (both due to a larger active population, and a fall in unemployment), which contributed 3.6pp between 1996 and 2007 (vs. 4.4pp up to 2002). Meanwhile, productivity has grown moderately, in line with the national average, although it has been particularly robust since 2003 (with an average annual increase of 0.6%). The only component that has systematically slowed the rise of per capita GDP has been the demographic makeup of the region. Between 1996 and 2007, the proportion of the working age population compared to the total population has fallen, shaving off between 0.3 and 0.5pp of per capita income growth in the Basque Country.

Nevertheless, the contribution of the Basque Country to national GDP (6.2%) is greater than its demographic weighting (4.7%), a gap that has been widening over the last decade.

Chart 1.

Basque Country and Spain: GDP per capita

(% Chg, YOY real)

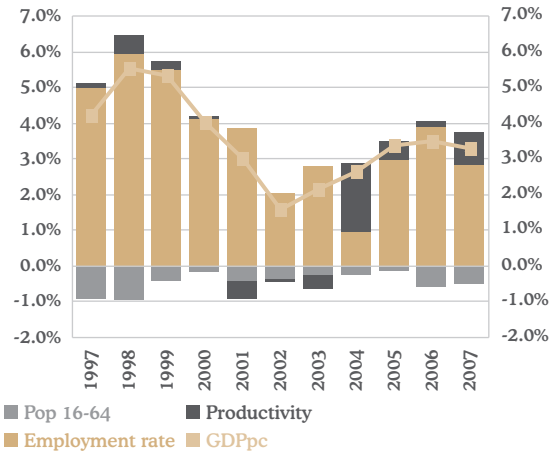


Source: BBVA Economic Research Department based on INE data

Chart 2.

Basque Country: GDP per capita

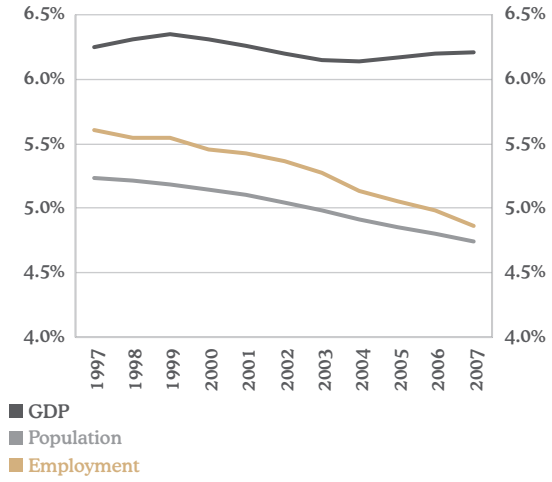
(% Chg, YOY and contribution to growth)



Source: BBVA Economic Research Department based on INE data

Chart 3.

Basque Country: Weight in Spain



Source: BBVA Economic Research Department based on INE data and Datacomex

A productive structure leaning heavily towards industry, and a relatively low exposure to residential construction

The Basque Country's productive structure differs from the national average. In this regard, we would highlight two features: 1) the greater importance of industry, whose contribution to the region's GDP is more than 12pp above the national average; and 2) the region's relatively low exposure to residential housing.

The Basque Country is relatively less exposed to the real estate cycle than other Spanish autonomous communities despite the increasing importance of the construction sector for its economy. For instance, the weighting of its housing permits as a proportion of the national total is clearly lower than what the region's economic importance might initially suggest (1.2% and 6.2%, respectively). Given the current context, this clearly provides a certain degree of support for its economy.

[1] *Per capita* income can be calculated as follows:

$$\frac{Y}{Pob} \equiv \frac{Y}{N} \times \frac{N}{Pob16-64} \times \frac{Pob16-64}{Pob}$$

Where *Y* is GDP, *Pob* is the population, *N* is employment and *Pob*16–64 is the working population. Per capita income growth depends on economic and socio-demographic factors: apparent labour productivity $\left(\frac{Y}{N}\right)$, the unemployment rate $\left(\frac{N}{Pob16-64}\right)$ and the proportion of the working population $\left(\frac{Pob16-64}{Pob}\right)$.

Table 1. Basque Country, weight in Spain

	Basque Country
Average 2003-2007	
GDP (%)	6.2%
Construction (%)	5.2%
Public tenders (%)	5.7%
Building permits (%)	1.3%
Housing	1.2%
Other construction	2.5%

Source: BBVA Economic Research Department with INE data and Development Ministry

Therefore, the overall slump in the construction industry is not having as negative an impact on the Basque Country as it is on the rest of the country. Further analysis of housing permits shows that the downturn started earlier in the rest of Spain and has been gathering pace since then.

Labour market: high participation and employment with a less pronounced adjustment than the national average

The labour market in the Basque Country is in better shape than the rest of Spain. Its participation rate is similar to the national average (57.7% in 2007 in the Basque Country vs. 58.9% for the rest of Spain), while it enjoys a higher employment rate and less unemployment. That said, a large portion of the jobs created in recent years has been in sectors that are neither capital- nor technology-intensive (mainly construction and services). These jobs are less skilled and less productive.

Table 2. Basque Country and Spain, productive structure

(% of GAV)

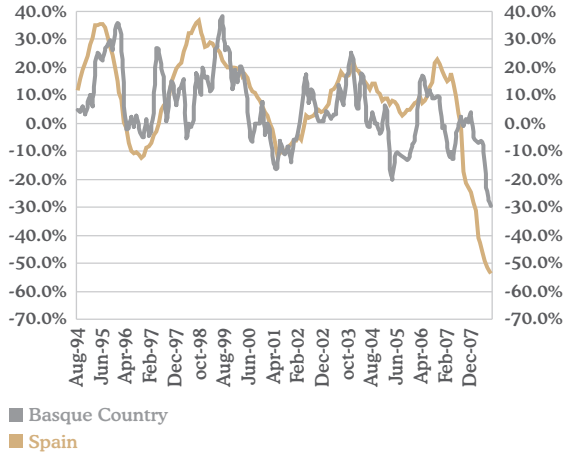
	Spain	
	1997	2007
Agriculture	5.0	2.9
Energy and Industry	22.2	18.0
Construction	7.1	12.2
Servicies	65.7	66.8
Market	50.6	52.1
Non-market	15.1	14.7
TOTAL	100	100
	Basque Country	
	1997	2007
Agriculture	1.9	1.2
Energy and Industry	32.6	30.2
Construction	5.7	10.3
Servicies	59.8	58.4
Market	45.2	45.2
Non-market	14.6	13.2
TOTAL	100	100

Source: BBVA Economic Research Department based on CRE data, INE

Chart 4.

Basque Country and Spain: new building permits

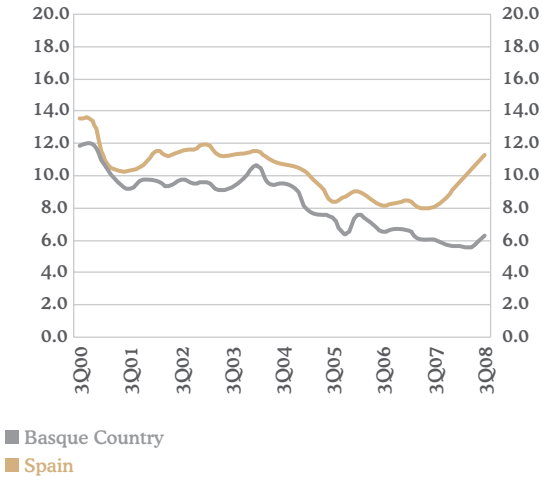
(sum 12M moving, % Chg YOY)



Source: BBVA Economic Research Department based on Housing Ministry data

Chart 5.

Basque Country and Spain: Unemployment rate (%)

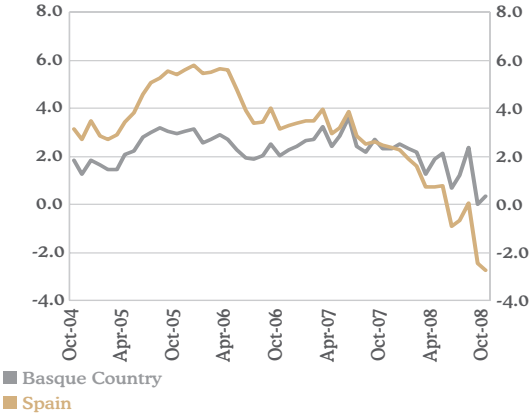


Source: BBVA Economic Research Department on EPA data, INE

Chart 6.

Basque Country and Spain: Social Security affiliates

% Chg, YOY



Source: BBVA Economic Research Department on Labour Ministry data

We are seeing a marked decline in employment levels, as measured by Social Security affiliation figures, while unemployment numbers are rising sharply. At the end of 3Q08, the number of unemployed stood at 6.2% of the active population. Despite this, the adjustment is not as severe as in the rest of Spain, where unemployment now stands at 11.3%.

Activity and spending indicators: sharp correction

Likewise, for some months we have seen a clear slowdown by certain activity and spending indicators, denoting that private agents (households and companies) are postponing consumption and investment decisions. In this regard, according to the General Directorate of Traffic, the number of car registrations in the Basque County fell by 29.2% yoy in October. This figure is nevertheless lower than in the rest of Spain (-38.9%).

Also, recent figures for the industrial production index (IPI) for the Basque Country confirm that the scaling back of output which began in the second half of 2007 has gathered pace, pointing to increasingly lower growth rates. However, it is worth noting that Basque exports continue to fare well, indicating that the industrial slowdown is related more to an easing of domestic demand than trends in trade.

Household consumption in the Basque Country, driven by per capita income growth and employment

Studying to the long term, household spending in the Basque Country has doubled in the past 10 years, reaching 31 million € in 2006. This means an average yoy increase of 6.1%, 9pp lower than the overall growth in national consumption. The reason for this underperformance is the lower relative propensity to consume of Basque households. Nevertheless, given the region's smaller population growth, nominal per capita consumption growth has outstripped the national average.

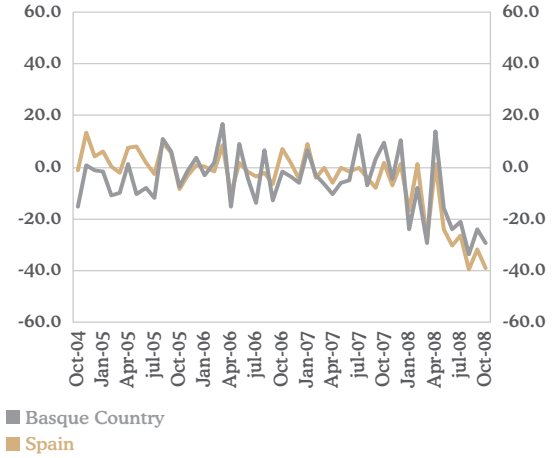
If we look at the two factors comprising per capita consumption[2], the average propensity to consume (APC) and the per capita disposable income, we can see that, of the average increase of 5.7% in nominal per capita household consumption in the region for 1996-2005, 2.8% was due to the increase in per capita disposable income, while 3.3% was due to a rise in prices. However, the lower APC of Basque households drained 4pp from nominal per capita consumption growth in the region. Also, if we compare this to the national average, we can see that the

[2] For more details on the methodology and the series used please see Section 5 of our May 2005 *Consumption Watch* report.

Chart 7.

Basque Country and Spain: Private car registrations

% Chg, YOY

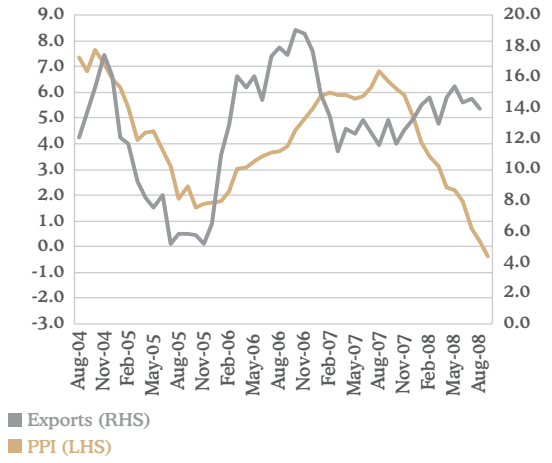


Source: BBVA Economic Research Department based on DGT data, Interior Ministry

Chart 8.

Basque Country: PPI and exports

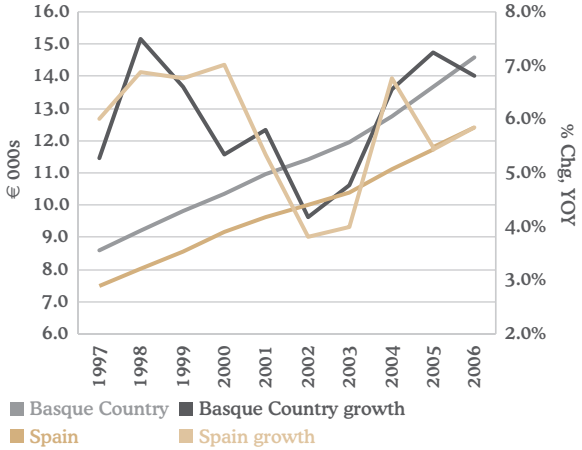
(seasonally adjusted, 12-month MA, % Chg, YOY)



Source: BBVA Economic Research Department based on INE data and Datacomex

Chart 9.

Basque Country and Spain: *Per capita* household consumption

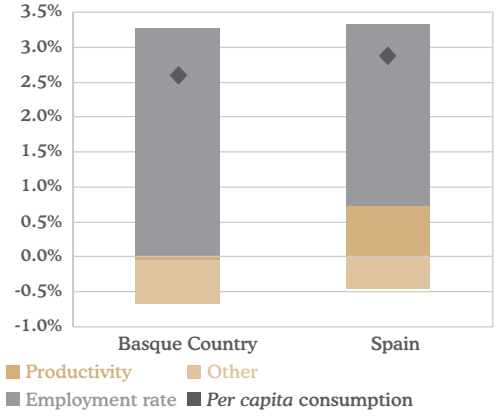


Source: BBVA Economic Research Department based on INE data

continual decline in the region's APC is the reason behind higher relative growth in its saving rate.

Finally, if we take a closer look at the per capita disposable income and strip out the price effect, we can see that in 1997-2005 the employment rate was the main growth driver for real per capita consumption in the Basque Country, with a greater net contribution than seen in the rest of Spain (3.2% vs. 2.5%).

Chart 10.
Basque Country and Spain: % Contribution to change in real *per capita* consumption (1997-2005)



Source: BBVA Economic Research Department based on INE data

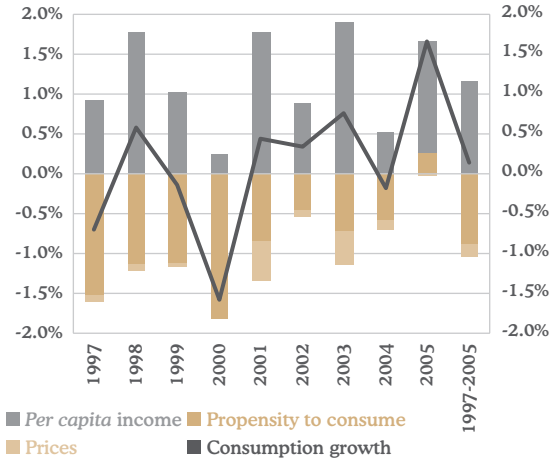
In short, the region's higher employment rate and the marked increase in per capita income have been the main growth drivers for consumption.

Two challenges in the future: demographics and productivity

Demographics: birth rate and immigration

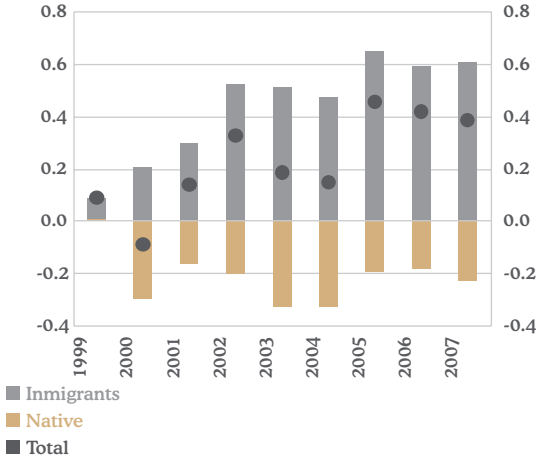
In recent years, the population growth in the Basque Country has been much lower than in the rest of Spain. According to the regional accounts office, the gap in 1997-2007 averaged around 1pp (0.2% for the Basque Country vs. 1.2% for Spain). This difference is only comparable with other Spanish regions such as Asturias, Castilla y León, Galicia and Extremadura; although per capita income in these regions is much lower than in the Basque Country. Also, the increase in the working population (the 16-64 age band) –historically below 0.5%- is well below the sharp rise of 1.5% p.a. seen in the rest of Spain since 2002.

Chart 11.
Basque Country vs. Spain: Contribution to growth in *per capita* consumption



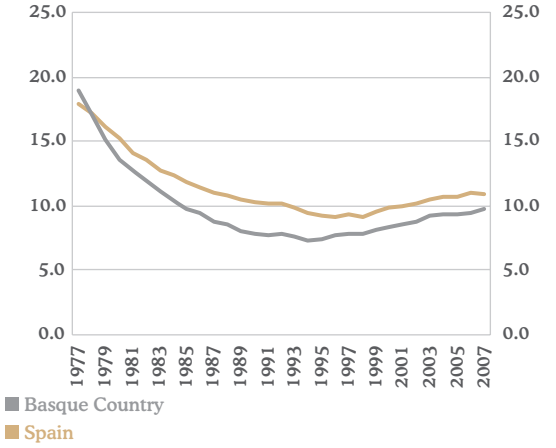
Source: BBVA Economic Research Department

Chart 12.
Basque Country: Population growth (contribution, %)



Source: BBVA Economic Research Department on local census bureau data

Chart 13.
Basque Country and Spain: Gross birth rate (per 1000 pop.)



Source: BBVA Economic Research Department based on INE data

The region's unfavourable demographic situation is largely due to the steady decline in the birth rate in recent decades. The gross birth rate has fallen from 18.9 per 1,000 women in 1997 (vs. the national average of 17.9) to 9.8 in 2007 (vs. 10.9 for the rest of Spain).

Also, over the past decade net internal migration has been negative, with a net outflow of the native population of just over 4,000 residents on average a year. The loss of the native population is closely linked to people seeking employment in other autonomous regions that better match their skills and expectations. Despite increasing efforts by Basque officials to reverse this situation, it will cause a significant reduction in human capital.

The local government has therefore begun to invest heavily in the population pyramid, as the weight of the 45 or older group is rising. This trend is partially offset by the increasing weight of the under-35 immigrant population.

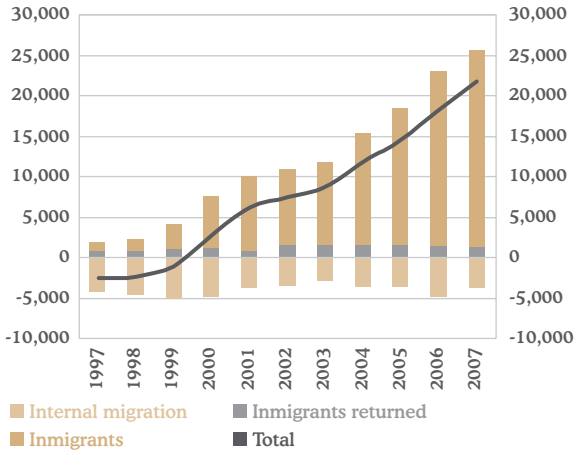
Productivity, human capital and innovation

In terms of productivity, the Basque Country must persevere with its efforts to accumulate physical, technological and human capital, as well as promoting legislation that encourages innovation and favours an optimum allocation of resources. A report based on the indicator of regulatory conditions in the retail distribution sector (known as the ICRCM after its initials in Spanish) [3] drawn up by BBVA's Economic Research Department shows that the Basque Country has one of the strictest commercial legislations in Spain, doing little to encourage competitiveness and the capacity to create jobs.

Research available also highlights the imbalance in qualifications of the region's population, largely among those who opted for vocational training programmes with a clear bias towards degrees and less technical fields, which are characterised by lower job insertion. Given the Basque Country's industrial tradition, it is surprising to note that vocational training courses have fallen out of favour, especially as entrance requirements to shorter university courses are now less stringent. During the 2006-2007 academic year, only 29% of students enrolled in higher education in the region opted for vocational training courses, 15% less than in 2000-2001. This is particularly worrying as it affects job insertion figures of new graduates in the Basque Country, particularly women, as well as migration flows of the native population.

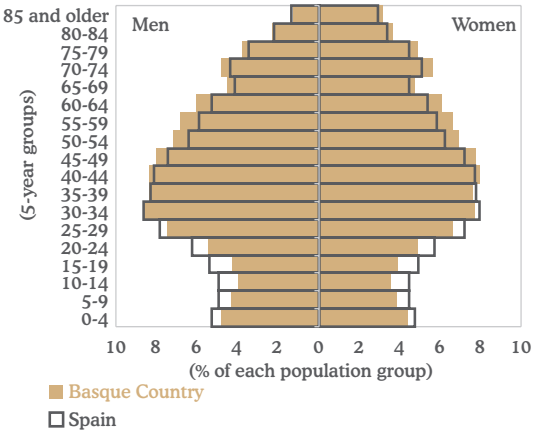
[3] The ICRCM is drawn up using various components. This method used a linear combination of variables which explains the sharp differences among autonomous regions, such as the existence of moratoriums on new store openings, the number of authorised Sunday/holiday openings, barriers to entry and taxes on large-scale retailers. The indicator uses values from 0 (most lax regulation) to 10 (strictest legislation).

Chart 14.
Basque Country: Migration



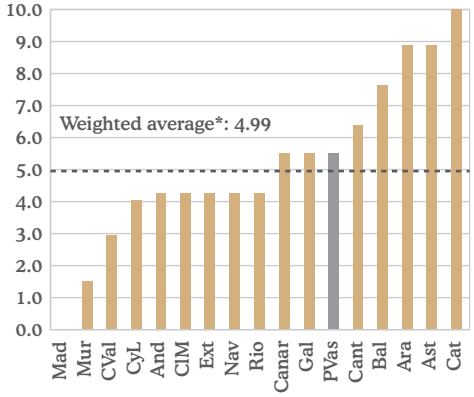
Source: BBVA Economic Research Department based on INE data

Chart 15.
Basque Country and Spain: Population pyramid (2007)
(native)



Source: BBVA Economic Research Department based on INE data

Chart 16.
Indicator of regulatory conditions in the retail distribution sector 2007
(Autonomous Communities)



* Weighted by turnover
Source: BBVA Economic Research Department

In sum, we could see less foreign and Spanish investment in the Basque Country due to the higher cost of living and the lack of skilled workers in key sectors of the economy. This will surely hurt the long term growth of the Basque Country

Table 3. Vocational training students by area

	2000/01 Total	2006/07 Total	Chg. 00/01 06/07 %
Total	**30,533**	**25,939**	**-15.0**
Technical	17,779	14,130	-20.5
Other	12,574	11,809	-7.4
Hombres	**18,710**	**15,101**	**-19.3**
Technical	n.a.	11,938	n.a.
Other	n.a.	3,163	n.a.
Mujeres	**11,823**	**10,838**	**-8.3**
Technical	n.a.	2,192	n.a.
Other	n.a.	8,646	n.a.

Source: Eurostat

3. Consumer Lending

Consumer credit in Spain: falling back to European levels

In a difficult economic environment, made worse by the international financial crisis, and with consumer confidence at levels at all time lows, the slowdown in consumer credit in Spain is heightening. As noted, consumption is the variable of aggregate economic demand that is slowing the fastest, well above our forecast in May. In addition, lending rates have risen. These factors have translated into a sharper slowdown in consumer credit. Indeed, consumer credit is growing at a pace similar to that of the euro zone: the accumulated increase as of September was approximately 110 billion €, only 4.6% higher than last year.

One of the clearest expressions of sluggish growth in credit is the trend in new loans, which have declined sharply both in Spain and elsewhere in Europe. In Spain, the rate of new loans has been declining since the end of 2007. The accumulated balance through September was 33 billion €, or 19.6% less than last year, with 7% of household consumption financed through borrowing. In the same period, the slowdown in the euro zone was even sharper, with 179 billion € in new loans granted, 16.9% less than the year earlier and equivalent to 4.9% of consumption.

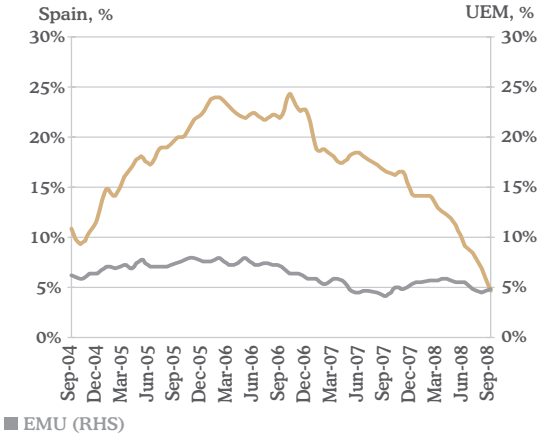
There is also a difference between medium-term credit in Spain and in the rest of Europe. In Spain, loans for up to one year are still more prevalent, partially because of the pervasiveness of quick credit and credit cards amid greater uncertainty for consumers. Nevertheless, medium-term loans have declined from 24% of the total in late 2007 to 22% currently. The financial crisis, which is making it difficult for companies to tap international markets for liquidity and causing risk premiums to rise, is pushing the cost of loans for all maturities higher, both in Spain and the rest of the euro zone. Since June of this year, the European Central Bank (ECB) has shaved 75bp off its key refinancing rate, but the 12-month interbank rate is still 80bp higher because of liquidity pressure in the markets. Looking ahead, our forecasts point to cuts in official rates to 1.5% by the spring of next year. This will reduce the financial burden on households, which next year will have an additional 6 billion € of disposable income, or about 0.8% of the total.

In addition, according to the most recent Spanish bank-lending survey, in the last three months, both the supply of and the demand for consumer credit have declined more sharply in Spain than in the euro zone. This is consistent with the credit squeeze, which is expected to continue in the coming quarters. In the euro zone, the rate of contraction of both has accelerated. In particular, demand has been adversely affected by lower spending on consumer durables and by declining consumer confidence.

Revolving loans: still in the spotlight

Given the lack the statistics on consumer credit extended by the entire financial system disaggregated by purpose, a disaggregated analysis must rely on data from the Spanish Credit and Financial Association (Asociación Nacional de Entidades Financieras, Asnef), which gathers information from lending institutions. In the first half of 2008, 10.5

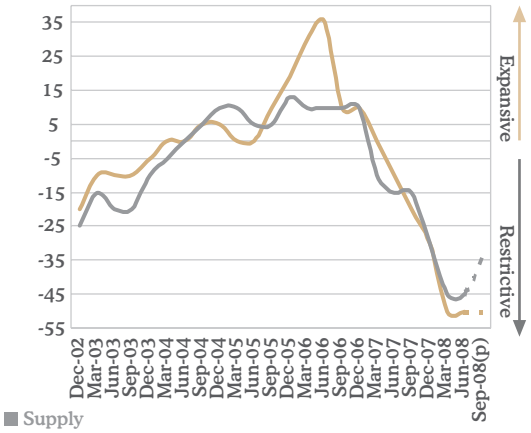
Chart 3.1.
Consumer credit
(% Chg, YOY)



EMU (RHS)
Spain* (LHS)

* Includes securitisations
Source: BBVA Economic Research Department based on Bank of Spain and ECB data

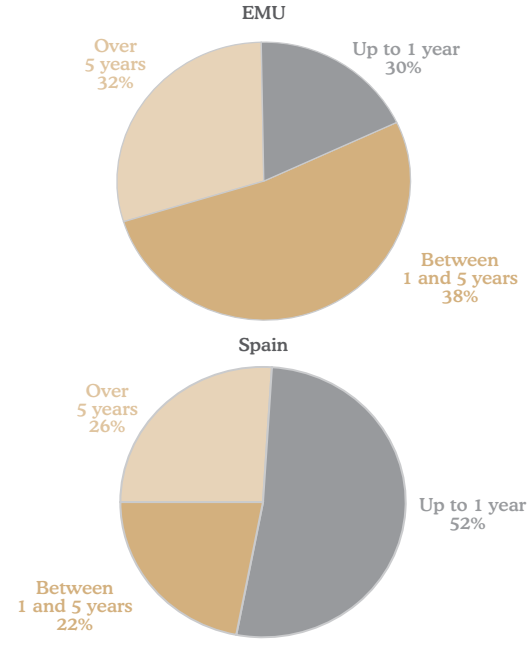
Chart 3.2.
Spain: Bank loan survey
consumer and other



Supply
Demand

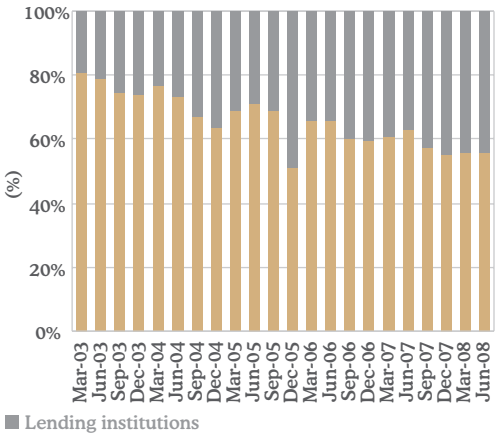
Source: Bank of Spain

Chart 3.3.
New consumer credit transactions by term, Jan-Sept 2008



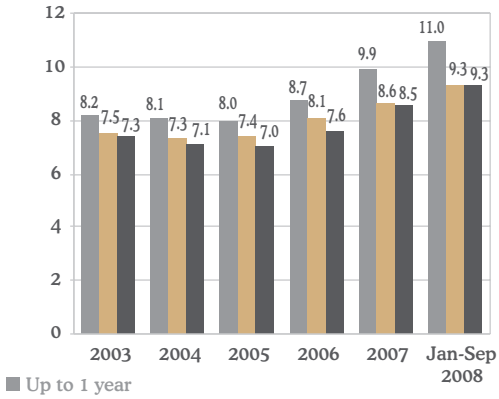
Source: Bank of Spain

Chart 3.4.
Spain: New consumer finance transactions



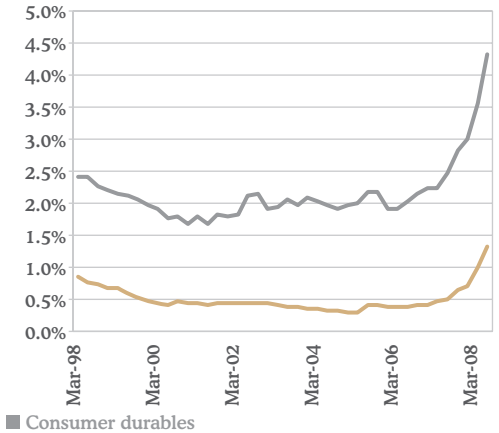
Source: Bank of Spain and ASNEF

Chart 3.5.
Spain: Interest rates on new consumer credit transactions



Source: Bank of Spain

Chart 3.6.
Spain: Household default rate
(90 days past due)



Source: Bank of Spain

billion € of new loans were granted, 2% less than in the same period last year. Nevertheless, this decline is less severe than that seen for new domestic loans overall. Hence, lending institutions financed 3.3% of new consumer loans in the second quarter of the year, compared with 4.2% for other institutions.

By type of credit, the steepest decline was the 31% yoy drop in personal loans in 2Q08. Segments that previously were experiencing strong growth have slackened considerably; for example, financing of consumer goods (28% growth in 4Q07 compared with -2% in 2Q08) or revolving credit-card loans (85% vs. -4%). Therefore, products such as quick loans or debt consolidation plans, which have become substantially more expensive, no longer play as prominent a role in household finance as they once did, despite the households' growing financial difficulties. Nevertheless, revolving loans still account for two-thirds of financing by lending institutions, and financing of consumer goods, account for one-quarter.

New auto loan transactions by lending institutions amounted to 6.1 billion € in 1H08, a 15% yoy decline. This fall is in line with the drop in car registrations. New cars for individuals still make up the largest segment, representing 71% of the total, despite sustaining a 18.3% yoy decline. This category was followed by new vehicles for businesses and used cars for individuals, which accounted for 13% and 11% of the total. Growth in loans for these in 2Q08 was 2% and -8.7%, respectively. New loans to finance used vehicles for companies continued to grow at a somewhat robust pace of 12%. The average value of new auto loans remained steady, at 15,200 €, compared with 11,300 € for used vehicles (+11%). This may indicate a stronger preference for used, high-end cars sold by rental companies.

Consumer credit default: sharp upturn

In recent months, the default rate on loans for consumer durables has increased significantly, by the end of September above 4%, far higher than the 2% rate at the beginning of 2007. Not only are default rates rising much quicker than in previous crises, but because of the new accounting standards, the financial situation of Spanish households, especially those most heavily in debt, has deteriorated sharply. In the coming months, the rising unemployment rate, the stagnating value of real estate (the principal wealth of households) and the difficulties faced by a portion of the companies that financed households will make it difficult for default rates to remain in check. Nonetheless, the Bank of Spain's strict provisioning policies have allowed Spanish institutions to face this crisis on surer footing than other European institutions. Accordingly, default levels may remain high and some loans may be refinanced during this cyclical downturn.

Outlook for consumer credit: lower growth

Moving ahead, growth in consumer credit will continue to taper off based on its fundamentals. Household income will decline as the economic slows and consumption wanes. Household wealth will also suffer because of falling housing values. Nevertheless, better financial conditions and lower inflation may provide some support for the future. After several years with lending significantly outstripping the economy's nominal growth, we will probably enter a period of lacklustre credit growth, lagging nominal GDP growth.

Main drivers of consumer credit: an international comparison

With global credit slowing worldwide, an analysis of the factors that determine the performance of each type of credit extended to the private sector should prove useful. To conduct such an analysis, we will look back the *Consumption Watch* report for the second half of 2006, which examined the three factors related to per capita consumer credit: the propensity to borrow, the propensity to consume and per capita disposable income. Based on this analysis, in the following pages we make an international comparison of the drivers of credit growth in Spain versus those of Germany, France, the UK and US.

Consumer credit in Spain: a convergence story

Since the mid-1990s, consumer credit has grown in all developed countries. In both the leading European economies and the US, consumer credit grew at rates above 5% per year between 1994 and 2004, easing thereafter. The slowdown in the growth of consumer credit began somewhat later in Spain -at the end of 2006- and has continued until now.

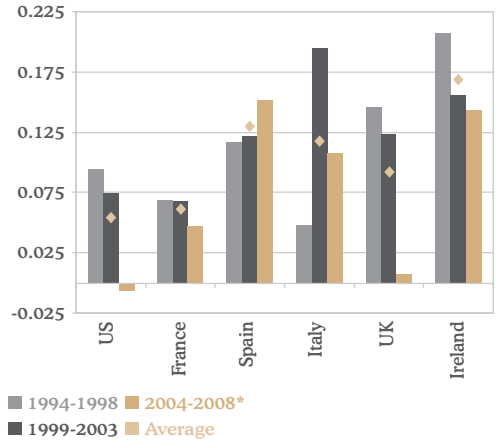
Despite the strong and prolonged growth of consumer credit in Spain, its relative importance is much less than in other economies. The ratio of consumer credit to GDP in Spain has historically been below that of Anglo-Saxon or French economies. Nevertheless, the most recent data available -for 2007- have begun to point to a new situation: the ratio of consumer credit to GDP in Spain has risen to 10%, above the 8% figure for France and very close to that of countries such as the UK and Ireland, which have always had significantly higher ratios than Spain. The US ratio remains far above other economies, at over 18%.

A similar trend can be seen in per capita consumer credit, measured in purchasing power parity. Spain has traditionally trailed the leading European economies, but during the period under analysis the trend has moved toward convergence. Spain reached Germany's level in December 2006 and surpassed France at the end of last year. However, despite moving closer to the countries of Continental Europe during this period, Spain still has a way to go before reaching the level of the UK or the US.

Drivers of convergence in per capita consumer credit

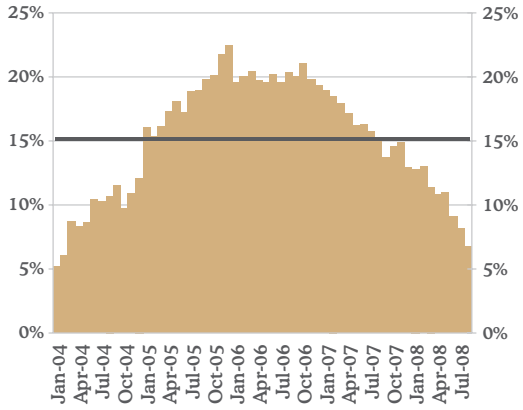
We will now examine the factors determining per capita consumer credit, not only in Spain, but also in neighbouring countries. The increase in per capita consumer credit in Spain has been driven primarily by a higher propensity to borrow (i.e. finance purchases) and by rising household disposable income. Higher relative growth in the propensity

Chart 1.
Consumer credit trends
(average % Chg, YOY)



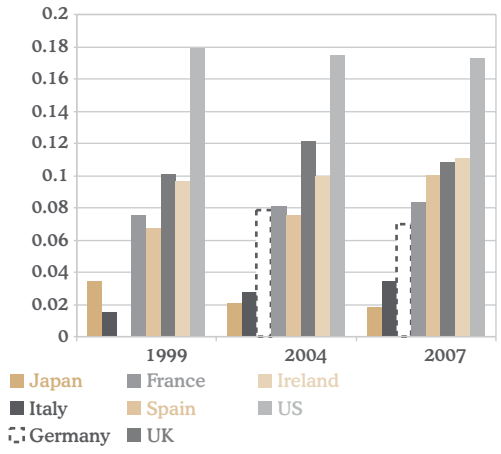
* Last data, including June 2008
Source: National central banks

Chart 2.
Spain: Consumer credit*
(% Chg, YOY)



* Includes securitisations
Source: Bank of Spain

Chart 3.
Consumer credit to GDP ratio



Source: BBVA Economic Research Department based on central bank data

to borrow has brought Spain more in line with levels in France and Germany. Nonetheless, compared with the US and the UK -where per capita consumer credit is two and three times higher, respectively- the convergence has been driven by both Spain's higher propensity to borrow and its higher household disposable income.

Per capita consumer credit depends on the three factors outlined below.

$$\frac{Consumer\ Credit}{Population} = \frac{Consumer\ Credit}{Consumption} * \frac{Consumption}{Disposable\ Income} * \frac{Disposable\ Income}{Population}$$

The first is households' propensity to borrow; the second is the portion of household disposable income used for consumption; and the third is per capita disposable income, which also provides an indicator of an economy's level of development.

An analysis of these factors will explain trends in per capita consumer credit in Spain compared with the other countries of the group examined. Spain rose from fifth place in the ranking in 2003 to third place at the end of 2007 (see table). The US and the UK still have the highest level of per capita consumer credit, reflecting their economies' stronger tradition of indebtedness. By contrast, Germany moved from third place in the ranking to fifth place, although it continues to rank ahead of Italy, despite zero average growth in per capita consumer credit in the period analysed.

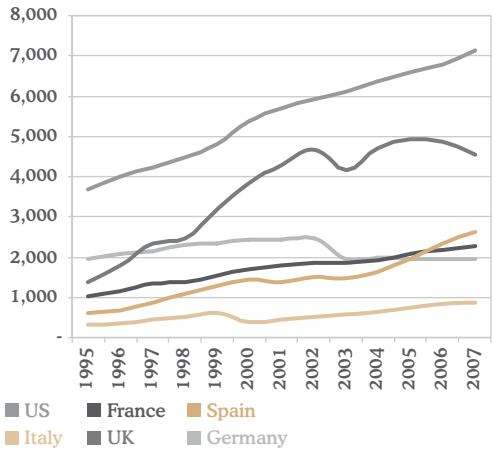
Per capita consumer credit in Spain has risen in nearly every year of the period analysed, with average annual growth of 12%, i.e. higher than that of all the other countries examined. This means that, over time, short-term per capita financing in Spain has moved closer to levels in France and Germany. In addition, the longer duration and greater intensity of the economic growth cycle in Spain has allowed the country not only to reach, but to surpass, the levels of per capita consumer credit recorded in 2007 in Continental Europe.

Table 1.

	2007				Ranking	
	Per capita consumer credit	Propensity to borrow	Propensity to consume	*Per capita* disposable income	2007	2003
US	7,124	30%	85%	27,577	1	1
UK	4,554	22%	101%	20,829	2	2
Spain	2,613	20%	90%	14,813	3	5
France	2,279	14%	84%	19,817	4	4
Germany	1,958	12%	85%	19,728	5	3
Italy	863	6%	86%	17,748	6	6

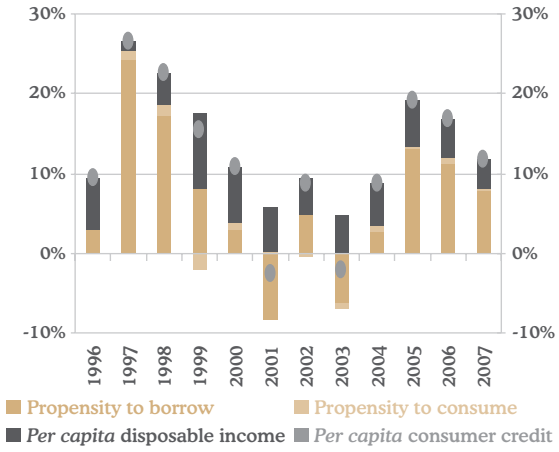
Source: BBVA Economic Research Department

Chart 4.
Per capita consumer credit
(€, PPS)



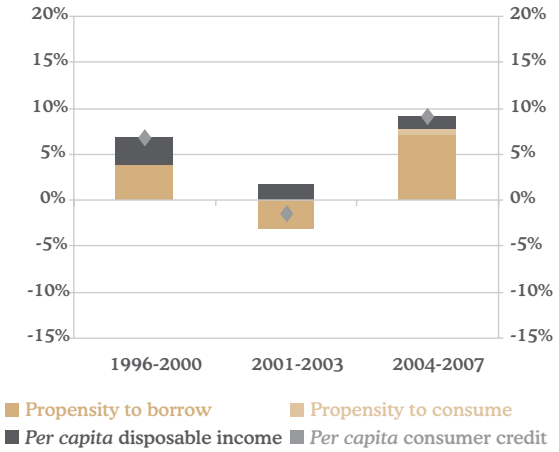
Source: BBVA Economic Research Department on national sources

Chart 5.
Spain: Breakdown of *per capita* consumer credit



Source: BBVA Economic Research Department

Chart 6.
Per capita consumer credit: Spain vs. France



Source: BBVA Economic Research Department

This international comparison of per capita consumer credit trends suggests that the behaviour of Spanish households may be examined from two perspectives: comparing the behaviour with the countries with which Spain has converged (France and Germany) and surpassed, while comparing it with the countries with which Spain has begun to converge, but is still considerably behind (the UK and the US).

Spain has approached the levels of France and Germany in part because it has experienced higher growth in disposable income than these two countries, but more importantly because of the higher propensity to borrow in Spain. For each of the three sub periods, more than 60% of the higher growth of consumer credit is because of Spanish households' higher propensity to borrow (see Chart 7).

Moreover, between 2004 and 2007, Spanish households' propensity to consume, while remaining stable, became a more important driver of per capita consumer credit growth, given that the propensity to save in Spain has declined more than it has in France or Germany, despite starting at a lower level.

Despite this considerable surge in consumer credit, Spain remains below countries with a stronger history of borrowing, such as the UK and the US. This is not only because these countries already had substantially higher levels, but also, in the case of the UK, because per capita consumer credit has continued to grow at a higher rate there than in Spain.

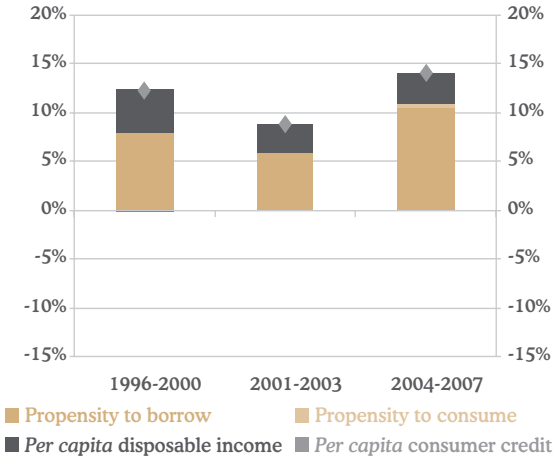
The increase in Spain was stronger than that of the US from 1996 to 2000 and from 2004 to 2007. In the first period, this was driven by the propensity to borrow, whereas in the second, the propensity to borrow and disposable income were equally important factors.

By contrast, the convergence between Spain and the UK in the second period (2004 to 2007) was thanks to Spanish households' higher propensity to borrow.

In sum, these findings show that two factors are preventing Spain from attaining the per capita consumer credit level of Anglo-Saxon economies. First, per capita disposable income, which, despite increasing in the most recent growth cycle, is still lower than that of the remaining countries analysed. Second, Spain has a higher propensity to save, especially compared to the UK.

Chart 7.

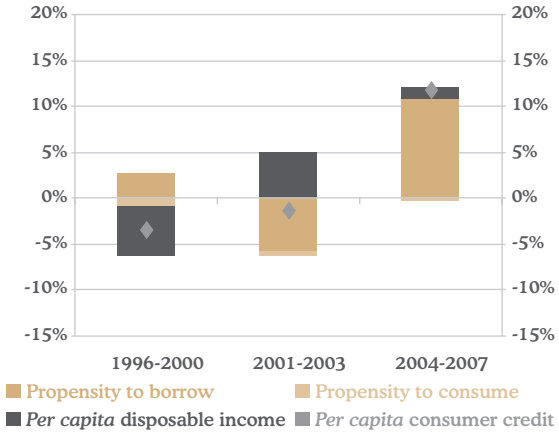
Per capita consumer credit: Spain vs. Germany



Source: BBVA Economic Research Department

Chart 8.

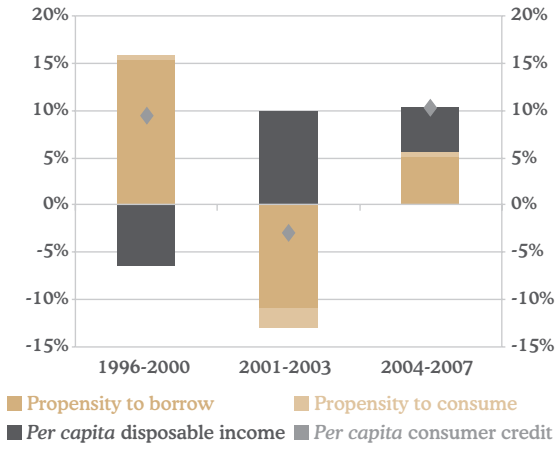
Per capita consumer credit: Spain vs. UK



Source: BBVA Economic Research Department

Chart 9.

Per capita consumer credit: Spain vs. US



Source: BBVA Economic Research Department

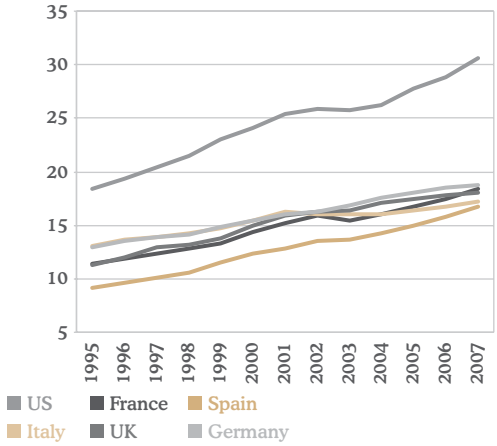
How will domestic per capita consumer credit evolve?

As in other European countries, per capita consumer credit in Spain faces uncertainties related to the global financial crisis as well as the downturn of the national economy. Nevertheless, there are some factors that should lend support in the medium and long term.

In the medium term, moderate interest rates will make it easier for Spanish households to borrow. A smaller financial burden will free up about 6 billion €, or 0.8% of disposable income in 2009. In addition, this factor will be more important in Spain, where short-term and variable-rate credit is more prevalent, than in the other EMU countries.

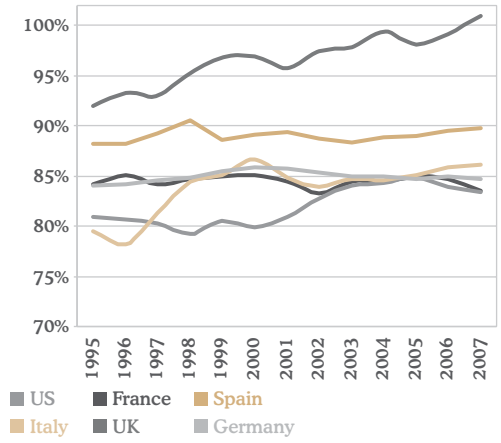
Over the long term, higher per capita disposable income will allow Spain to reach the level of consumer credit in the US and the UK. This will also be made possible by Spanish households' rising propensity to borrow. In addition, the fact that Spanish households' debt as a proportion of wealth is lower than that of other countries leaves room for growth in the propensity to consume.

Chart 10.
Per capita disposable income
(€ 000, PPS)



Source: BBVA Economic Research Department

Chart 11.
Household propensity to consume
(% of disposable income)



Source: BBVA Economic Research Department

4. Situation of consumer durables

The household consumption data compiled in the corresponding macromagnitude of Spain's National Accounts includes spending on both services and goods. Spending on goods may be broken down into durable and nondurable goods. Spending on durable goods (cars and home furnishings) accounts for only 8% of total household spending, yet it largely explains the swings in that spending (see chart comparing total consumer expenditure in the National Accounts and apparent consumption of durables[1].

Slower growth in household final consumption conceals a much sharper decline in the consumer durables indicator (apparent consumption), which since early 2008 has contracted, with average monthly declines in the year above 20%. Overall, it seems reasonable to assume spending on durables is more sensitive than overall spending to both the outlook for economic growth, given that the purpose of this spending is to meet households' essential needs, and to changes in interest rates, inasmuch as most purchases of durables are financed. Consequently, with the economy slowdown and consumer lending rates rising, demand should weaken more for consumer durables than for other goods in the basket of household goods and services.

4.1. Auto industry: sharp drop in demand and production

Car registrations: further decline

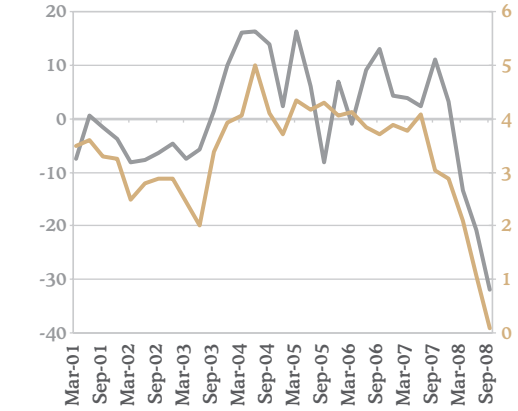
The forecast for fewer vehicle registrations estimated in the previous *Consumption Watch* report has been clearly surpassed, with the drop plainly reflecting the economic downturn in Spain. After three years of sluggish growth, the decline that began in 2007 accelerated considerably throughout 2008, with a cumulative decline of 23.8% yoy in the first 10 months of the year. In October, 77,660 vehicles were registered, with figures similar to the ones seen in the first half of the 1990s. Further declines are expected for November and December, putting the drop for FY08 at over 26%.

Vehicle registrations have declined steadily across all regions of Spain, with all registering declines of more than 15% in the first 10 months of the year. In addition, data published in early October point to a sharper decline in new car sales, also nationwide. However, the scale of decline varies across regions, with Aragon (-24.4%), Andalusia (-20.8%) and the Valencian Community affected most, and La Rioja (-2.8%), the Balearic Islands (-8.80%) and Navarre (-9%) the least.

The auto sector is a clear reflection of the overall situation, with households postponing expenditure on durable goods. Lower growth in disposable income and wealth, difficulty obtaining credit and high interest rates have caused a steeper-than-expected decline in auto sales. Looking ahead, cuts in official interest rates in Europe, and

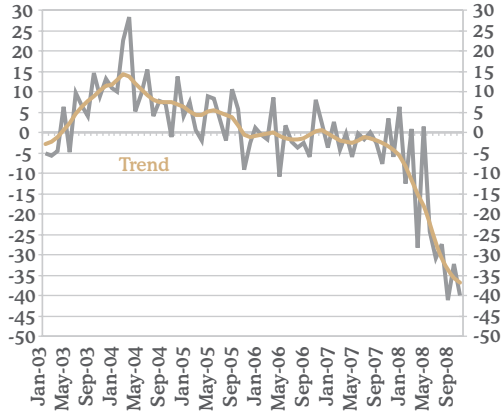
[1] "Apparent consumption" is equal to domestic production of goods—in this case of consumer durables—plus imports minus exports.

Chart 4.1.
Household consumption: total and durable goods
(% Chg, YOY)



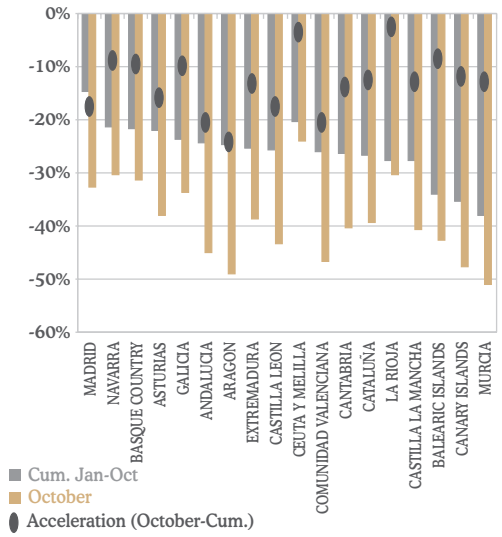
Source: INE, Economics Ministry and BBVA Economic Research Department

Chart 4.2.
Spain: Car registrations
(% Chg, YOY)



Source: ANFAC and BBVA Economic Research Department

Chart 4.3.
Car registrations by Autonomous Community
(% Chg, YOY)

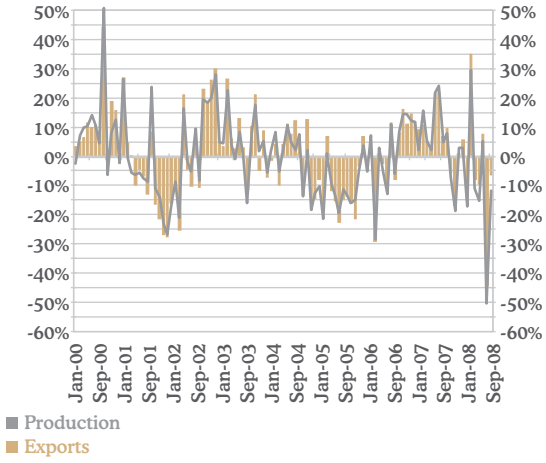


Source: ANFAC and BBVA Economic Research Department

Chart 4.4.
Spain: Contribution to automobile growth by segment
(Excluding 4x4)

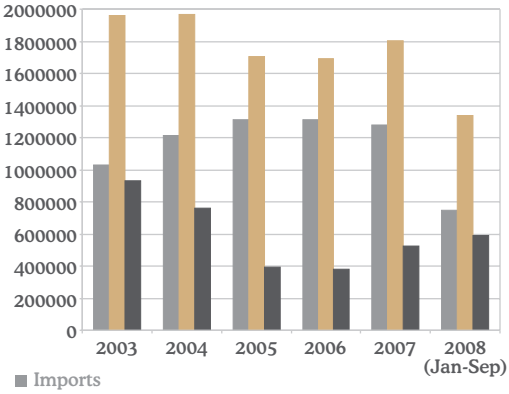
Source: ANFAC and BBVA Economic Research Department

Chart 4.5.
Spain: Auto production and exports
(% Chg, YOY)



Source: Bank of Spain

Chart 4.6.
Spain: Foreign auto trade
(Units)



Source: Bank of Spain

the probable decline in liquidity and risk premiums from recent highs could lend support, taking our indicator of household access to auto financing (EFCA indicator) back to pre-financial crisis levels. Despite this, however, the fall in income and wealth is bound to continue weighing on the industry, with forecasts pointing to a drop over 25% in 2008 and further declines in 2009 until reaching a monthly average of 80,000 registrations.

Declining registrations across all segments

An analysis of the different segments' contributions to growth in car registrations shows that all segments have declined[2]. As shown in the chart, the segment of midsize vehicles, which began to decline in 2006, has contributed the most (-8.9%) to the decline in registrations in 2008, followed by small vehicles (-6.2%) and minivans (-6.0%). These three segments account for 95% of the accumulated decline in registrations. In addition, despite their relatively small share of total registrations (3.3%), luxury vehicles, along with minivans, have declined the most in 2008 (34% in both cases). Higher fuel prices and the worsening financial situation of households may have been responsible for cutbacks in spending on these items, which can be considered luxury goods.

Sharp fall in production and exports

There has been a similar situation with automobile production, which has fallen sharply throughout most of 2008, by an average of 7.2%. August 2008 saw the largest yoy decline (50%) since data recording began (January 1981: see Chart). A total of 41,123 automobiles were produced that month, the lowest figure since August 1997. September data -the most recent published by the Bank of Spain -point to a further, albeit more moderate, decline in production (11.7%).

Exports have also decreased considerably, although their performance has been extremely volatile, ranging from peak growth of 35.1% in April to a peak decline of 44.3% in August. In September, the last month for which data are available, the decline was less severe, at 6.4% yoy. Overall, the average monthly decline for 2008 is 3.8%.

Despite the contraction in exports, the automobile sector trade balance in 2008 is still positive and even higher than it was from 2005 to 2007. Both exports and imports have decreased significantly between last year and this year (see chart); nevertheless, the balance for 2008 is higher than for 2007. This translates into a 12.1% yoy increase in the foreign trade balance for private cars from January to September. Consequently, the data appear to indicate that, although Spain is now importing fewer vehicles as the crisis has dampened consumption, the decline in countries importing Spanish cars is even more pronounced.

Reversal in the downward trend of prices

Prices for new cars in Spain have come down since the beginning of

[2] The categories shown in the chart comprise the following segments: "Small" comprises subcompact and small vehicles; "midsize" includes medium-low and medium–high cars; "luxury" includes executive vehicles, sports cars, and luxury cars; and "minivans" includes both small and large vans.

the year, by an average of 0.9% per month through September. However, the summer months of 2008 marked a turning point in the downward trend in prices that began in the summer of 2006. In the last two months, the average monthly change in automobile prices has gone from -1% in the 2Q08 to -0.5% in 3Q08. The trend in the euro zone has also changed, with prices rising 0.6% yoy in September. Nevertheless, in Spain, the current rate of increase is still below the rates recorded in the last three years.

Motorcycles: similar trend to private cars

The number of motorcycles registered has declined in every month of 2008, except July, when there was a yoy increase of 23.1%, although this was smaller than the same month in previous years. The cumulative decrease between January and October of 2008 was 19.3%. The steepest decline in 2008 was in June, when the number of registrations fell 39.9% yoy, the largest decrease since February 2001 (51.3%). In October, new motorcycle sales also fell (-12.0%), although less sharply than at the beginning of the year.

Motorcycle production has also decreased since June of this year, with August seeing the strongest decline (76.2%) since August 1996 (99.1%). Production was also down in September, albeit more moderately (-44%). There have been large swings in production, alternating between months of positive growth and those with sharp declines (see chart). On aggregate, through September motorcycle production was down 13.8% yoy.

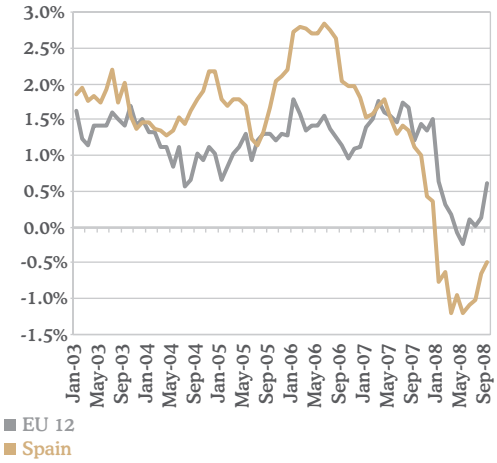
4.2. Furniture: less prominent role in foreign trade

In the past seven years, the Spanish furniture sector has lost its position both domestically and abroad.

Spanish furniture exports slowed in 2001 after several years of steady growth. Despite growing 12% in 2007, furniture exports have tended to decline, with an average yoy decrease of 9% from 2001 to 2006. As a result, Spain now plays a less prominent role in international markets. Its share of global exports declined by 0.2pp between 2000 to 2007, from 2% to 1.8%. Even so, other countries in Europe fared worse in the period. France and Italy have seen their shares erode by 0.4pp and 1.7pp, respectively, although they still boast a larger share of the global market than Spain. The clear winner is undoubtedly China, whose market share increased by 15.5pp to 19.6%.

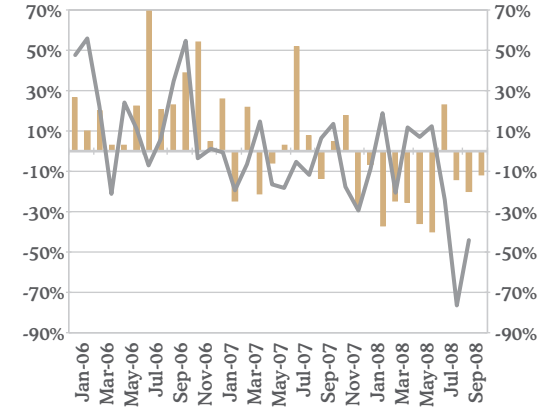
The markets for Spanish furniture exports are, not surprising, other European countries, i.e., France, Italy, the UK, Germany and Portugal, which combined account for 60% of the total. Although exports to these countries have declined both in euros and tonnes, especially in 2007, the ratio of euros per tonne has increased considerably in nearly every case. The only exception is exports to France, in which the average ratio from 2006 to 2007 declined by 4%. The two countries in which the ratio rose the most were the UK (11%) and Germany (4%). If the euros-per-tonne variable is taken as an indicator of the quality of furniture, these data may point to the transformation of the sector to one that manufactures higher quality goods.

Chart 4.7.
CPI for automobiles
(% Chg, YOY)



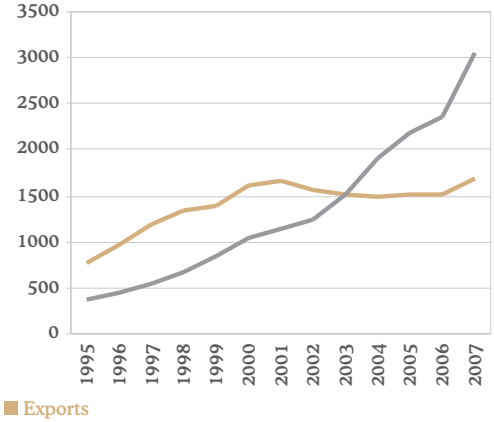
Source: Eurostat and BBVA Economic Research Department

Chart 4.8.
Spain: Motorcycle production and registrations
(% Chg, YOY)



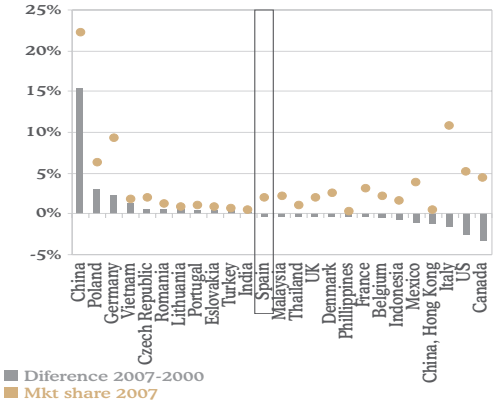
Source: Bank of Spain and BBVA Economic Research Department

Chart 4.9.
Furniture exports and imports
(Euros million)



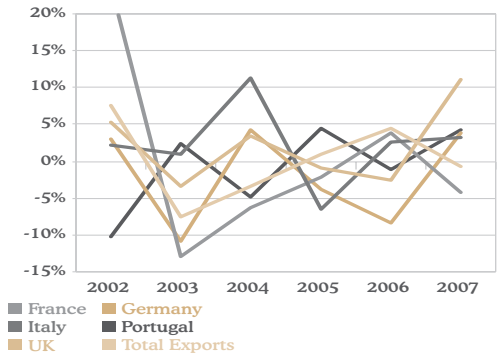
Source: BBVA Economic Research Department based on ANFEL and INE data

Chart 4.10.
Share of global furniture export market



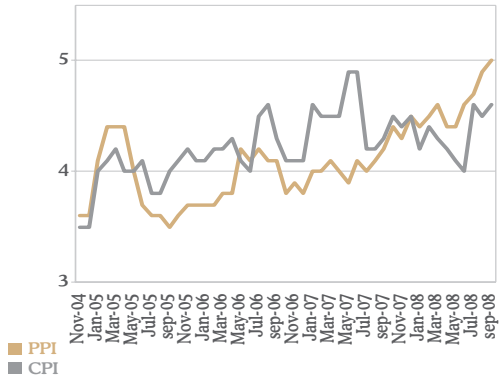
Source: BBVA Economic Research Department and COMTRADE

Chart 4.11.
Exported furniture:
% Chg in euros/tonnes



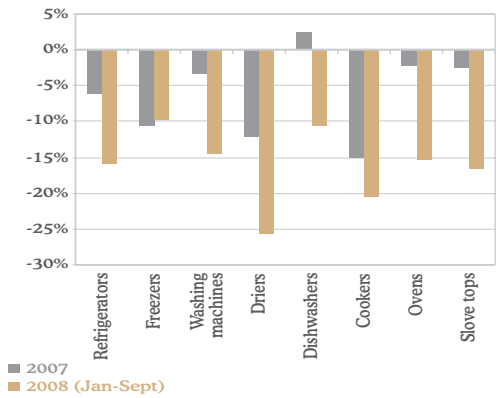
Source: Technology and Science Ministry and BBVA Economic Research Department

Chart 4.12.
Furnitue PPI and CPI
(% Chg, YOY)



Source: BBVA Economic Research Department based on INE data

Chart 4.13.
Spain: Production of appliances
(% Chg, YOY)



Source: BBVA Economic Research Department based on ANFEL data

Unlike furniture exports, furniture imports have not stopped growing. In just five years, average annual furniture imports have soared from 1.4 billion € in the period from 1998 to 2002 to 3.6 billion € from 2003 to 2008. The country which Spain has imported and increased amount every is China. In the last six years, Chinese exports to Spain have rocketed 483%. In that time, China has gone from being the country's fifth most important producer of furniture imports to its first. Data for imports in 2008 also reflect the economic climate in Spain. Indeed, furniture imports in the first three quarters of this year were down 9% from last year.

The increasing market share imported furniture has affected the prices of furniture sold in Spain. The last quarter of 2007 was a turning point for business margins in the domestic market, as since then the furniture component of the Producer Price Index (PPI) has risen more than the same component of the Consumer Price Index (IPC). During the first two quarters of 2008, this gap widened, primarily as a result of the deceleration in consumer prices for furniture. However, during the past three months, this trend has tapered off, with the furniture component of the IPC begin to rise more quickly, with an annualised average increase as of September 2008 of 3.8%. This was, nonetheless, still lower than the increase on the PPI. During this period, furniture prices have continued to rise on the PPI, at an average yoy rate of 4.1%, nearly 1pp higher than the overall increase in the PPI for durable goods.

The furniture industry is unquestionably going through a restructuring phase, fuelled by stiff competition from abroad and probably exacerbated by the current economic situation in general, and the housing sector in particular. Undoubtedly, the situation is reflected by the growth of turnover in the furniture-manufacturing sector, with rates tumbling from above 10% from 1995 to 2000 to nearly zero from 2000 to 2007 and, according to figures from the Association for Research and Development on the Furniture Industry and Related Products (Asociación de Investigación y Desarrollo en la Industria del Mueble y Afines, AIDIMA), to a fall of 14.3% in 2008.

4.3. Major appliances: the downward trend worsens

The recent trend in home appliance sales, with sales falling more rapidly, is another example of how the Spanish economy is slumping. According to statistics from the National Association of Appliance Manufacturers (Asociación Nacional de Fabricantes de Electrodomésticos, ANFEL), in 2007, the number of appliances sold declined 3.4% and the amount of sales by 0.9%. However, in the first three quarters of 2008, sales have dropped by 14.9% and the amount invoiced by 17.1%, which also indicates consumers' growing preference for lower-priced appliances. Dryer sales have fallen most, with a 26% drop in the number of units sold, probably because they are not an essential item. Meanwhile, freezer sales have fallen least, by 10%. Worth mentioning is that, sales of dishwashers, the only appliance that experienced slightly positive growth last year (3%), are down 11% YTD.

Price trends remain favourable. Refrigerators, washing machines and dishwashers stand out with negative inflation of 1.9% so far this year, compared with 1.3% in 2007, as do cookers and ovens, whose prices have declined 0.7% this year after rising 0.5% in 2007. In short, prices are falling across the board, yet this has not prevented sales from decreasing this year.

The factor that could possibly have had the most influence in the decline in sales is the drop in real estate activity, especially home purchases, which show a strong correlation to the performance of sectors linked to home furnishing. In addition, consumer confidence has declined steadily: according to European Commission data, in October 2008 consumer confidence in Spain was at the lowest level since the survey began.

In this situation, the 2008 version of the "Plan Renove," as part of a new Ministry of Industry energy plan expected to run through 2012, may provide the sector with a much-needed boost by encouraging consumers to trading in old appliances for new ones.

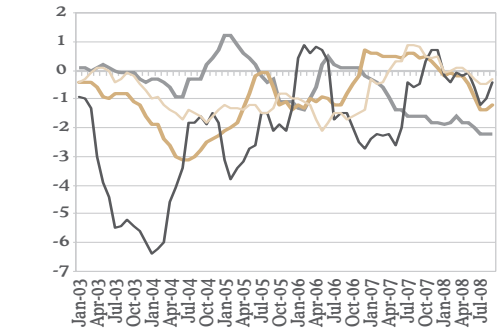
As for the trade balance, the downward trend in exports continues. Imports, on the other hand, have continued to increase, including a 5% rise in 2007. Consequently, we are witnessing a gradual loss of standing of Spanish-manufactured appliances in the global market, of 0.8% between 2000 and 2007. The decline in share of Spanish exports, measured in dollars, is still less than that of other countries in the region, such as France or Italy, whose shares have declined 2% and 4%, respectively, in the same period. This stands in contrast with the growing share of global exports from other European countries, such as Poland (3.4%), Hungry (0.8%) or the Czech Republic (0.8%). We can therefore conclude that price competition is stiff, and countries with lower labour costs have a relative advantage in this situation.

The appliance industry has a highly cyclical element, as do most purchases of durable goods. An analysis of the cyclical correlation between appliance sales and GDP growth will allow us to draw a conclusion on the prospects for recovery by the industry. Since 1991, when comparable statistics on appliance sales were first compiled, growth in these, specifically of washing machines and refrigerators, have served as leading indicators for the Spanish economy. Essentially, home appliance sales begin to fall a year before GDP does and, conversely, begin to recover a year before the overall economy. This strong correlation allows us to conclude that we are likely to see a recovery in the appliance sector before statistics point to a recovery of the overall economy.

4.4. ICTs: the most affordable leisure option

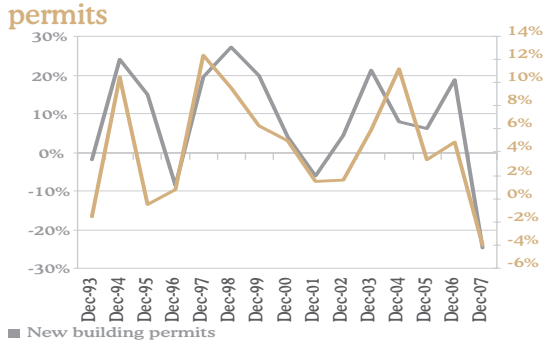
Prices in the information and communication technologies (ICTs) sector continue to trend downward. From January to September 2008, prices for video and sound equipment decreased 12.8% (vs. -11.4% in 2007), while prices for computer equipment dropped 21.9% (-20% in 2007). Nevertheless, after declining sharply in the first half of the year, in August and September prices on the IPC for both items have declined more modestly.

Chart 4.14.
Spain: CPI appliances
(% Chg, YOY)



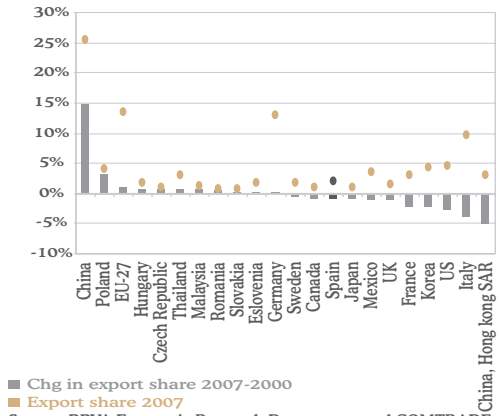
Refrigerators, washing machines and dishwashers
Cookers and ovens
Heaters and air conditioners
Other appliances
Source: BBVA Economic Research Department based on INE data

Chart 4.15.
Spain: Appliance sales and new building permits



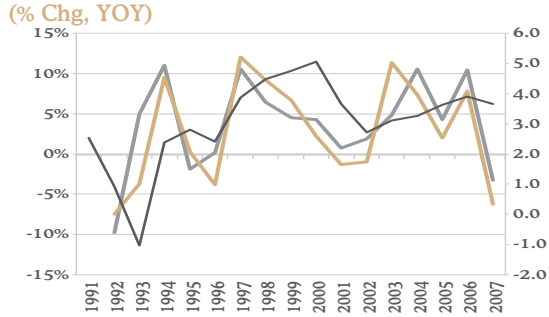
New building permits
Appliances
Source: BBVA Economic Research Department based on Development Ministry and ANFEL

Chart 4.16.
Spain: Global appliance export market share



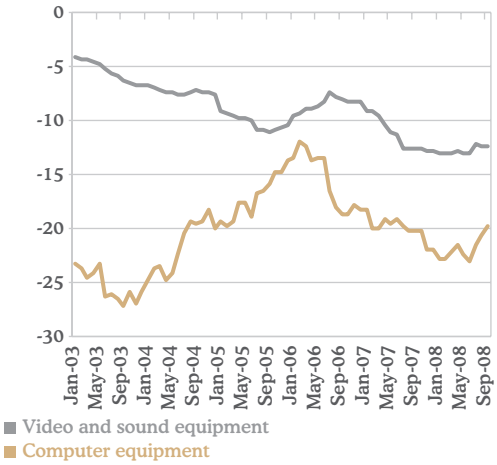
Chg in export share 2007-2000
Export share 2007
Source: BBVA Economic Research Department and COMTRADE

Chart 4.17.
Spain: GDP and appliance sales
(% Chg, YOY)



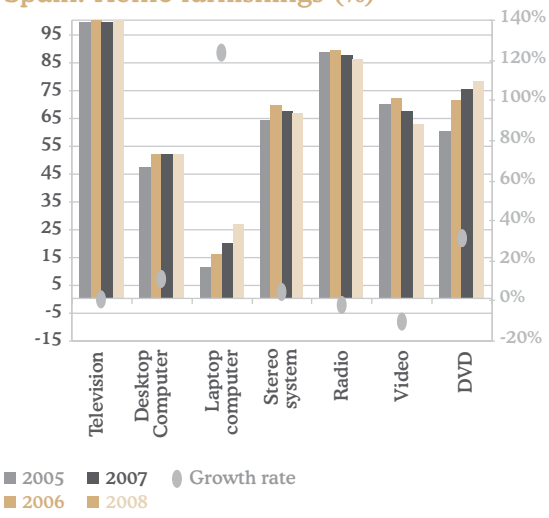
Washing machines
Refrigerators
Real GDP
Source: BBVA Economic Research Department based on ANFEL and INE data

Chart 4.18.
Spain: CPI for video & sound and computer equipment



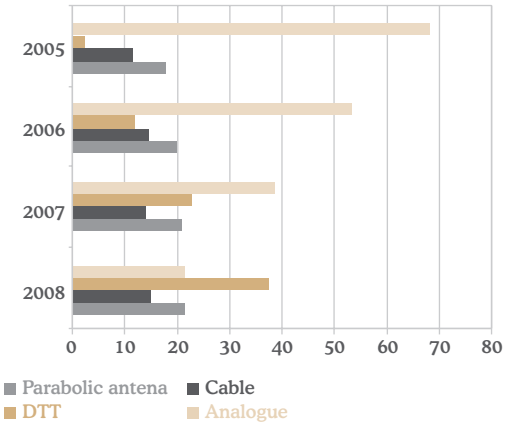
Source: BBVA Economic Research Department based on INE data

Chart 4.19.
Spain: Home furnishings (%)



Source: BBVA Economic Research Department based on INE data

Chart 4.20.
Spain: Home reception of TV channels (%)



Source: BBVA Economic Research Department based on INE data

Lower prices have encouraged Spanish households to acquire more advanced technology and to replace articles based on more traditional technology. According to data from the National Statistics Institute (Instituto Nacional de Estadísticas, INE), since 2005, the presence of portable computers or DVD players in Spanish households has increased by 123% and 38%, respectively, while that of radios and video players has decreased by 3% and 11%, respectively. Purchases of desktop computers, home cinemas and GPSs continue to grow at modest rates, but above 5% per year.

The trend in television sets merits special attention. Although nearly every household in Spain has a television, the sets have gradually been upgraded. By type of screen, 20% of televisions in use were flat-screen (e.g. LCD or plasma) in 2007. Moreover, with the imminent disappearance of analogue television signals, the number of digital terrestrial television (DTT) decoders or televisions with built-in decoders has increased spectacularly. In 2008, DTT surpassed analogue television as the most widely used television-reception platform in Spain, representing 37.6% of the total. In addition, the use of ADSL television increased considerably (75%) between 2007 and 2008.

Also highly important is the increase in Spanish households with internet connections, and specifically with broadband connections. Although still below the EU-15 average, the proportion of Spanish households with internet connections has risen from 35.5% in 2005 (versus 45% in the EU-15) to 51% this year (versus 59% in the EU-15 in 2007). Broadband connections have followed a similar trend. To illustrate the growth in broadband, 21% of Spanish households in 2005 had broadband access, whereas this year 43.5% do.

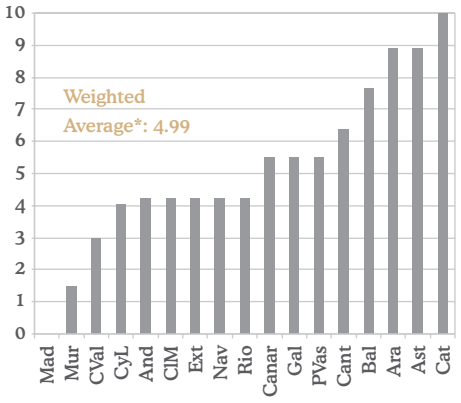
Spanish households are clearly continuing to join the “information society”, thanks to the greater availability of technology at more affordable prices and the increase in technology education in Spanish society.

The Bolkestein directive: a revolution in the retail sector?

On 1 January 2010, the EU Directive on Services in the Internal Market, more commonly known as the Bolkestein Directive, will take effect. One of the purposes of the directive is to facilitate the establishment of enterprises in Member States and to streamline administrative formalities, through a one-stop process. Not surprisingly, one of the economic spheres most affected by the imminent transposition of the directive into Spanish law is commerce, inasmuch as the directive will prevent Spanish autonomous regions from limiting the construction of shopping centres and hypermarkets in their territories for economic or demographic reasons.

Spanish regulation of the commercial sector has tightened in recent years in terms of both opening hours and Sunday/holiday openings, and store opening requirements, making it one of the most restrictive in Europe. According to indicators of regulatory conditions in the retail distribution sector published by the OECD, Spain's retail sector is more closely regulated than the EU-15 average. However, given the model of the Spanish State, this level of protection varies considerably among autonomous communities, as shown by the indicator of regulatory conditions in the retail distribution sector (ICRCM) constructed by BBVA Economic Research Department[1]. To develop this indicator, available data on the existence of moratoriums on new store openings, the number of authorised Sunday/holiday openings, barriers to entry and taxes on large-scale retailers were combined, as these variables proved to be those that best explained the disparity by region in statistical terms. A value of zero was assigned to the least strict regulations, and a value of 10 to the strictest. The outcome shows that Catalonia, Asturias, Aragon and the Balearic Islands are the most restrictive, while Madrid and Murcia are the most permissive.

Indicator of regulatory conditions in the retail distribution sector 2007

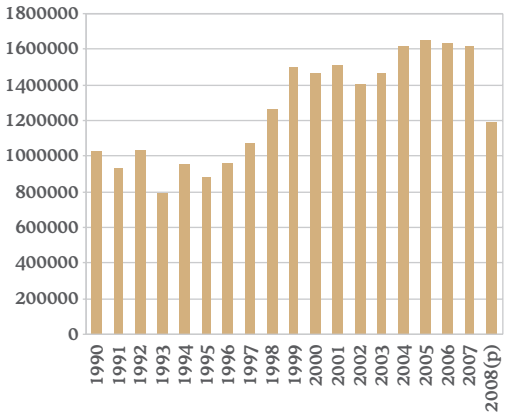


* Weighted by turnover
Source: BBVA Economic Research Department

Various economic forums have considered the Bolkestein Directive favourable, as easing regulations will make the sector more efficient, possibly raising productivity, containing price increases and creating more jobs. Nevertheless, although the economic agents involved are optimistic, the directive is not expected to bring about an immediate revolution in the retail sector once it is transposed into Spanish law. Clearly, by still allowing opening permits to be limited based on environmental and urban-planning criteria, some autonomous regions could resort to this option to maintain their moratoriums in effect and continue limiting the free establishment of businesses.

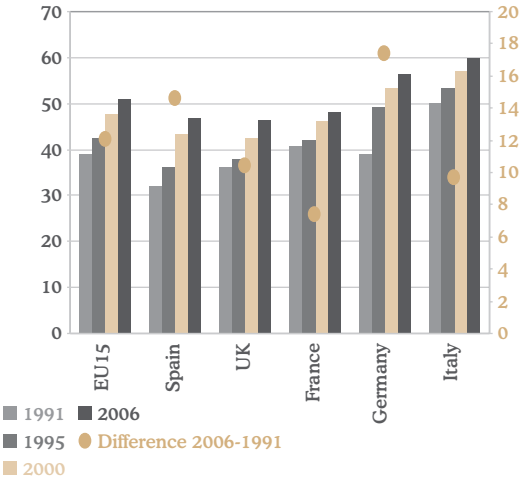
[1] For a detailed analysis of how the indicator of regulatory conditions in the retail distribution sector is developed in the different autonomous regions, see the November 2008 issue of *Economic Watch. Retail distribution: a balancing act?*

Chart 5.1.
Spain: Car registrations
(Cumulative to December)



Source: BBVA Economic Research Department and ANFAC

Chart 5.2.
Vehicles per 100 inhabitants



Source: BBVA Economic Research Department, Eurostat, ACEA and ANFAC

5. Profile of an auto buyer

The auto industry is one of the most cyclical. It grows in times of economic expansion and contracts in times of crisis. Therefore, an analysis of the sector is crucial when the cycle changes phases, like now. The industry's strong cyclical component, which normally leads the rest of the economy, is a testimony of Spain's current economic climate. After four years during which more than 1.6 million vehicles were registered per year, today we are moving dangerously toward fewer than 1 million, the lowest since the first half of the 1990s.

Growth until now was clearly supported by the economic boom, which raised household income and wealth; structural factors that helped sector trends converge with those of other European countries; and greater access to consumer credit. When the economy is doing well, everyone buys a car. But who buys a car when the situation turns worse? Identifying households willing and able to purchase a vehicle is essential for companies hoping to cope with what lies ahead. For this, we first take a detailed look at the convergence between the Spanish and European automobile sectors, focusing in particular on the differences in their cyclical behaviour. Next, we will turn to the 2006 Household Budget Survey (HBS) to get a profile of automobile purchasers, distinguishing between those who buy new cars and those who buy used cars. In addition, we also examine the factors that lead families to allocate a larger or smaller portion of their budget to buying a car. Lastly, although the profile of the typical consumer is likely to change when the economy is less buoyant, we present a forecast for new-car market trends next year.

Converging with European car owners…

Before examining households that buy cars, let's look at what has occurred in recent years in Spain and compare this with the rest of Europe.

The strong increase in car registrations -above population growth- has brought the percentage of Spain's car ownership closer to that of its European neighbours. After Germany, the number of cars per capita has risen the most in Spain, climbing from 32 per 100 inhabitants in 1991 to more than 45 in 2006. Accordingly, in the early 1990s, automobile ownership in Spain was 83% of the EU-15 average, but by 2006 it had risen to 92%.

Not only has there been convergence in the number of cars on the road, but also in the age and power of the cars. An analysis of the percentage of cars on the road that are more than 10 years old shows that for the EU-15, the percentage has remained relatively stable, even increasing in some countries (e.g. France and Germany), whereas in Spain it has declined by 5pp in just five years.

A similar trend can be seen in the horsepower of cars in use. Whereas in 1999, 8% of Spain's cars had a cylinder capacity above 2,000cc, by 2006 the proportion had risen by 2pp.

Used cars have followed a similar trend. While the number of car registrations increased by 0.5% a year from 2000 to 2007, the average increase for used cars was 3.1%. Therefore, the growth in the number of private cars on Spanish roads stems not only from the increase in registrations, but also from growth in transfers of used cars. The ratio

of car transfers to new cars sales has increased in recent years, but it is still far below levels elsewhere in Europe: 3.5 to 1 in the UK, 2.4 to 1 in France or 2 to 1 in Germany, but only 1.2 to 1 in Spain in 2007[1].

...but with a comparatively more volatile performance

The profile of the current context stands in stark contrast with the surge in car registrations in previous years, as the yoy rates of decline have been above 30% during the last four months. In fact, the number of car registrations is currently at its lowest since the beginning of the 1990s.

The number of registrations has declined much more sharply in Spain than in other European countries, with only Ireland seeing a downturn close to that of Spain. This is further evidence that the number of car registrations in Spain reacts more strongly both to economic expansion and to contraction (see Chart 5.4).

Having examined the current situation, we now turn back to the question of who acquires cars in Spain. To answer this, we use the household expenditure survey, or Household Budget Survey (HBS), recently published by the INE.

Profile of households that purchase cars

The answer to the question of who will buy a car in coming quarters is simple: traditional customers; i.e. young households, with large families and economic means, including ownership of their homes, will be the ones to go to a dealership to buy a car. In this section, we look at the characteristics of likely car buyers during the current economic downswing.

The latest HBS indicates that 15.4% of Spanish households set aside part of their family budget to buy a car in 2006. But, which families are most likely to make such an expenditure? BBVA Economic Research Department's multivariate analysis[2] shows that household size and income, home ownership vs. rental, as well as gender, nationality and age of the head of household are the variables that identify households with a higher propensity to purchase a car.

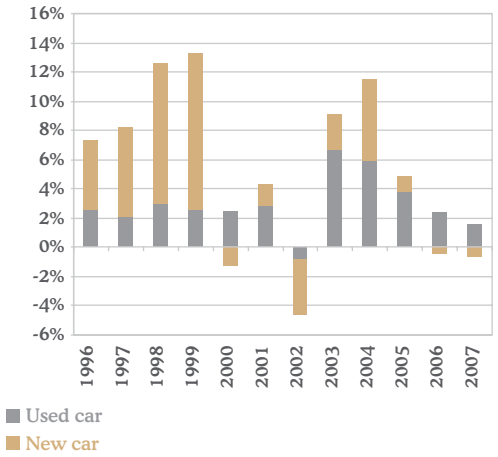
Specifically with regard to the variables that characterise households, the results show, as we might expect, that higher-income families have a higher propensity to use part of their budget to buy a car. Whereas the likelihood of purchasing a car is below 13% among those who earn less than €2,000 per month, the probability is above 20% among those who earn more than €3,000 per month and as high as 30% among those who earn more than €5,000 per month.

Household size is also an important variable for identifying households with a higher propensity to acquire a vehicle. For each additional adult in a household, the propensity to purchase a car increases 5pp.

[1] According to data from the National Association of Motor Vehicle Sellers, Repairers and Spare Parts Distributors (Asociación Nacional de Vendedores de Vehículos a Motor, Reparación y Recambios GANVAM), the ratio in Spain in 2008 was about 1.3.

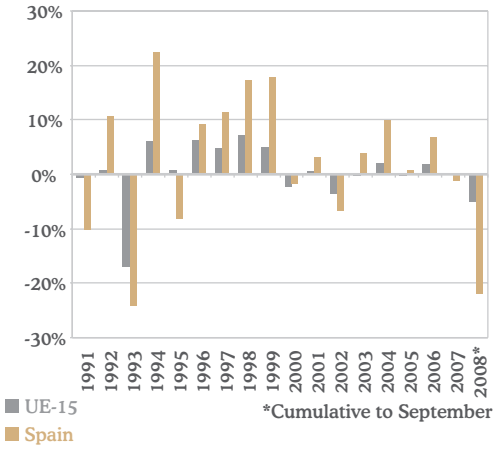
[2] The results presented in this section are based on the estimate of a discrete choice model in which the dependent variable has a value of 1 if the household is seen to have spent part of its annual budget on purchasing a car. The following explanatory variables of this decision have been taken into account: the region where the household lives, whether or not it lives in the province capital; the number of members of the household older than 18; the number of dependent children; household income; and home ownership versus rental. In addition, the following characteristics of the head of household have been taken into account: gender, employment status, nationality, marital status, educational level and age.

Chart 5.3.
Contibution to growth of car sales: new vs. used car



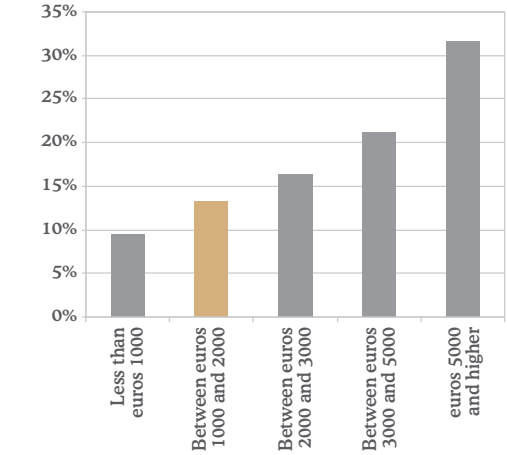
Source: BBVA Economic Research Department, INE and GANVAM

Chart 5.4.
Growth in car registrations
(Spain vs. EU-15)



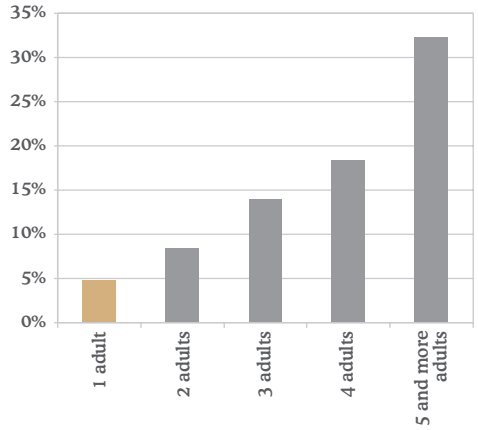
Source: BBVA Economic Research Department, Eurostat and ACEA

Chart 5.5.
Propensity to buy a car based on household income



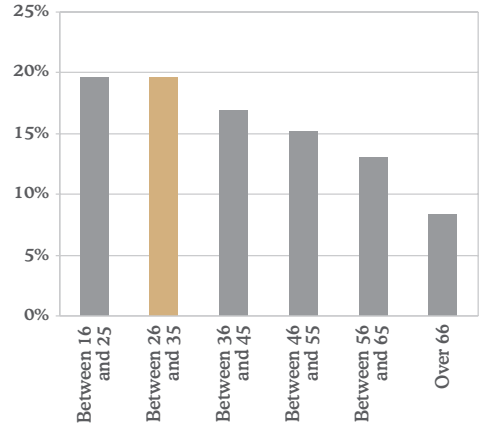
Source: BBVA Economic Research Department based on HBS

Chart 5.6.
Propensity to buy a car based on size of household



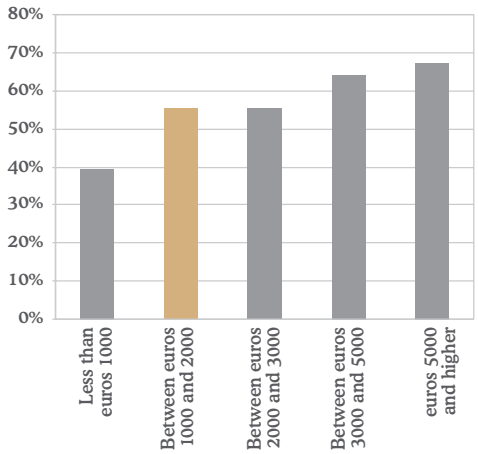
Source: BBVA Economic Research Department based on HBS

Chart 5.7.
Propensity to buy a car based on age of breadwinner



Source: BBVA Economic Research Department based on HBS

Chart 5.8.
Propensity to buy a new car based on household income



Source: BBVA Economic Research Department based on HBS

If the likelihood of buying a car among households with only one adult (20% of the population) is 5%, the likelihood among households with four adults (nearly 9% of the population) is above 20%. As shown by these findings, the more adults in a household, the more likely that it will need its own mode of transportation, whether for individual or family use.

Lastly, regarding home rental vs. ownership, the findings are eye-catching. Households that own their own home but are still paying their mortgages have the highest propensity to purchase a car. The figure for these households is 13%, 2pp higher than for families that do not have mortgages.

As noted above, with regard to the characteristics of the head of household, gender, nationality, and age directly affect the likelihood that a family will decide to buy a car. The likelihood that a family will use part of its budget to purchase a vehicle is 2pp higher if the head of household is a male and 5pp higher if the head of household has foreign nationality; in addition, the likelihood is inversely proportional to age. In the latter case, the results of the study indicate that the propensity to purchase a car among families in which the main wage earner of the household is less than 45 years old (35% of all households) is 4pp higher than among those in which the main wage earner is more than 56 years old (43% of households).

New or used car?

Once a family has decided to use part of its budget to purchase a car, what type of car does it choose: a new one or used one? About 57.6% of households opt to buy a new car and, once again, among the variables that characterise households, income, family size, and home rental/ownership play the most important role in families' propensity to purchase one type of car or the other[4].

As with the decision to purchase an automobile, a household's income level is the most important factor in the decision to buy a new or a used car. The likelihood of buying a new car is 10pp higher among households that earn more than €3,000 a month than among those that earn less.

Regarding homeownership vs. rental, individuals who own their own homes, even if they are still making mortgage payments, are the most likely to buy a new car: 20pp more likely to do so than families that rent their home. This finding probably reflects the greater ability, among families that own their own home, to access credit and, therefore, to buy more expensive cars.

Just as the number of adults in the household incrementally raises the likelihood of purchasing a car (5pp for each person over 18 years

[3] The result obtained for nationality may also be influenced by the fact that the estimation does not take into account whether the household already owns a car. The Household Budget Survey (HBS) identifies households that spend part of their annual budget on purchasing of a vehicle, but it does not gather information on the number of vehicles owned by each family. Therefore, one of the findings obtained from the estimates is that foreigners have a higher propensity to purchase a car; however, this finding may also reflect the fact that, as these households are newly formed, this is often their first car.

[4] In this case, a discrete choice model has been devised in which the dependent variable has a value of 1 if the household is seen to have spent money on a new car and 0 if it has spent money on a used car. Families that spend part of their budget on both a used and a new car have been excluded. Explanatory variables are the same as those given in the preceding footnote with the exception of marital status (the descriptive analysis does not show differences in vehicle-purchase patterns according to marital status;. for this reason, this variable has been used to allow identification in the Heckman procedure).

of age), the size of the household also appears to influence the type of car the family buys, but only in the case of very large households. Indeed, households with five or more adults (2.9% of the total), as well as those with three or more children (3.5%), show the highest propensity to purchase a used car— between 15pp and 20pp more than the rest of the households.

Nevertheless, among the characteristics of the head of the household, only nationality appears to have a significant effect on the decision of what type of automobile to buy. Whereas 63% of the homes in which the main wage earner is Spanish choose to buy a new car, only 31% of those headed by a foreigner elect to do so. Although foreign household heads are more likely to buy a car —probably because newly formed households lack their own car— the likelihood that they will buy a new one is rather low, and they normally prefer a used one.

Which households purchase more expensive cars?

The data indicate that families that purchase new cars spend more than €18,000, whereas the average expenditure on used cars is €6,600.

The most important determinant of the amount spent is, as we might expect, household income[5]. While households with an income above €5,000 per month spend an average of €27,000 on a new car and €9,500 on a used one, the figures for households with a monthly income of between €1,000 and €2,000 are €17,000 and €6,500, respectively; i.e. 33% less than the average amount spent by higher income families on used cars.

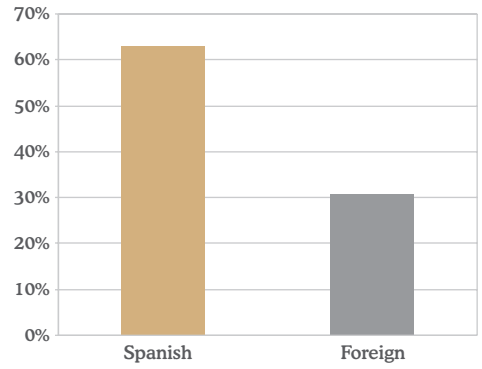
On the other hand, small households, despite having a lower propensity to buy a car, once they have decided to make a purchase, set aside a larger share of their budget for this purpose, probably because their expenses on essential items are lower. Households with fewer than three adults spend at least €2,000 more on a new car than do households with more than three adults, and up to €4,000 more when they purchase a used car.

Looking at the head of household, gender does not appear to be statistically important for the household's decision to buy a new or used car, but it does affect the household's total expenditure on the car, whether new or used. Households where the main wage earner is a male not only have a higher propensity to purchase a car, but also spend more: 11% more on new cars and up to 32% more on used cars.

Finally, households where the main breadwinner has foreign nationality spend significantly less on used cars. However, for new cars -once we take into account the fact that foreigners have a lower propensity to buy new cars- the nationality of the head of household does not significantly affect the amount of the expenditure.

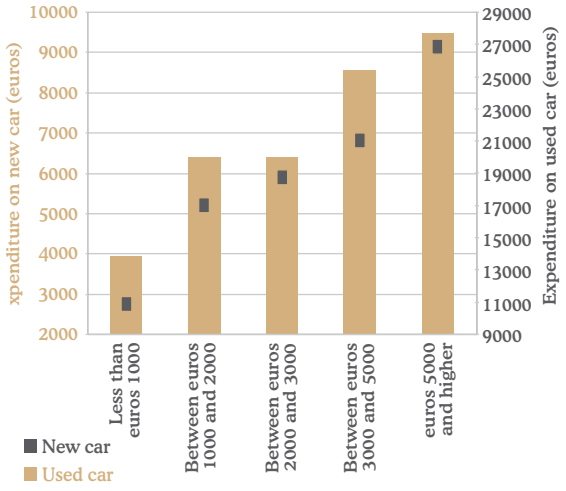
[5] The results presented in this section are based on independent estimates of the determinants of expenditures on new and used vehicles. In the case of the estimate of the determinants of amount spent on a new car, it *is* necessary to introduce a prior correction in the decision on what type of car is bought by the household: the fact that a household has a higher propensity to buy a new car does affect -positively, in this case- the amount that the household will spend on a vehicle.

Chart 5.9.
Propensity to buy a new car based on nationality of the breadwinner



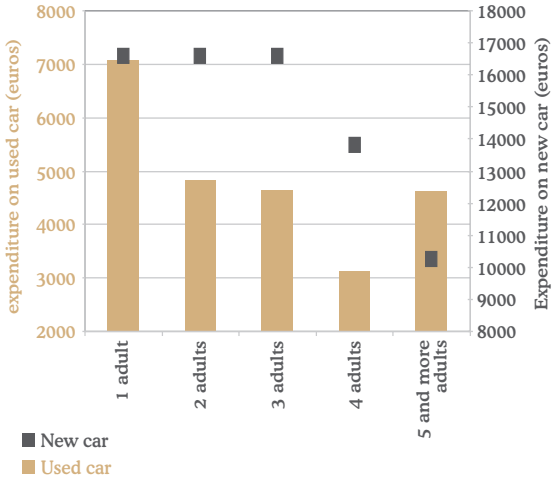
Source: BBVA Economic Research Department based on HBS

Chart 5.10.
Determinants of expenditure on new and used car based on household income



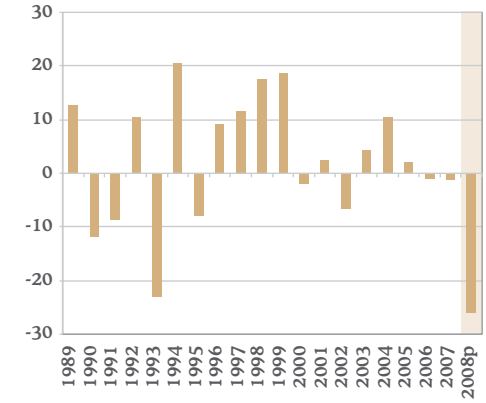
Source: BBVA Economic Research Department based on HBS

Chart 5.11.
Determinants of expenditure on new and used car based on household size



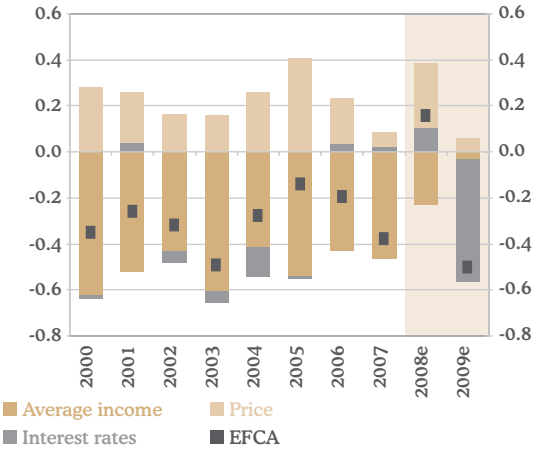
Source: BBVA Economic Research Department based on HBS

Chart 5.12.
Spain: Car registrations
(% Chg, YOY)



Source: BBVA Economic Research Department and ANFAC

Chart 5.13.
Contribution to changes in EFCA index



Source: BBVA Economic Research Department

Outlook

The results of BBVA Economic Research Department's analysis appear to indicate that larger families, with more economic means - including home ownership- in which the head of household is male, young and of foreign nationality are more likely to choose to buy a vehicle[6]. Nevertheless, once the decision has been made, small families with economic means, in which the head of household is male, will probably spend more to buy a car. The nationality of the main wage winner only appears to determine the size of expenditure in the case of used car purchases: Spanish main wage winners buy more expensive used cars.

Now, what is likely to happen in the future? What are the implications of these results in light of the slowdown in the Spanish economy? The answer is clear. Lower immigration flows, lower family income and, in the longer term, the ageing of the population lead us to expect demand for cars to fall. This is the conclusion we draw based on our expectations for car registrations, which forecast more than a 25% decline in new car sales in 2008 and a decline of about 80,000 registrations per month, on average, in 2009. These forecasts are also supported by the indicator of household access to auto financing (EFCA), which shows the percentage of family income used to purchase a car on credit. This index closely correlates to changes in the number of registrations. Nevertheless, the decline in the EFCA indicator in 2008 should be offset in 2009, especially thanks to lower interest rates.

[6] As was pointed out in the footnote on page 2, the effect of the nationality of the head of household on an automobile purchase should be interpreted with caution.

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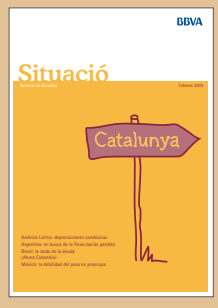

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