This box analyses in greater detail some determinants of the behaviour of the consumer credit portfolio of Spanish deposit institutions. In particular, the size of this portfolio has expanded and the volume of NPLs increased since 2015, developments that have been closely linked to the expansionary behaviour of the segment of credit for the purchase of consumer durables. Specifically, over the last three years, consumer credit extended by deposit institutions and specialised lending institutions (SLIs) in Spain has grown by some €30 billion, increasing from somewhat more than €60 billion in December 2015 to almost €90 billion in December 2018 (i.e. growth of more than 40%). Credit for the acquisition of consumer durables has been the main driver of this growth, with year-on-year growth rates of close to or above 20% since late 2016. However, this growth slowed in the second half of 2018 (14.8% in December 2018, see Chart A).

As regards the NPLs in this segment, they began to increase in 2017, reaching growth rates of around 20% by mid-2018, although their growth edged down in the second half of the year, to 18.4% in December 2018 (see Chart B).

One factor that has contributed to the growth of credit mentioned above is the behaviour of SLIs. SLIs are a group of institutions that are not able to take deposits and that tend to grant credit in specific business segments (consumer credit, mortgage credit, cards, guarantees, etc.). In December 2018, this group of institutions accounted for 4.3% of total credit to the resident private sector. In the case of households, SLIs accounted for 5.6% of all credit granted as at that date. However, the sectoral composition of the credit granted to households by SLIs has been changing in recent years, with the proportion of consumer credit rising, to the detriment of credit for house purchase. Thus, in December 2018, 67% of the credit extended to households by SLIs was for the purpose of acquisition of consumer goods. This reflects the contrasting behaviour of the credit granted by these institutions for house purchase (with negative rates of change in recent years) and for consumption, with year-on-year growth rates of well above 10% since 2014.

The relationship between the consumption of durable goods and disposable income enables us to obtain an indicator of the possible existence of restrictions on lending for the consumption of this type of goods. This is because one would expect the correlation between consumption and disposable income to be lower (higher), the smaller (larger) the percentage of restricted agents. Chart C shows the estimation for different periods of the parameter associated with disposable income in a regression model that relates this variable to the aggregate consumption series. The estimates for pre-crisis

Chart A
YEAR-ON-YEAR RATE OF CHANGE OF CONSUMER CREDIT AND ITS COMPONENTS
Deposit-taking institutions and specialised lending institutions

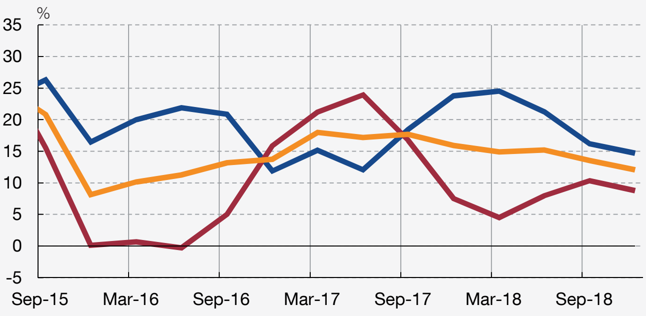
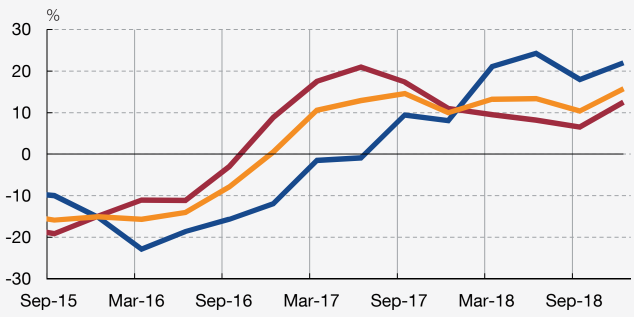


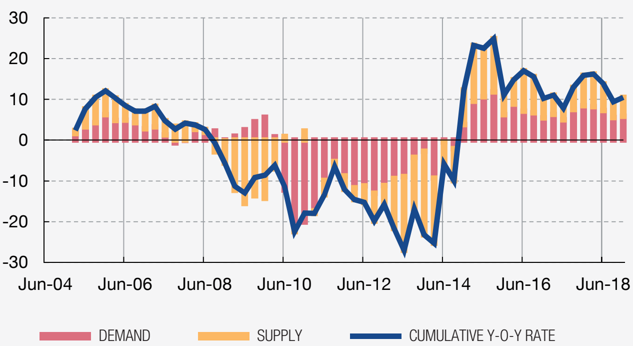
Chart B
YEAR-ON-YEAR RATE OF CHANGE OF NON-PERFORMING CONSUMER CREDIT AND ITS COMPONENTS
Deposit-taking institutions and specialised lending institutions



SOURCE: Banco de España.

Chart C
RELATIONSHIP BETWEEN DURABLE GOOD CONSUMPTION AND DISPOSABLE INCOME

Chart D
BREAKDOWN OF CONSUMER CREDIT SUPPLY AND DEMAND FACTORS. (a)



SOURCES: Banco de España and INE.

a The chart divides y-o-y growth (measured for each quarter) into two portions which relate to supply and demand factors. The breakdown is based on an SVAR periods indicate that credit restrictions were at very low levels. The higher correlation estimated after the start of the crisis suggests that these restrictions increased significantly, to reach a peak in 2014. A change in trend is observed thereafter, and a reduction – albeit not continuous – has dominated in recent years. This suggests that greater access to bank credit, in the form of a significant increase in consumer credit, has enabled households to smooth their durable goods consumption. In addition, the shocks to the supply and demand for credit for the purchase of durable goods are analysed using a structural vector autoregressive model (SVAR). This model allows us to estimate the contemporaneous effects of shocks associated with supply and demand on changes in consumer credit and interest rates. Chart D shows the historical decomposition of supply and demand factors in the growth of credit for the purchase of durable goods (in cumulative year-on-year terms) between 2004 and 2018.

This chart shows, for example, how growth in this segment has been above 10% year-on-year practically every quarter since the beginning of 2015. Before the 2008 crisis, growth in this type of credit was associated both with supply and demand factors, although supply factors made a larger contribution. When the crisis arrived supply factors appear to have been more important in explaining the decline in credit during the first stage (2008-2010) and the last stage (2013-2014) of the credit contraction period from 2008 to 2014. By contrast, demand factors were the main determinants of the decline during the middle years (2010-2012) of this period. Finally, since late 2014 both types of factor have been contributing in very similar proportions to the increase in consumer credit for durable goods.

An analysis was also performed for consumer credit as a whole, to determine which bank characteristics are most closely related to the growth of total credit and NPLs. For this purpose, a panel was considered – with half-yearly frequency, from June 2015 to June 2018 (seven periods) – with data on the 30 individual institutions with the highest relative weights in the consumer credit portfolio. The model estimated includes temporary fixed effects to control for the set of systemic factors and individual effects to control for cross-bank heterogeneity. The following explanatory variables were considered: the return on assets (ROA), the average interest rate on consumer credit, the book solvency ratio, the net interest margin, the NPL ratio for the consumer credit portfolio, the institution's market share in total consumer credit and total assets.

With regard to the growth of the stock of consumer credit, this appears to be inversely related to the level of rates applied by institutions, their ex-ante return on assets and their market share. This suggests efforts to secure a greater presence and higher returns by expanding the consumer loan portfolio, an objective attained by means of lower interest rates (see Chart E).

In addition, as regards the growth of NPLs in the consumer credit portfolio, it is striking that those institutions with the highest NPL ratios seem to be the ones experiencing the smallest increases in NPLs. This suggests that a certain convergence is occurring in the average credit quality of consumer credit portfolios and that institutions with a lower initial portfolio quality have limited their expansion in this segment. The initial return on assets appears to be negatively correlated with the growth of NPLs, and also with the growth of total consumer credit, while the other explanatory variables show no significant effects (see Chart F).

In short, consumer credit continues to grow at double-digit rates, although it slowed significantly in the second half of 2018. Supply and demand patterns lie behind these developments, in particular the desire of institutions with a low market share to increase their weight in this segment. On the other hand, highlighting a certain fragility in the demand for credit in a very benign macrofinancial context, NPLs are rising at double-digit rates and accelerating.

The Banco de España will continue to monitor these developments closely. So far, they do not pose a risk to the stability of the Spanish financial system as a whole, nor do they require the adoption of macroprudential measures, but greater vigilance is needed in relation to credit conditions and the most dynamic institutions in this segment need to be monitored.

Chart E
CHANGE IN TOTAL CONSUMER CREDIT. SENSITIVITIES (a)

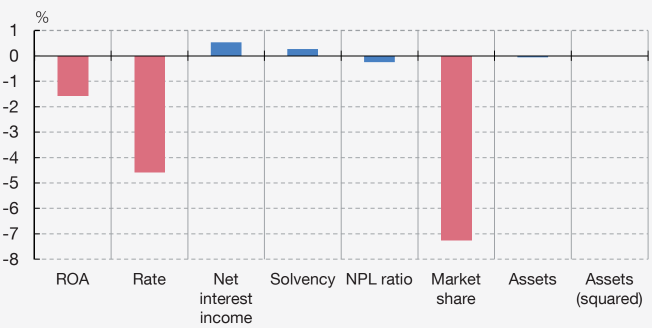
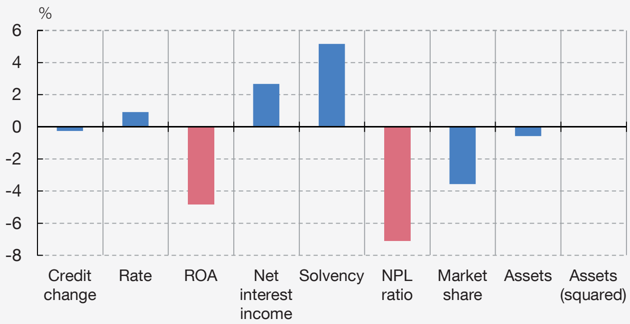


Chart F
CHANGE IN NPLs FOR CONSUMER CREDIT. SENSITIVITIES



SOURCE: Banco de España.

a ROA = return on assets, Rate = average interest rate on consumer credit. Net interest income = ratio of interest income to assets, Solvency = accounting solvency ratio, NPL ratio = NPL ratio for the consumer portfolio, Market share = market share of the institution in total consumer credit , Assets = total assets in the balance sheet, Assets (squared) = total assets in the balance sheet, squared. Statistically significant effects set at 5% are shown in red. For each explanatory variable, the panel data analysis shows the related regression coefficients.