Box 1.2

BUILD-UP OF HOUSEHOLD DEBT DEFAULTS

Bank lending to households represented 57.9% of lending by credit institutions to the non-financial private sector in Spain in December 2019 (see Chart 1). The ability of households to meet their payment obligations is therefore essential for the financial stability of the economy as a whole.

Chart 1 also shows that mortgage lending to households for house purchase was 3.7 times higher than lending for the purchase of consumer goods and other purposes, although the latter has gained more weight in the last five years as a result of the increase in consumer credit. In fact, this segment has maintained an average growth rate of more than 10%, while mortgage lending has steadily contracted (see Chart 2). Moreover, the volume of non-performing consumer credit reversed its downward trend in December 2016 and posted growth of more than 10%, while that of non-performing loans for house purchase continued to decline in the 2016-2019 period.

The varying patterns of behaviour in each of the household lending segments suggest the existence of timing differences between them. Specifically, between the defaults and impairments of consumer loans and other lending, which represent a low but increasing proportion of household lending, with a growing NPL volume, and those of mortgage loans for house purchase, which have a high relative weight in deposit institutions' balance sheets but a declining volume of NPLs.

Additionally, it should be borne in mind that households may have non-bank financial commitments with suppliers (electricity, gas, telephone, etc.), insofar as these services are paid for after they have been used. Since this type of financing has different characteristics (the collateral in loans for house purchase, for example, is the home occupied by the household,[1] while collateral is not generally required for other types of lending), and is granted by financial and non-financial institutions, the question arises as to whether households establish an order of priority for defaults in situations of financial difficulty and if, as a result, these build up.

To analyse this aspect, an econometric exercise was performed using the individual information of the representative sample of Spanish households provided by the Living Conditions Survey (LCS) of the National Statistics Institute. This survey collects information on households' payment delays on their mortgages, consumer credit, instalment purchases and bills. It also contains

Chart 1
COMPOSITION OF LENDING TO HOUSEHOLDS AND NON-FINANCIAL CORPORATIONS

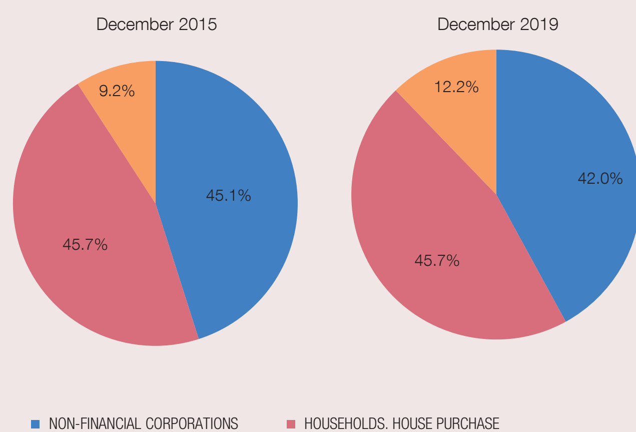
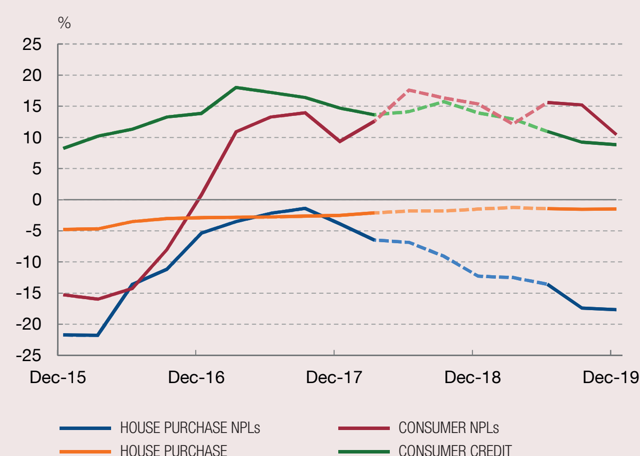


Chart 2
YEAR-ON-YEAR RATE OF CHANGE OF LENDING TO HOUSEHOLDS (a)



SOURCE: Banco de España.

a Data corresponding to deposit institutions and specialised lending institutions (business in Spain). The data for June 2018 to June 2019, shown by the broken line, exclude an institution at which substantial reclassifications were made.

1 In relation to mortgage lending in the Spanish banking system, Galán and Lamas (2019) found that the probability of default increases the higher the level of leverage of the loan, particularly the loan-to-price ratio, the borrower's ability to manage repayment of the loan (loan-to-income ratio), or maturity.

Box 1.2

BUILD-UP OF HOUSEHOLD DEBT DEFAULTS (cont'd)

Chart 3
PERCENTAGE OF SPANISH HOUSEHOLDS WITH LOANS FROM CREDIT INSTITUTIONS. AVERAGE DATA 2011-2017

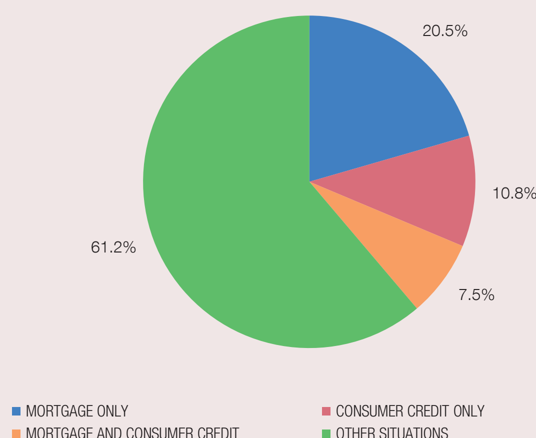
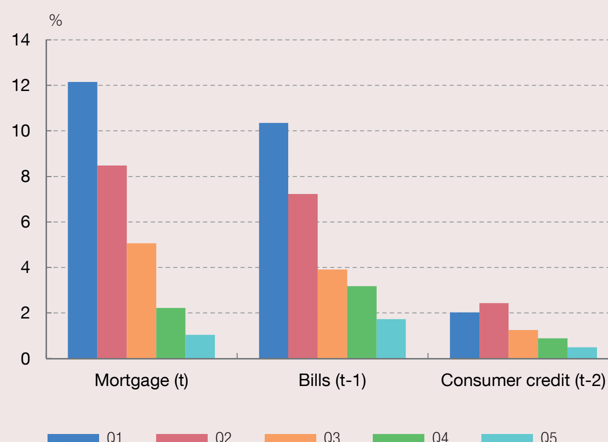


Chart 4
BREAKDOWN OF HOUSEHOLDS WITH DEFAULTS, BY LEVEL OF INCOME 2011-2017 (a)



SOURCES: INE, Living Conditions Survey and Banco de España.

a The chart shows, for each income quintile (from the bottom Q1 quintile to the highest Q5 quintile), the average proportion of households with defaults on mortgages (2013-2017), utilities bills (2012-2016), consumer credit and instalment purchases (2011-2015).

information on certain characteristics of households (level of education, age, etc.), employment status, income, household wealth or debt-to-income ratio, which determine their ability to meet their payment commitments.[2] Furthermore, three quarters of households in the survey are monitored during two to four years, allowing dynamic considerations to be added, such as those analysed here, namely, the possible build-up of defaults.

As can be seen in Chart 3, almost 40% of Spanish households had some form of debt to credit institutions in the 2013-2017 period. Of these indebted households, slightly more than half had mortgage loans only, approximately a third had consumer loans only and less than 20% had both types of loans. Chart 4 shows the average percentage of defaults on different types of loans for households with mortgages, broken down by household income levels. The percentage of defaults diminishes in line with the level of income for all loan products, with a larger decline in higher income levels for mortgages and bills than for consumer credit.

Based on LCS data, a probability model is estimated in which the mortgage default event depends on significant household characteristics and also on past defaults on consumer credit, instalment purchases and bills. With respect to household characteristics, the proportion of income allocated to paying the mortgage increases the probability of a payment delay, as does a lower level of education. However, as found in other studies, the variables with the highest information content explaining the probability of default are the transition to unemployment and a decline in household income. But, more importantly for the purposes of this analysis, past defaults on both consumer credit and bills have a statistically significant positive impact on the probability of default on mortgages.

The findings indicate that, faced with financial difficulties, indebted households first delay the payment of consumer credit, around a year later they stop paying bills and, if the situation persists for a further year, they cease to pay their mortgages. This order of priority appears to be consistent with the collateral requirements for each type of loan and with the level of necessity represented by the expense

2 Casado and Villanueva (2018) also found, drawing on data for Spanish households, but in this case, obtained from the Spanish Survey of Household Finances, that, over the life of the loan, the fall in household income and changes in the employment status of the main earner were the main factors explaining the delays in the payment of their debts.

Box 1.2

BUILD-UP OF HOUSEHOLD DEBT DEFAULTS (cont'd)

Chart 5
VARIATION IN THE PD FOR MORTGAGES OF CUSTOMERS WITH PAST DEFAULTS ON OTHER BANK LOANS (a)

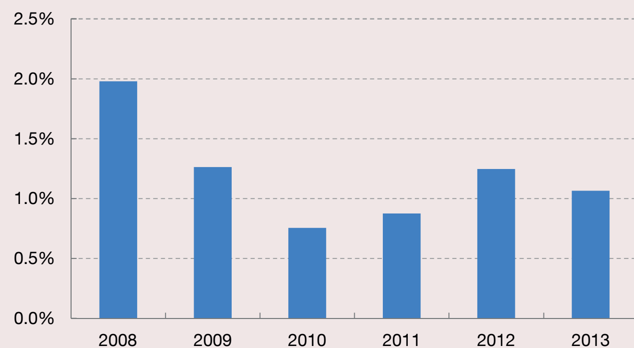
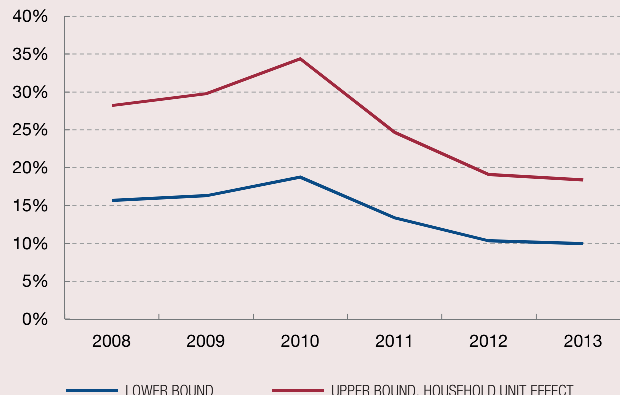


Chart 6
PERCENTAGE OF MORTGAGE DEFAULTS WITH PAST DEFAULTS ON OTHER BANK LOANS (b)



SOURCE: Banco de España.

a Difference between the PD of the entire mortgage portfolio and that observed in the population of individuals with past defaults on their other bank loans in the two preceding years (annual weighted averages obtained from monthly monitoring thereof).

b Percentage of individual borrowers with mortgage defaults preceded by other defaults in other types of bank loans in the preceding 24 months. The lower bound is obtained by considering borrowers individually, and the upper bound by assuming that the past default of a borrowers precedes two mortgage defaults (on average, mortgages have two borrowers corresponding to two adults in the household unit).

arising from of these debts. This build-up of defaults was particularly prevalent during the crisis years. Although it has subsequently decreased, it remains statistically significant. Nevertheless, to assess the quantitative impact of these estimates, it should be noted that less than 20% of households have both mortgage and consumer loans at the same time.

The aforementioned analysis was accompanied by a study, based on data from the Banco de España's Central Credit Register (CCR), on the relationship between the quality of mortgage loans and that of loans for other purposes to individuals during the crisis period (2008-2013).[3] The use of CCR data allows for this relationship to be analysed across all bank lending to individuals, not only for the representative sample of households in the LCS, but it does not measure the effect of household characteristics or of non-payment of bills as mentioned in the aforementioned study.

Chart 5 shows that the probability of impairment of the quality of a mortgage loan for house purchase increases if the borrower's other bank loans,[4] particularly consumer loans, have become impaired in the preceding 24 months. This increase is significant in all the crisis years, ranging from 0.8 pp to 2 pp in the period under review, but particularly pronounced in 2008-2009 and in 2012, coinciding with the periods of greatest financial stress in Europe. The presence of previous impairments in other types of bank loans, particularly consumer loans, can therefore be seen as a clear sign of risk regarding the ability to repay a mortgage loan.

However, Chart 6 shows that only a limited percentage of individual borrowers with mortgage loan impairments have previous impairments in other types of bank loans. This percentage ranges from 10% in 2013 to 18.8% in 2010. As this analysis is conducted at individual borrower level rather than at household level, this percentage may have been underestimated in the case of mortgages with more

3 This analysis, drawing on CCR data, is carried out at borrower level, focusing on individuals and considering as mortgage exposures those with collateral and a minimum duration of five years, and as other exposures to individuals, those lacking these characteristics.

4 The probability of impairment of a mortgage for house purchase in a given month is estimated as the frequency of transition into non-performing status (existence of objective non-performance or classification as non-performing for subjective reasons) of borrowers whose mortgage loans were performing in the preceding 24 months. Previous impairments of borrowers' other bank loans is measured as the occurrence of at least one monthly transition from performing to non-performing in the preceding 24 months.

Box 1.2
BUILD-UP OF HOUSEHOLD DEBT DEFAULTS (cont'd)

than one borrower (on average, there are two) where only one of them has a non-mortgage loan with previous impairments. On this assumption, the level of borrowers with mortgage loan impairments conditioned by previous impairments of other loans would be higher, ranging from 18.4% (in 2013) to 34.4% (in 2010).

Both studies agree that, to date, the impact on the banking sector of this build-up of defaults and impairments is moderate, since a minority of households (less than 20%) have simultaneously held both types of loans. As the recourse to consumer credit grows among the Spanish population, following a clearly observed pattern until 2019, the quantitative significance of default build-up can be expected to increase within the banking system. These studies indicate that, as a result of the shocks triggered by the coronavirus, consumer credit defaults will occur at an earlier stage than mortgage defaults in the case of households combining different loan products, and that a decline in income and employment status will adversely affect mortgage lending overall. The presence of mitigating measures, such as state-sponsored or private mortgage payment holidays or financial support to vulnerable households, may alleviate these effects.