Box 1.2

THE PASS-THROUGH OF MARKET INTEREST RATES TO THE COST OF BANK LOANS TO HOUSEHOLDS AND FIRMS

Since the beginning of 2022, interest rates have increased sharply on the financial markets, affecting interbank market rates such as 3-month and 12-month EURIBOR, which are the main benchmarks for floating-rate loans. This reflects the monetary policy normalisation process and market expectations of further policy rate hikes over the coming months.

These developments have an impact on the financial costs of households and firms through two channels: i) the increase in the cost of new lending and ii) the rise in the cost of outstanding debt for borrowers. Historically, changes in benchmark interest rates have passed through to the cost of debt for these agents more or less fully, although usually with some lag. In the case of new lending, this lag is due to commercial and statistical reasons.[1] As regards outstanding debt, it is explained by the fact that a portion of the stock of loans is not subject to interest rate revision until maturity of the related loan and that, for the portion that is subject to revision, lending conditions are not adjusted immediately, but periodically (for the most part, yearly).

This box analyses the extent to which the market rate increases observed in recent months are being passed through to the cost of bank loans to households and firms at the same pace as in other historical periods. A previous article[2] assessed this issue for the cost of new bank loans with data until May 2022. This analysis is now extended with data up to September 2022, to ascertain whether the same findings still stand. Furthermore, the box also analyses the speed at which interest rate rises are being passed through to the average rates on outstanding debt, which are more relevant both for determining financial institutions' interest margin and for assessing households' and firms' debt repayment capacity. The two exercises are conducted for loans for house purchase and loans to non-financial corporations (NFCs), which are the segments concentrating the highest volume of lending. Such loans also account for a higher share in these sectors' liabilities.

Regarding the pass-through to new lending, Charts 1 to 4 show, for different credit segments, the cumulative change in the cost of bank loans and their benchmark market interest rates between December 2021 and September 2022. Also shown, for comparison purposes, are the changes observed in these variables over a similar period of time in other historical bouts of interest rate hikes (starting in September 2005 for the short and medium-term benchmarks and in September 2010 for longer-term benchmarks).[3]

As shown in Chart 1, in the segment of loans for house purchase, between December 2021 and September 2022 average short-term interest rates[4] on new loans (floating-rate loans) only reflected 34% of the rise in 12-month EURIBOR, which is their main benchmark. This proportion is far lower than that observed (77%) in the first nine months following the start of the interest rate hike episode of 2005. As shown in Chart 2, in the case of long-term interest rates for this segment (mainly fixed-rate loans), the pass-through in the same period was even lower (30%) vis-à-vis the changes in the benchmark rate (20-year interest rate swap, IRS), which contrasts with the more than full (over 100%) pass-through observed in the 2010 rate hike cycle.

In the segment of loans to NFCs,[5] the pass-through of market interest rates to the interest rates on new bank loans is also generally being substantially slower than in other historical bouts of interest rate hikes (see Charts 3 and 4).

The slower pass-through to the interest rates on new loans in the current cycle, which is in line with previous analyses, could be due to the fact that, in contrast to the developments observed in 2005, the remuneration of customer deposits has hardly increased in response to

1 The commercial reasons would be related to the financial institutions' reluctance to change terms and conditions on loans frequently. With regard to statistical reasons, lending transactions included by financial institutions in the interest rate statistics for a given month may refer to transactions initiated in previous months.

2 For further details, see Box 1 of Analytical Article "Recent developments in financing and bank lending to the non-financial private sector. First half of 2022", *Economic Bulletin* 3/2022, Banco de España.

3 To choose the cycle of interest rate hikes in the historical period, a significant cumulative rise in the benchmark interest rate must have been recorded. In addition, the historical upward cycle must have lasted at least nine months for the short and medium-term benchmarks and, owing to the absence of longer continuous cycles with significant hikes since 2003, seven months for the long-term benchmarks.

4 In this box, the term of interest rates on new loans refers to the period in which the interest rates are fixed, rather than to the loan term.

5 Between January and September 2022, 85% of the volume of new lending to NFCs comprised loans in which the interest rate was fixed for a period of less than one year, with around one-half of such loans being for an amount of less than €1 million.

Box 1.2

THE PASS-THROUGH OF MARKET INTEREST RATES TO THE COST OF BANK LOANS TO HOUSEHOLDS AND FIRMS (cont'd)

Chart 1
CUMULATIVE CHANGE IN THE COST OF SHORT-TERM LOANS FOR HOUSE PURCHASE AND IN THE MARKET INTEREST RATE (a) (b)

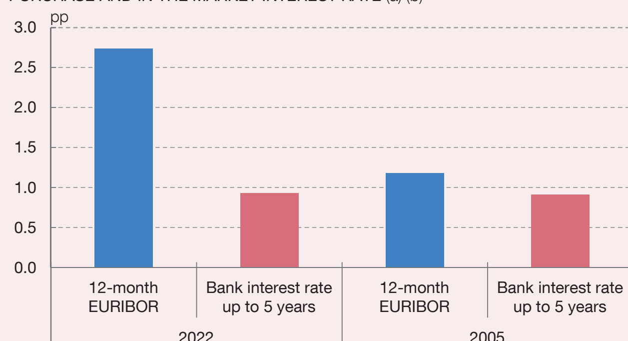


Chart 2
CUMULATIVE CHANGE IN THE COST OF LONG-TERM LOANS FOR HOUSE PURCHASE AND IN THE MARKET INTEREST RATE (a) (c)

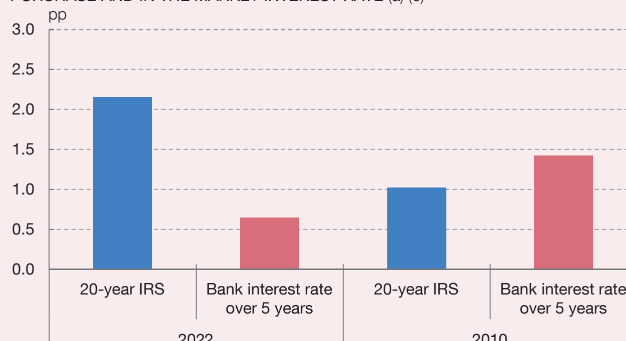


Chart 3
CUMULATIVE CHANGE IN THE COST OF SHORT-TERM LOANS TO NFCs AND IN THE MARKET INTEREST RATE (a) (b)

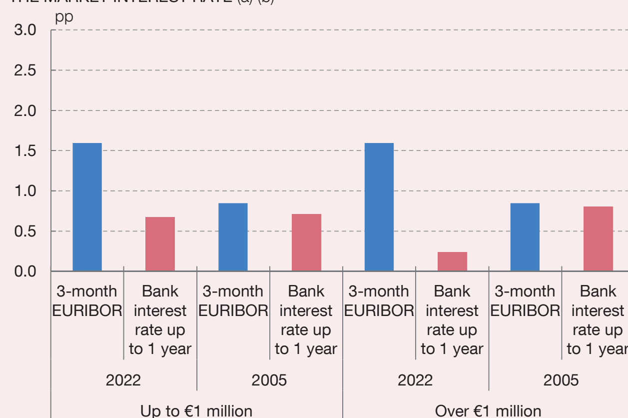
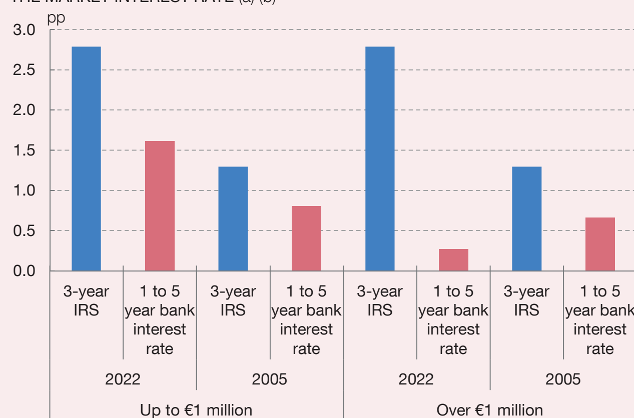


Chart 4
CUMULATIVE CHANGE IN THE COST OF MEDIUM-TERM LOANS TO NFCs AND IN THE MARKET INTEREST RATE (a) (b)



SOURCES: Banco de España and Refinitiv Datastream.

a Bank lending interest rates are narrowly defined effective rates (NDERs), i.e. they exclude related charges, such as repayment insurance premia and fees. They are also trend-cycle interest rates, i.e. they are adjusted for seasonal and irregular components (small changes in the series with no recognisable pattern in terms of periodicity or trend). Also, the bank rate term does not necessarily indicate the maturity of the lending transaction, but rather the frequency with which the interest rate on the arranged loan is revised.

b The cumulative change in interest rates is shown for two cycles between month 0 and month 9. In 2022 month 0 corresponds to December 2021 and in 2005 to September 2005.

c The cumulative change in interest rates is shown for two cycles between month 0 and month 9 in 2022 and between month 0 and month 7 in 2010. In 2022 month 0 corresponds to December 2021 and in 2010 to September 2010.

the rise in money market interest rates on this occasion. Therefore, bank funding costs would not have been as affected as in other episodes and would have exerted less pressure on financial institutions to pass them through to the price of credit. The scant response in terms of deposit remuneration might be related, in no small part, to the ample liquidity and high deposit-to-credit ratios in the banking system in the current situation. Additionally, it should be borne in mind that, unlike in prior cycles of interest rate hikes, the spread between the remuneration of deposits and money market interest rates was very high on this occasion. The latter interest rates were in negative territory whereas those on deposits did not stand below zero, except in very specific cases. However, since June 2022 the spread between interbank rates and bank deposit rates has been wider than that observed in historical normal times. Accordingly, financial institutions will foreseeably start to raise the remuneration of bank deposits in the coming months.

In order to assess the pass-through of market interest rates to the average costs of outstanding debt, Charts 5

Box 1.2
THE PASS-THROUGH OF MARKET INTEREST RATES TO THE COST OF BANK LOANS TO HOUSEHOLDS AND FIRMS (cont'd)

Chart 5
CUMULATIVE CHANGE IN THE COST OF THE OUTSTANDING STOCK OF LOANS FOR HOUSE PURCHASE AND IN THE MARKET INTEREST RATE (a) (b)

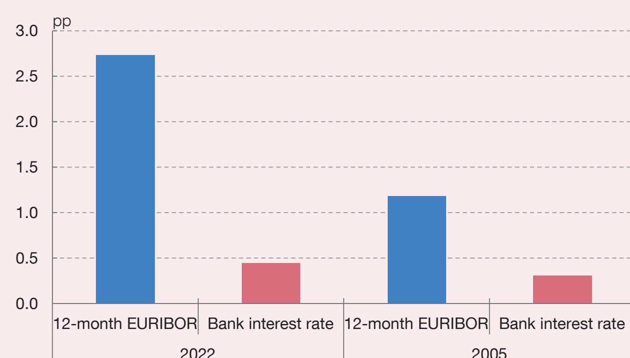
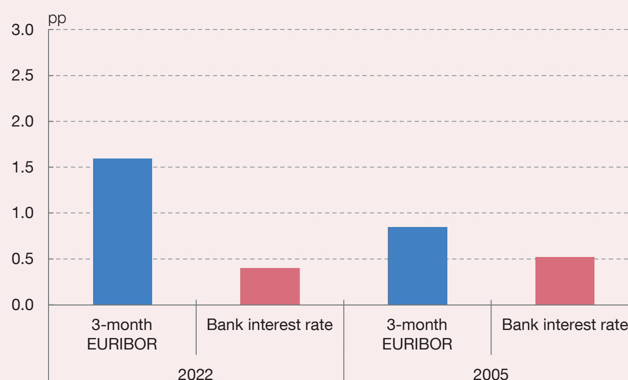


Chart 6
CUMULATIVE CHANGE IN THE COST OF THE OUTSTANDING STOCK OF LOANS TO NFCs AND IN THE MARKET INTEREST RATE (a) (b)



SOURCE: Banco de España.

a Bank lending interest rates are narrowly defined effective rates (NDERs), i.e. they exclude related charges, such as repayment insurance premia and fees.
b The cumulative change in interest rates is shown for two cycles between month 0 and month 9. In 2022 month 0 corresponds to December 2021 and in 2005 to September 2005.

and 6 illustrate, respectively, the cumulative changes in these costs and in market interest rates for loans to households for house purchase and loans to NFCs in the current cycle and in the 2005 cycle.[6] The results show that, in the loans for house purchase segment, the speed at which 12-month EURIBOR is passed through to the average cost of outstanding debt is slower (16%) than that observed in the 2005 hike cycle (26%). This is in line with the increase in the relative weight of fixed-rate mortgage loans in the outstanding stock of mortgage loans in recent years,[7] which appears to have led to a slower pass-through. Meanwhile, between December 2021 and September 2022 the average cost of the outstanding stock of loans to NFCs increased by 25% of the change observed in the benchmark market rate (3-month EURIBOR), clearly lower than the 61% pass-through observed in 2005. The slower pass-through in the current cycle may be related to the firms' funding structure, with a smaller share of loans with rates that are revisable in the short term, as a result of the extension of the average life of the loans, and to the slower pass-through associated with new loans. The presence of ICO-backed loans, which have relatively long terms and are predominantly at fixed rate, also appears to be contributing to the slower pass-through.

In conclusion, the evidence presented in this box suggests that the pass-through of market rate increases to the cost of new bank loans is slower in the current cycle than in previous episodes. The same finding is obtained when analysing the impact on the cost of outstanding debt for firms and of loans to households for house purchase. This means that, for the same change in interest rates, with all other variables remaining constant, debt repayment capacity deteriorates in the near term to a lesser extent than in the past. In any event, the financing cost of loans to households and firms must remain subject to close monitoring since, as monetary conditions tighten further and the amortisation of current loans continues, the pass-through could be expected to be larger than that seen so far.

6 The average interest rates on outstanding debt are not adjusted for seasonal or irregular components, as their performance is more stable than that of average interest rates on new lending.

7 The proportion of fixed-rate mortgage loans has risen in recent years to represent around 25% of the mortgage loan portfolio in 2021. For more details, see Asociación Hipotecaria Española (2022), "Un análisis dinámico de la cartera hipotecaria española. Segundo semestre de 2021".