

HAS THE RETAIL BANK INTEREST RATE PASS-THROUGH BEEN ATYPICAL IN 2002?

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Introduction

The adjustment of retail bank interest rates to market interest rate changes in the euro area is a key link in the monetary transmission process. Retail bank interest rates reflect the prices of money and credit, which, in turn, are important for firms and households and therefore for monetary policy. Following the decision of the ECB Governing Council to lower the interest rate on its main refinancing operations by 50 basis points on 5 December 2002, much attention was devoted in the media to the retail bank interest rate pass-through process in Germany. This discussion was triggered by some statements of banking officials, who said that German banks could currently not afford to pass through the ECB interest rate cut, given concerns about German banks' margins and therefore profitability.

Against this background, this article briefly reviews the relevant issues regarding the interest rate pass-through process and examines whether the developments in 2002 have been in line with the adjustment of bank lending and deposit rates to changes in market interest rates as observed for the years 1999–2001. In this respect, the German experience is compared with that of the euro area.

What do we know from past experience about the interest rate pass-through?

Four main issues emerge from past experience about the interest rate pass-through.

First, a distinction should be made between an immediate or short-term adjustment of retail bank interest rates to changes in official and market interest rates and a final or long-term adjustment.¹ Retail bank interest rates adjust with a delay to

changes in official and market interest rates, that is the immediate, i.e. same month, pass-through tends to be incomplete although typically there is a close to one-to-one pass-through in the long term of changes in market interest rates to retail bank interest rates. Short-term stickiness of retail bank interest rates can, among other factors, be explained by administrative costs of price changes, maintaining bank-customer relationships, risk premia and uncertainty about whether market interest rate changes are temporary or permanent.

The second important issue for the retail bank interest rate pass-through process is that maturity matters.² For instance, banks prefer to fund their loans with a comparable maturity to avoid interest rate risk due to a mismatch between their assets and liabilities and offer loans at rates which are competitive to those on non-bank sources of finance. This implies that long-term lending rates are expected to adjust more to changes in government bond yields than to money market interest rate movements.

Third, an important difference between the adjustment of lending compared to deposit rates is that credit risk considerations will play a role in the way the former respond to official interest rate changes (for empirical evidence for Germany see Winker 1999). In addition, the degree and speed of the interest rate pass-through highly differs across different segments of the retail bank market. This reflects, among other factors, differences in the degree of competition and market power of banks. The fourth and final issue is that the retail bank interest rate pass-through may change over time. Several studies provide evidence supporting the fact that the speed at which retail bank interest rates adjust to changes in market interest rates has become quicker since the introduction of the

¹ See B. Mojon, (2000), "Financial structure and the interest rate channel of ECB monetary policy", ECB Working Paper, 40; L.A. Toolsema, J.-E. Sturm and J. de Haan, (2001), "Convergence of monetary transmission in EMU: new evidence", CESifo Working Paper, No. 465; F. Heinemann and M. Schüller, (2002), "Integration benefits on EU retail credit markets – evidence from interest rate pass-through", Zentrum für Wirtschaftsforschung; and S. Kleimeier and H. Sander, (2002), "Consumer credit rates in the eurozone: evidence on the emergence of a single retail banking market", European Credit Research Institute Research Report, 2.

² Arguments and empirical evidence in favour of this for the euro area is provided in G. de Bondt, (2002), "Retail bank interest rate pass-through: new evidence at the euro area level", ECB Working Paper, 136 and for euro area countries in G. de Bondt, B. Mojon, and N. Valla, (2002), "Interest rate setting by universal banks and the monetary policy transmission mechanism in the euro area", CEPR Conference Paper, Conference entitled "Will universal banking dominate or disappear? Consolidation, restructuring and (re)regulation in the banking industry, Madrid 15 and 16 November.

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euro.³ Furthermore, the speed at which bank lending rates adjust to changes in market rates may depend on time-varying bank-specific characteristics, such as bank profitability and its interplay with bank refinancing conditions (Weth 2000).

What is a typical response of retail bank interest rates to market interest rate changes?

Bank lending rates

Table 1 provides insight into the typical response of bank lending rates in both Germany and the euro area during the first three years of Stage Three of EMU. The immediate (or within one-month) adjustment to a change in corresponding market interest rates was incomplete in all cases and typically amounted to between 40% and 75%. The immediate adjustment of bank interest rates on consumer lending and short-term lending to enterprises varies, however, between 5% and 25%. In contrast, in the long term, a complete adjustment of all bank lending rates to market rates with a comparable maturity is found. The mean adjustment lag at which market interest rates are fully passed through to lending rates is generally up to 4 months. The main exceptions are the slow adjustment speed of the interest rate on short-term lending to enterprises in Germany of 6 months and of

the interest rate on consumer lending in both Germany and the euro area of around 1 year.

Bank deposit rates

Table 2 provides insight into the typical response of bank deposits rates in both Germany and the euro area during the first three years of Stage Three of EMU. The immediate (or within one-month) adjustment to a change in corresponding market interest rates has been incomplete in all cases. A typical immediate adjustment of deposit rates varies between 45% and 55%. The immediate adjustment of bank rates on deposits redeemable at notice of up to three months and overnight deposits is, however, found to be less than 20%. The long-term adjustment of deposit rates to a change in market rates with a comparable maturity is found to be up to 85%. In contrast to bank lending rates, all deposit rates adjust in the long term by less than one-to-one to market interest rate developments. The mean adjustment lag at which market interest rates are fully passed through to deposit rates is generally up to 2 months. The exceptions are the slow adjustment speed of the interest rate on deposits redeemable at notice of over three months in Germany and the euro area. The mean speed at which these deposit rates finally adjust to market interest rate developments is found to be around 6 months.

It should be noted that these results, just as those for lending rates, might be affected by the choice of the market rate with the most comparable maturi-

³ See footnote 2.

Table 1
Overview of adjustment of bank lending rates to market interest rates in Germany and the euro area
(100 basis point change in comparable market rate passed through to bank lending rate in basis points)

Bank lending rate	Market interest rates with a comparable maturity	Immediate adjustment ^{a)}	Final adjustment ^{b)}	Adjustment speed (in months)
Germany				
Up to 1 year to firms	Twelve months	6	94**	5.7**
Over 1 year to firms	Five-eight years	56**	114**	1.8**
Consumer lending	Three-five years	8*	119**	15.4
House purchase	Three-five years	73**	98**	0.4**
Euro area				
Up to 1 year to firms	Six months	23**	90**	3.0**
Over 1 year to firms	Two years	42**	95**	3.6**
Consumer lending	Two years	7	78**	8.5**
House purchase	Five years	44**	103**	2.4**

Notes: ^{a)} Adjustment in the first month. ^{b)} In all cases the final adjustment is not statistically different from 100, i.e. there is a complete long-term adjustment. ** and * denote significance at the 1% and 5% level, respectively. For a model description see ECB Working Paper No. 136.

Sources: Bundesbank, ECB, Reuters, and author's estimations based on sample 1999.01–2001.12.

Table 2

Overview of adjustment of bank deposit rates to market interest rates in Germany and the euro area
(100 basis point change in comparable market rate passed through to bank deposit rate in basis points)

Bank deposit rate	Market interest rates with a comparable maturity	Immediate adjustment ^{a)}	Final adjustment ^{b)}	Adjustment speed (in months)
Germany				
Up to 3 months notice	Three months	17**	35*	7.3
Over 3 months notice ^{c)}	Twelve months	45**	83**	1.9**
Maturity of one month	One month	54**	72**	1.0**
Maturity of three months	Three months	50**	83**	0.9**
Euro area				
Overnight	Overnight	7**	61**	1.5**
Up to 3 months notice	Three months	6	30**	5.1**
Maturity up to 2 years	Three months	43**	76**	1.0**
Maturity over 2 years	Two years	43**	64**	1.1**

Notes: ^{a)} Adjustment in the first month. ^{b)} In all cases the final adjustment is statistically different from 100, i.e. there is no complete long-term adjustment. ^{c)} Same results are found for the euro area, since Germany has for the euro area bank rate a country weight of 100%. ** and * denote significance at the 1% and 5% level, respectively. For a model description see ECB Working Paper No. 136.

Sources: Bundesbank, ECB, Reuters, and author's estimations based on sample 1999.01-2001.12.

ty. For instance, German deposits redeemable at notice of up to three months, cover special savings accounts with specific contractual conditions which usually reflect in their remuneration the movement of longer-term market interest rates.

Has the retail bank interest rate pass-through been atypical in 2002?

To assess whether the 2002 experience was different compared to that in the period from 1999 to 2001, a sequence of one-month ahead forecasts (red lines in Chart 1) for the retail bank interest rates considered and its 95% confidence interval (dotted lines in Chart 1) are calculated.⁴ These forecasts are based on actual values for the lagged retail bank interest rates and on the typical retail bank interest rate pass-through seen in 1999-2001 by estimating a model over this period, as summarised in Table 1 and 2. The yellow lines in Chart 1 are the actual values for the retail bank interest rates.

Broadly speaking, retail bank interest rates adjusted in 2002 in a typical way to changes in market interest rates with a comparable maturity. The main exception regarding lending rates is, however, that the interest rates on loans to enter-

prises have been stickier since the summer of 2002 than models may have predicted on the basis of previous experience (see top panel of Chart 1). The latter finding is particularly marked in the case of Germany, where short-term lending rates to enterprises have remained fairly stable since July, while the model would have predicted a slight decline. But also for long-term lending rates to enterprises, the bank rates were higher than predicted by the model, albeit not at a statistically significant level. The main atypical observations found for deposit rates are that the German interest rates on deposits with an agreed maturity of one month and of three months, respectively, adjusted more quickly to falling money market rates in December 2002 than might have been expected from past experience (see bottom panel of Chart 1).

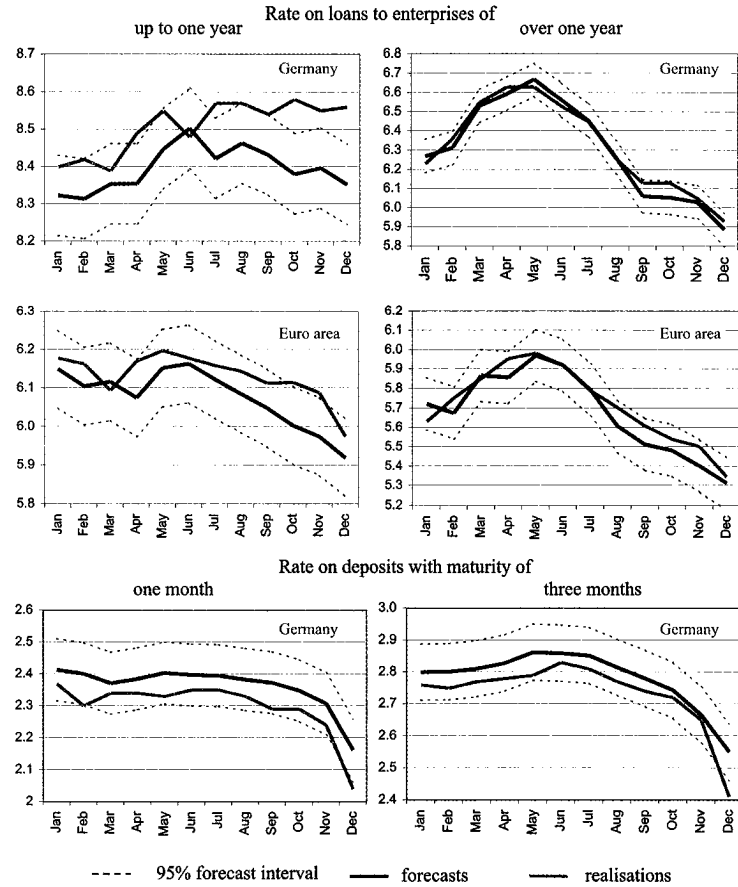
In sum, these findings show that banks in Germany were slower in lowering their corporate lending rates than usual in the second half of 2002, but at the same time much quicker than observed in the past to lower their rates on deposits with an agreed maturity, following the ECB Governing Council decision to lower interest rates by 50 basis points on 5 December 2002. This suggests that the retail bank interest rate pass-through has been asymmetric in December 2002, e.g. deposit rates are quicker to adjust downwards than lending rates in a environment of falling market interest rates.

⁴ Chart 1 plots this for the retail bank interest rates which show a striking atypical behaviour. Charts for the other retail bank interest rates are available upon request.

Chart 1

ONE-MONTH AHEAD FORECASTS OF BANK LENDING RATES IN 2002

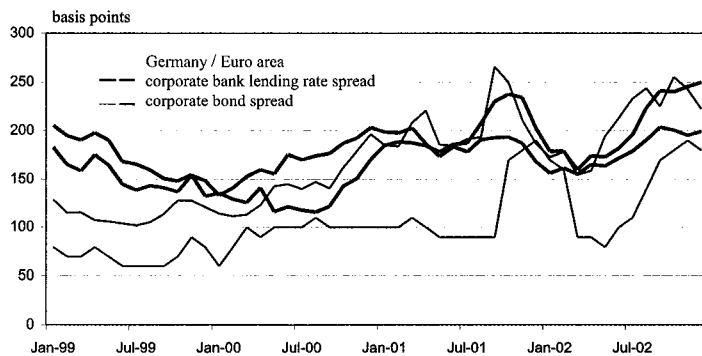
Based on estimated 1999-2001 pass-through process
(% p.a., monthly average)



Source: Bundesbank, ECB and author's calculations and estimations.

Chart 2

CORPORATE BANK LENDING RATE SPREAD AND CORPORATE BOND SPREAD IN GERMANY AND THE EURO AREA



Corporate bank lending rate spreads are the difference between the interest rate on loans to enterprises of over one year and a comparable market interest rate; German corporate bond spreads are the yield difference between corporate and government bonds; Euro area corporate bond spreads are the difference between the yield on seven to ten-year BBB rated corporate bonds and on seven to ten-year government bonds.

Source: Bloomberg, Bundesbank, ECB and author's calculations.

Do credit risk considerations help in explaining the atypical sticky corporate lending rate?

A likely explanation of the more than usual sluggish behaviour of corporate bank lending rates is credit risk considerations. Corporate bond spreads can provide an indication of the market perceptions of the prevailing degree of corporate credit risk (see Chart 2). In fact, this indicator suggests that credit risk concerns rose considerably in 2002, in particular in the second half of 2002. These concerns can also be seen in the spread between bank lending and market interest rates. Furthermore, it should be kept in mind that corporate bond spreads, based on one particular rating category may be biased if there are substantial numbers of credit rating downgrades from that credit tier as was the case in 2002.

Further evidence in favour of relatively high credit risk concerns in the fourth quarter of 2002 is that the interest rates on long-term corporate loans, as set by German banks, diverged more than usual across borrowers (see Chart 3). This suggests a relatively large difference between bank perception of the credit risk of "bad" and "good" borrowers.

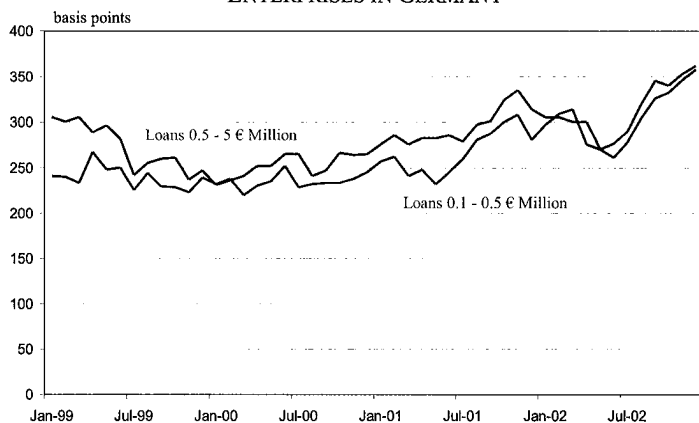
In sum, there can be good reasons to assume that the observed atypical pass-through to loans to enterprises reflected, at least to some extent, credit risk considerations.

Concluding remarks

To examine the retail bank interest rate pass-through it is

Chart 3

RANGE OF REPORTED BANK RATES ON LONG-TERM LOANS TO ENTERPRISES IN GERMANY



Interest rate range calculated by deleting the 5% lowest and 5% highest reported bank interest rates.

Source: Bundesbank.

adjusted much more quickly to the decline in money market rates in December 2002 than expected from past experience. This suggests that at least in certain segments of the German retail bank market banks, with high loan-loss provisioning needs and profits under pressure, have been attempting to maximise their margins through an asymmetric interest rate pass-through in late 2002.

important to i) distinguish between an immediate and final adjustment of retail bank interest rates, ii) take into account the maturity of the retail bank rates, iii) take account of credit risk developments regarding bank lending rates, and iv) consider the possibility of time-variation in the retail bank interest rate pass-through process.

Experience of the first three years of Stage Three of EMU suggests that for most bank lending and deposit rates, it may take up to 4, respectively, 2 months before the adjustment process of retail bank rates is completed. The adjustment speed is, however, found to be significantly lower for the interest rate on loans to enterprises of up to one year in Germany (6 months), on consumer lending in Germany and the euro area (12 months) and on deposits redeemable at notice of up to three months in Germany and the euro area (around 6 months).

Turning to developments in 2002, the majority of the responses of retail bank interest rates in Germany and the euro area to changes in market interest rates with a comparable maturity was reasonably consistent with past trends. However, the interest rates on loans to enterprises have, notably in Germany, behaved a bit differently since the summer of 2002 from what might have been expected on the basis of past trends. A likely explanation for this atypical sticky interest rate behaviour is that credit risk considerations played some offsetting role. At the same time, the interest rates on German deposits with an agreed maturity of one month and of three months, respectively,