

Research Brief



Which factors influence the pass-through of changes in policy and money market rates to bank lending rates to firms?

86th edition – September 2026

Henrike Michaelis and Reimers Endres

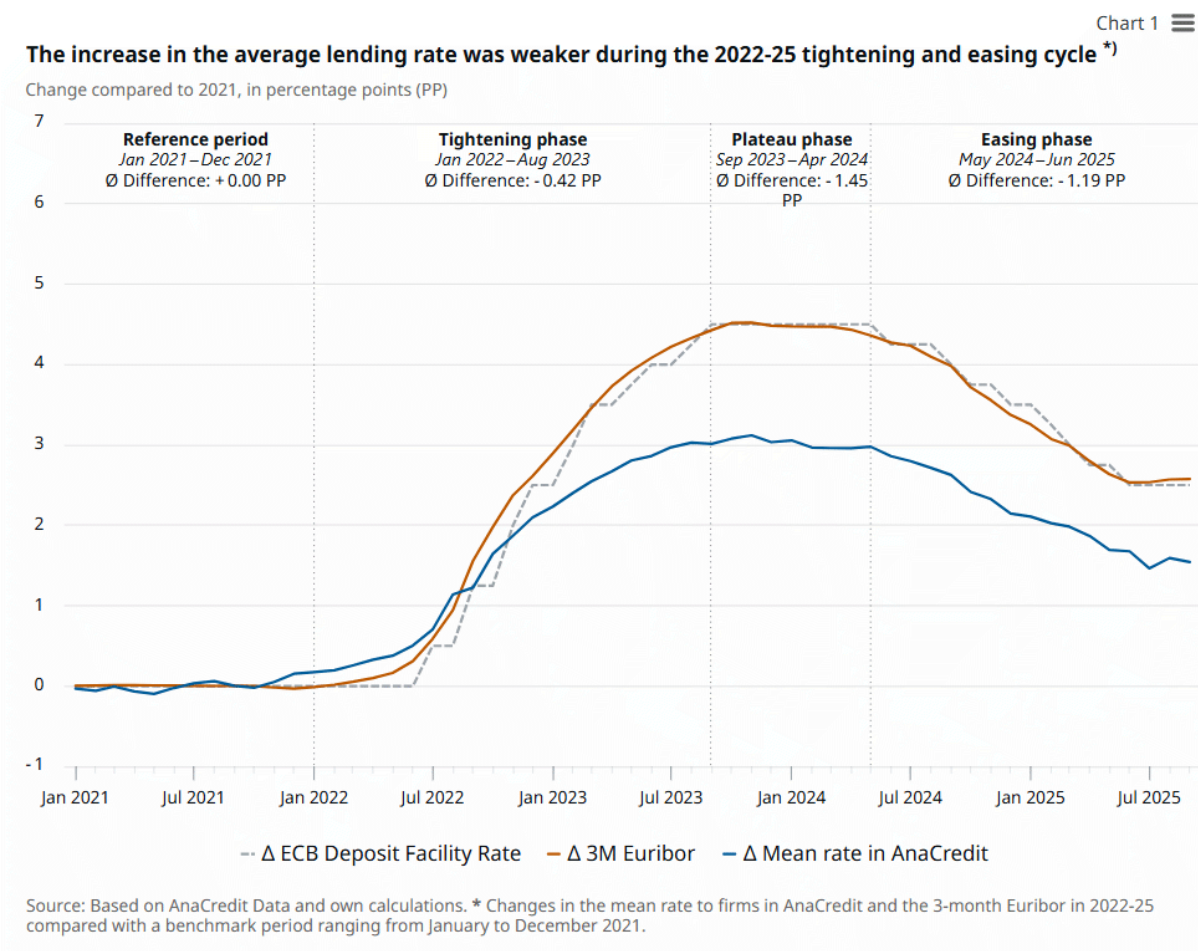
doi.org/10.71734/RB-86-en

Why didn't lending rates for bank lending to firms rise as much as policy and money market rates in the recent monetary tightening cycle? Earlier findings that interest rate pass-through is incomplete are based on aggregate data. The question of which factors are at play at the micro (credit) level is yet left unexplored. We pick up on this topic in our study. Our finding: the main factor, alongside the pass-through of funding costs, was a change in the pricing of credit characteristics, while compositional shifts in lending played a minor role.



© gopixa – stock.adobe.com

As inflation surged from 2021 onward, central banks around the world tightened their monetary policy. In the euro area, key policy and money market rates increased by up to 4.5 percentage points (p.p.) during the 2022-25 tightening and easing cycle. Bank lending rates to firms, meanwhile, rose by only 3 p.p. – that is, by 1.5 p.p. less (see Chart 1).



What is behind this weaker increase? This question matters from a monetary policy perspective because bank lending is a key transmission channel in the euro area. The extent to which bank lending rates follow policy and money market rates is a measure of the strength of monetary policy transmission (Deutsche Bundesbank, 2023) and helps when calibrating monetary policy.

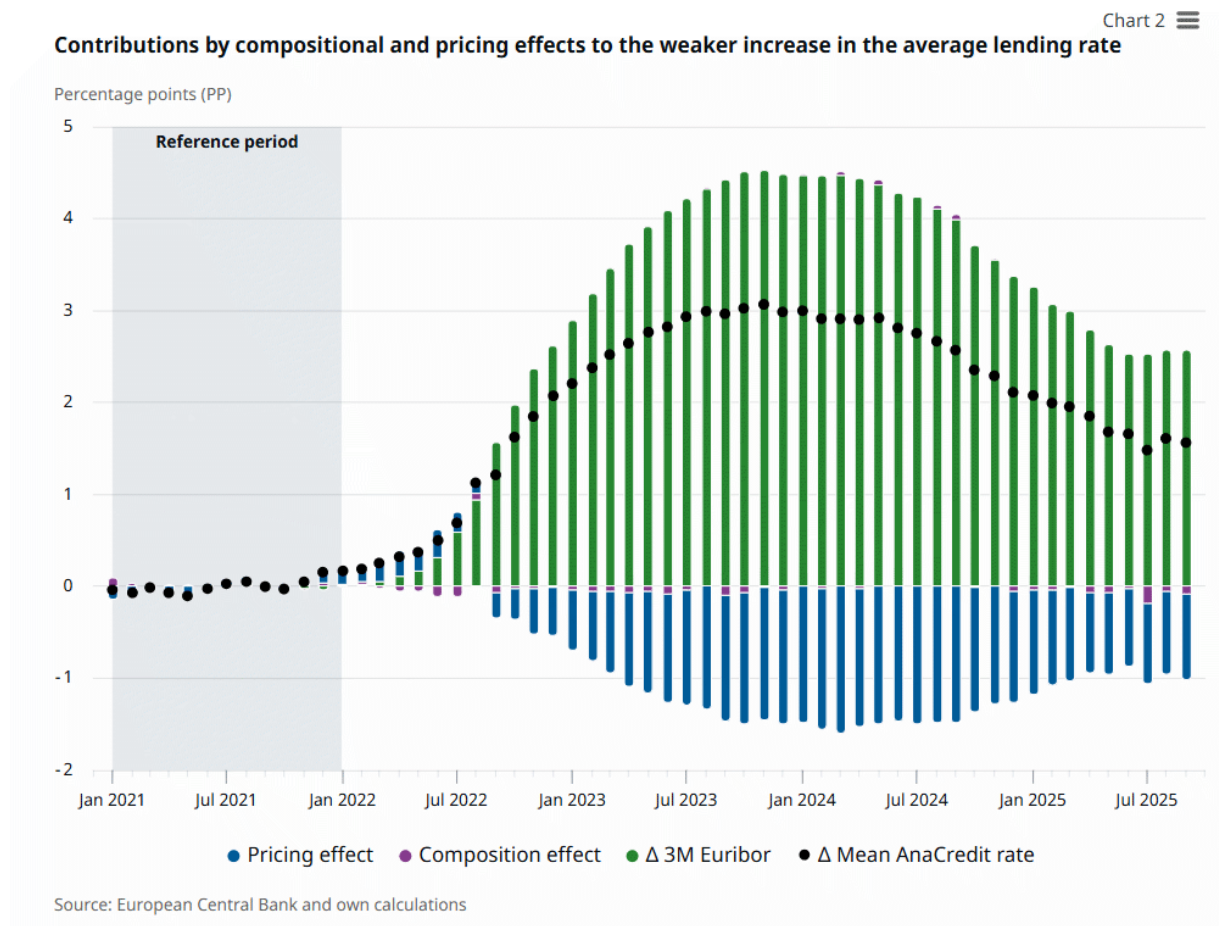
It is known that between 60% and 90% of changes in policy and money market rates are passed through to bank lending rates to firms (Belke et al., 2013; Holton and d'Acqui, 2018; Horvath et al., 2018). Pass-through is therefore incomplete. The literature mainly attributes this to changes in banks' funding costs (de Bondt et al., 2005; Deutsche Bundesbank, 2024). These generally lag behind changes in policy and money market rates. That is because banks make extensive use of customer deposits as a source of funding. Because of banks' power to set prices, the remuneration of customer deposits responds sluggishly to changes in policy rates. In combination, a high proportion of deposits and sluggish remuneration meant that the increase in banks' overall funding costs trailed behind the rise in money market rates. Assuming the lending rate moves broadly in line with the sluggish rise in costs, its weaker increase is hardly surprising. One thing was still unclear, however: which micro factors at the individual credit level were also exerting an influence on interest rate pass-through? Those drivers have been uncertain thus far owing to a lack of suitable data.

Our study, though, leverages credit-level registry data on lending to firms from AnaCredit. We also adapt a method that is well established in the labour market literature in a way that translates credit-level developments into aggregate effects. That approach evades the problem that micro dynamics cannot be readily aggregated into macro developments (Wolf, 2023).

Specifically, we decompose the weaker increase in the average bank lending rate into two effects. The first, compositional effects, results from a change in the composition of lending. There has been a shift since 2021, for example, in the shares of individual banks' new business and in the composition of firm and credit characteristics. The second, pricing effects, arises for two reasons, both of which relate to how banks set lending rates. The first reason concerns the extent to which banks pass through their increased funding costs. In our approach, banks' funding costs influence the fixed component of the lending rate – that is, the portion that exists regardless of the firm in question or credit characteristics. The second is that pricing effects come about because banks price in individual credit and firm characteristics. They do this by computing premia and discounts that are added to or subtracted from the fixed lending rate component. Pricing effects arise as these change over time.

Pricing effects explain much of the weaker increase

While it is true that both types of effects influenced the weaker increase, pricing effects were predominant (Chart 2). These dampened the increase by up to 1.5 p.p. Compositional effects were minor by contrast, dampening the increase only by up to 0.15 p.p.

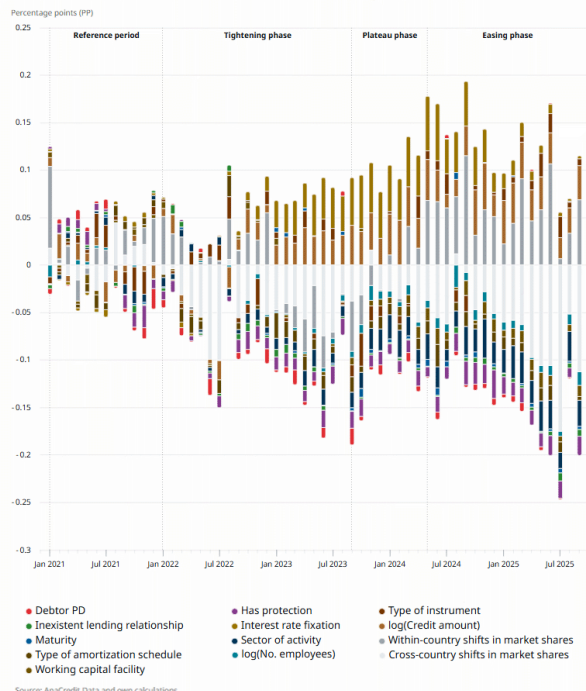


The increase was weaker because the fixed credit pricing component increased by far less than the 3-month EURIBOR (Chart 3). This confirms that changes in funding costs influence interest rate pass-through. That said, their transmission appears to be even more incomplete than the literature suggests. Because if the fixed component were the only factor, the average bank lending rate would have risen even more weakly than actually observed (not 1.5 p.p. but 2.25 p.p.).

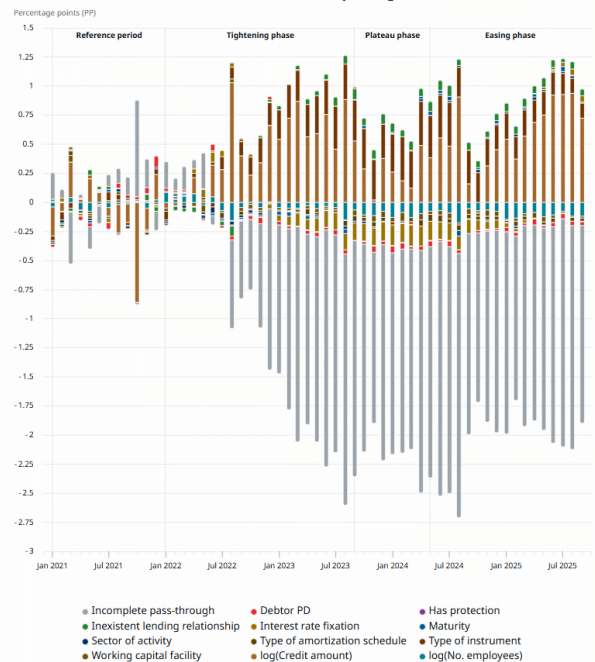
Hence, the transmission of monetary policy to bank lending rates must consist of more than just the pass-through of changes in funding costs. Our decomposition shows that shifts in the premia and discounts applied in respect of credit and firm characteristics were important, too:

- Loan amount: the bigger the loan, the cheaper it tends to be. That discount has narrowed since 2021, generating upward pressure of up to +1.3 p.p.
- Type of instrument: the pricing of traditional loans (as opposed to credit lines or revolving facilities, say) has become more expensive over time, creating upward pressure of just under +0.20 p.p.
- The inversion of the yield curve had a dampening effect. Because that makes loans with longer interest rate fixation periods cheaper than those with short ones. This dampened the increase during the tightening phase by up to 0.25 p.p.

Contributions of individual determinants: composition effect



Contributions of individual determinants: pricing effect



Compositional effects had a minor influence on the average bank lending rate

The shifts in the composition of lending highlighted in the literature turned out to be less important. Our data reveal shifts in market shares in individual banks' new business. However, their influence on the average bank lending rate remained minimal (0.15 p.p. at most during the tightening phase). Shifts in the composition of firms had a slight dampening effect as well. The influence of firms' lower probabilities of default was surprisingly small: both, compositional and pricing effects, had no more than a minimal dampening effect (0.05 p.p. at most). Shifts in the composition of credit characteristics created slight upward pressure.

Conclusion: Monetary policy is not only transmitted through funding costs – changes in how certain credit characteristics, in particular, are priced applied upward pressure to bank lending rates and merit consideration in the calibration of monetary policy impulses.

The transmission of monetary policy impulses to bank lending rates is about more than just the pass-through of higher funding costs. If that were the only driver, the average bank lending rate would actually have risen more weakly still. Earlier approaches based on aggregated data obscured the different drivers.

Our assessment at the credit level complements aggregate approaches, painting a more nuanced picture. Key drivers, alongside the pass-through of changes in funding costs, were effects resulting from changes in the pricing of credit characteristics. In particular, the discounts applied to larger loan amounts have narrowed since 2021. This pushed up the average bank lending rate, offsetting the weak pass-through of higher funding costs to a degree. Changes in the pricing of borrower-level characteristics and compositional effects, on the other hand, had a minimal influence.

Our approach provides important insights for monetary policy: It translates developments at the credit level directly into aggregate effects. Comparable findings from future tightening and easing periods will help identify patterns that are more universally valid. It is thus possible to assess the strength of monetary policy transmission better and calibrate monetary policy with greater accuracy.

List of references

Belke, A., J. Beckmann and F. Verheyen (2013), Interest rate pass-through in the EMU – new evidence from nonlinear cointegration techniques for fully harmonized data, Journal of International Money and Finance, 37, pp. 1-24.

de Bondt, G., B. Mojon and N. Valla (2005), Term structure and the sluggishness of retail bank interest rates in euro area countries, ECB Working Papers, No 518.

Deutsche Bundesbank (2024), Financing costs for banks in Germany in the monetary policy interest rate cycle, Monthly Report, December 2024.

Deutsche Bundesbank (2023), Developments in bank interest rates in Germany during the period of monetary policy tightening, Monthly Report, June 2023.

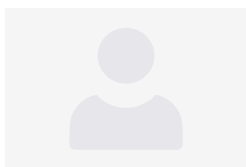
Holton, S. and C. R. d’Acri (2018), Interest rate pass-through since the euro area crisis, Journal of Banking & Finance, 96, pp. 277-291.

Horvath, R., J. Kotlebova and M. Siranova (2018), Interest rate pass-through in the euro area: Financial fragmentation, balance sheet policies and negative rates, Journal of Financial Stability, 36, pp. 12-21.

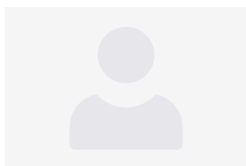
Reimers, P. and H. Michaelis (2025), Peering beyond the veil: A dissection of aggregate bank lending rate movements into pricing and composition effects using credit-level data, Bundesbank Discussion Paper, No 36/2025.

Wolf, K. (2023), The Missing Intercept: A Demand Equivalence Approach, American Economic Review, 113, No 8, August 2023, pp. 2232-2269.

Authors



Henrike Michaelis
Deutsche Bundesbank | Economics



Reimers Endres
Deutsche Bundesbank | Economics

Disclaimer

The views expressed here do not necessarily reflect the opinion of the Deutsche Bundesbank or the Eurosystem.