# ARTICLE – How do low and negative interest rates affect banks' profitability?

To push inflation up, the Riksbank and several other central banks have introduced negative interest rates. Critics say that negative rates counteract their purpose in that they are said to squeeze banks' profitability, which could then lead to higher lending rates and lower credit supply. This discussion has arisen in the euro area in particular, where banks are already burdened with low profitability. The Riksbank's assessment is that the overall effect of negative interest rates on banks' profitability is limited and may even be positive, and that the function of Swedish banks in the monetary policy transmission mechanism is maintained even at a negative policy rate level.

**Efficient credit supply presupposes a well-capitalised banking system**

To be able to lend to households and companies, banks need to have capital.[9] A good capitalisation implies in turn reasonable profitability, as new capital is in most cases built up via retained earnings.

Many banks in the euro area have been burdened by weak profitability for a long time. This has a negative effect on their capital situation and limits their scope for supplying the economy with loans. By extension, a banking system with weak profitability impairs monetary policy transmission.

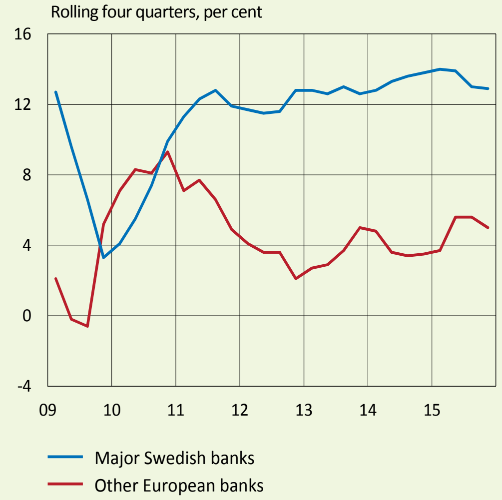
Even if profitability among banks in the euro area has been weak for some time, fresh concerns have recently emerged regarding their scope for improving profitability in a situation with low, and, in particular, negative interest rates.

The overall effect of low and negative interest rates on banks' profitability is not obvious in advance, however. Profitability can be affected in several ways, for instance as a result of falling lending rates and funding costs, but also due to changes in lending volumes, credit losses and commission income.[10]

**Low profitability in the euro area, high profitability in Sweden**

In contrast to Swedish banks, the banks in the euro area have been burdened with weak profitability for some time, when measured in terms of return on equity (see Figure 2:9). This is primarily due to that many banks there have high credit losses and hence lower earnings. In addition, they have relatively high costs.

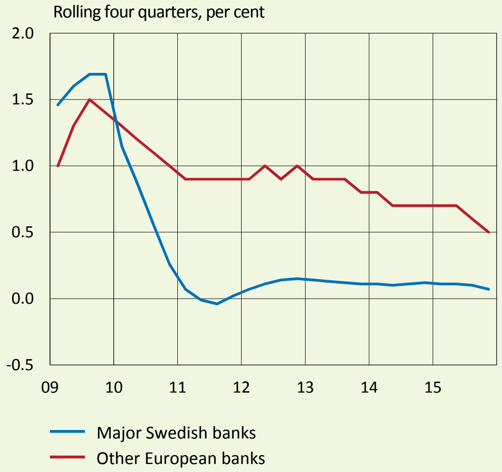
**Figure 2:9. Return on equity**
Rolling four quarters, per cent




Note. Unweighted average. The red line represents a sample of large European banks.

Sources: Banks' interim reports and SNL Financial

**Figure 2:10. Loan losses in relation to lending to the public**
Rolling four quarters, per cent

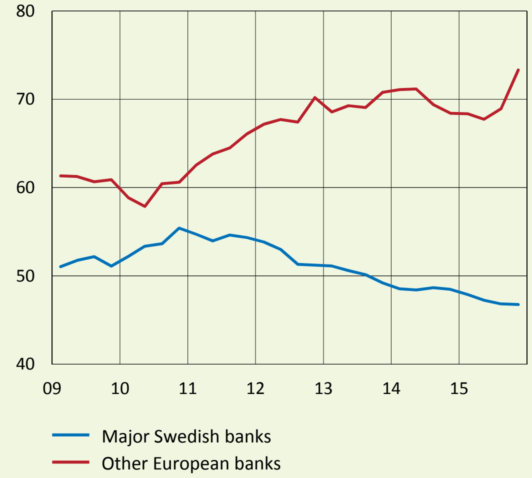



Note. Unweighted average. The red line represents a sample of large European banks.

Sources: Banks' interim reports and SNL Financial

[9] See, for example, H.S Shin, "Bank capital and monetary policy transmission", Panel remarks at The ECB and its Watchers XVII Conference, Frankfurt, 2016.
[10] See the article "Swedish financial institutions and low interest rates" in Financial Stability Report 2015:2.

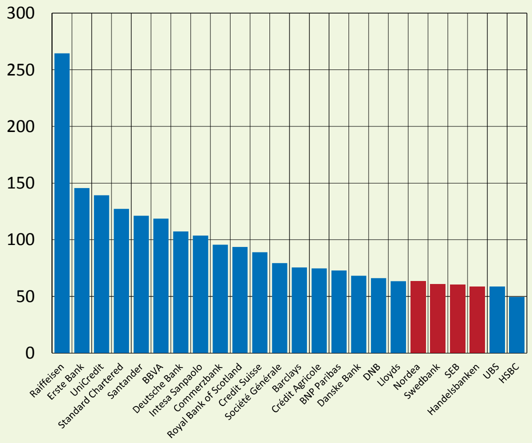
**Figure 2:11. Cost-to-income ratio**
Rolling four quarters, per cent




Note. Unweighted average. The red line represents a sample of large European banks.

Sources: Banks' interim reports and SNL Financial

**Figure 2:12. Indicative funding cost for a sample of European banks**
Basis points




Note. Measured as five-year CDS premiums and refers to the average over the last year.

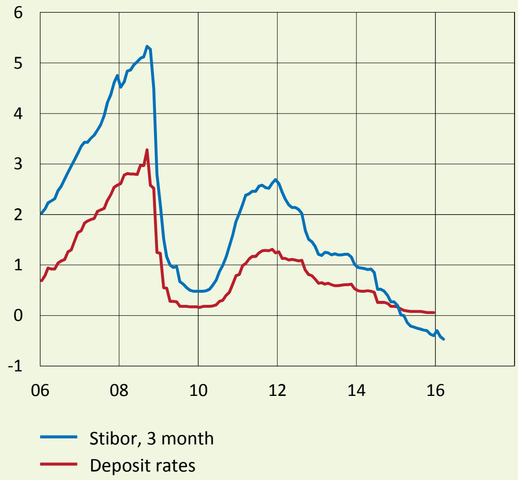
Sources: Macrobond and the Riksbank

Swedish banks, on the other hand, have had low credit losses over a longer period of time (see Figure 2:10). In addition, their cost efficiency is high (costs in relation to revenue) and they have also implemented several savings plans in recent years that have further improved the cost efficiency (see Figure 2:11). Furthermore, Swedish banks have low funding costs, which is positive for profitability (see Figure 2:12).

## Low interest rates squeeze deposit margins

Banks' profitability is affected by the difference between the lending rate and the interest with which they fund their lending, known as the interest margin. Since both the lending rate and the interest rate on funding normally follow the policy rate, the interest margin ought not to be affected by the level of interest rates. But at low and negative rates, the interest rate for funding might not fall

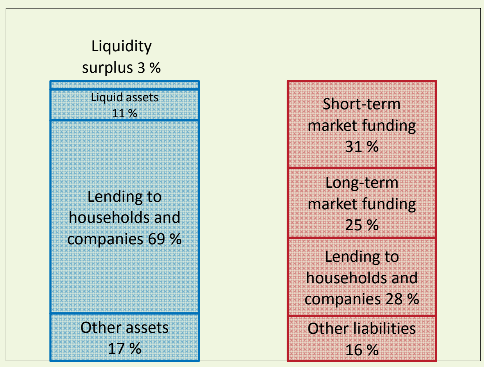
**Figure 2:13. Stibor and the deposit rate**
Per cent




Note. Refers deposit rates for households and companies.

Sources: Statistics Sweden and the Riksbank

**Figure 2:14. Swedish banks' balance sheets in SEK**
Allocation in per cent




Note. The balance sheet refers to Swedish banks' operations in Swedish kronor. The balance sheet total in Swedish kronor amounts to SEK 8,000 billion. Other liabilities also includes equity.

Sources: Statistics Sweden and the Riksbank

as much as the lending rate. This is because banks in Sweden and the euro area have so far chosen not to expose households and companies to a negative deposit rate. This means in turn that banks' "deposit margins", that is the difference between a market rate and the interest on deposits, are squeezed (see Figure 2:13). This has a negative impact on profitability.

But the extent to which the deposit margin affects profitability depends on how much a bank is dependent on deposit funding. In Sweden, banks largely obtain financing through wholesale funding (see Figure 2:14). Low and negative interest rates therefore lead to a fall in costs for a large share of the funding. In the euro area, however, banks' funding comes from deposits to a greater degree.[11]

**Lower interest rates lead to fewer bad loans and lower credit losses**

With lower funding costs, banks can offer lower lending rates to existing customers without a reduction in the interest margin. This strengthens the customers' debt-servicing ability, which in turn reduces credit losses and the need to make provisions for anticipated credit losses. In addition, lower interest rates lead to better macroeconomic conditions, which boost corporate profitability. This allow for higher wages, which further improves the conditions for borrowers in the management of their interest payments. Low and negative interest rates thereby make it easier for many banks in the euro area that have been burdened by large credit losses for a long time.[12] But this effect is less for Swedish banks since they have not been burdened by bad loans and credit losses during the current cycle of interest rate cuts.

**Limited costs of the liquidity surplus**

In both Sweden and the euro area, the banking systems have a liquidity surplus in relation to the central bank, that is they need to place liquidity at the central bank. The surplus has also increased concurrently with the Riksbank's and ECB's purchases of securities, known as "quantitative easing". The surplus is placed in the central bank, at an interest rate either equal or close to the policy rate. If the policy rate is negative, banks therefore have to pay interest on these placements. But banks can largely fund their liquid assets at a currently negative interest rate. The surplus is also very small in relation to the banks' total assets both in Sweden (see Figure 2:14) and in the euro area. Overall, the effect on banks' income of investing the surplus at a negative interest rate is therefore very small.

**No unequivocal effect on banks' profitability**

Low and negative interest rates affect banks' profitability in different ways. Table 2:2 shows the effect of low and negative interest rates on a bank's income statement.[13] As falling interest rates lead to lower funding costs, banks' interest margins should, in most cases, only be effected to a limited extent. On the other hand, a squeezed deposit margin means less net interest income. At the same time, however, the demand for loans increases at low interest rates, which can lead to larger lending volumes. Increased lending volumes improve earnings. It also contributes positively to profitability if the lending takes place at a greater interest margin than previously. Fee and commission income also tend to rise in low interest rate environments. This is in part due to the fact that the demand for capital management and investment banking services may increase when interest rates are low. Low interest rates also have a positive effect on the market for Swedish corporate bonds, which generates higher fee income for the major Swedish banks that have significant underwriting and advisory activities.

**Table 2:2. Effect of low and negative interest rates on banks' earnings**

| Income item | Effect |
|---|---|
| Net interest income | |
| Interest margin | Varies |
| Deposit margin | – |
| Increased volumes | + |
| Net commission income | + |
| Net results from item at fair value | + |
| Costs* | – |
| Loan losses | + |
| Profit | Varies |

Note. + and – specify the effect on banks' earnings. *The costs are specific to negative interest rates and do not apply to low rates in general.

Debt securities often increase in value when interest rates fall. Therefore, falling interest rates can also boost bank's profitability as a result of increased valuation profits (known as "net results from items at fair value" in the income statement).

For certain banks, there may, however, be costs specifically linked to negative interest rates. These include costs for IT systems that may have limited scope for dealing with negative interest rates, leading to extra costs for manual administration. They also include costs associated with dealing with legal and contractual problems that arise when interest rates are negative. The extent of these costs is difficult to assess, however. As already discussed, low interest rates may also lead to lower credit losses and hence have a positive effect on banks' income.

The overall effect of low and negative interest rates on banks' profitability both in Sweden and the euro area is mixed, and may differ from one bank to another. Swedish banks' profitability has been high and stable during the cycles of interest rate cuts in recent years, while profitability among banks in the euro area has increased during the corresponding period. There is therefore nothing to suggest that low and negative interest rates have so far had a negative effect on banks' profitability. The profitability problems among banks in the euro area

[11] See, for example, H.S Shin, "Bank capital and monetary policy transmission", Panel remarks at The ECB and its Watchers XVII Conference, Frankfurt, 2016.

[12] European Central Bank, Annual Report 2015, "Box 3: What do low interest rates mean for banks and savers?"

[13] A bank's earnings is not the same as its profitability. Profitability defined as return on equity refers to earnings in relation to equity. How the volume of equity has developed is therefore significant when evaluating profitability for a given period.

can instead be explained by more fundamental problems with a large proportion of bad loans in combination with high costs.

The Riksbank's assessment is that the function of Swedish banks in the monetary policy transmission mechanism has been maintained despite a negative repo rate. The banks' stable profitability therefore continues to create the prerequisites for efficient credit supply in Sweden. The prevailing low level of interest rates may, however, contribute to the build-up of financial imbalances, particularly in the form of ever-greater indebtedness and higher credit risks among Swedish households and companies, which, in the longer term, may have a negative effect on the economy and banks' profitability.[14]

[14] For further discussion, see the article "Swedish financial institutions and low interest rates" in Financial Stability Report 2015:2.