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Nominal Interest Rates: Less Than Zero?

Can nominal interest rates be less than zero? Many people would argue not, reasoning that no one would invest $100 today with a promise of receiving only, say, $99 in one year, given the alternative of simply holding the $100 in cash. Yet, rates on short-term Japanese government bills recently were negative, and several foreign-owned banks in Japan have paid negative nominal interest rates on yen deposits.

Is there a paradox? Not really. The claim that the nominal interest rate cannot be negative assumes that holding currency is costless. In the real world, however, holding cash is risky and costly. Like any valuable, cash can be lost, stolen or destroyed. Just as people pay depositories a fee for safekeeping other valuables, individuals are willing to pay a fee on deposits rather than bear the risk associated with holding cash.

In addition, there are costs associated with moving and storing cash. While these costs are trivial for a small amount of currency, they are not for large amounts. Consequently, individuals may prefer to maintain deposits at banks or hold Treasury bills rather than transport and store cash, even when these assets have negative rates of return. In effect, the negative nominal return represents a fee that individuals pay to hold deposits or Treasury bills rather than bear the risks and costs of holding cash. Just how negative the nominal interest rate can become depends on the willingness of individuals to pay for the risks and the costs associated with holding cash.

Deposit rates typically are lower than other rates for several reasons. Fundamentally, banks and other financial intermediaries profit by borrowing funds (taking deposits) at one rate and re-lending those funds at a higher rate. Depositors are willing to lend their funds to intermediaries rather than make the investments themselves because intermediaries are specialists at assessing and diversifying risk—something that is particularly difficult and expensive for those with small amounts to invest. In addition, deposits offer advantages over holding cash or other investments. For example, checks or electronic transfers from deposit accounts are more convenient and less costly, especially for large payments or payments to distant points. Furthermore, banks often bundle services, so deposit holders may gain access to certain bank services or to better prices on those services than nondepositors.

Finally, deposit rates usually are lower than other market rates because deposits bear less risk of default. This is certainly the case when the government guarantees deposits. Perceptions of default risk now are reflected in deposit rates at domestic- and foreign-owned banks in Japan. Deposit rates at foreign-owned banks generally have been lower than those at domestic banks because depositors view Japanese banks as riskier.

When market rates are very low, as they are in Japan today, deposit rates are correspondingly low, maybe even negative, because banks are unwilling to pay depositors high rates when the expected return on loans and other investments is low. Other things the same, individuals are willing to accept low nominal returns on deposits because they are paying for services that banks provide. Investors are willing to accept a negative nominal return on a risk-free asset because holding it is cheaper and less risky than transporting and storing cash.

—Daniel L. Thornton