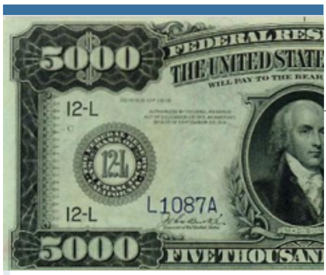
Negative Interest Rates: How Low Can They Go?



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12/29/2016 • Ronald-Peter Stöferle (https://mises.org/profile/ronald-peter-st%C3%B6ferle)

> ... there cannot be any question of abolishing interest by any institutions, laws, and devices of bank manipulation. He who wants to "abolish" interest will have to induce people to value an apple available in a hundred years no less than a present apple. What can be abolished by laws and decrees is merely the right of the capitalists to receive interest. But such laws would bring about capital consumption and would very soon throw mankind back into the original state of natural poverty. — *Ludwig von Mises*

Ludwig von Mises understood the importance of interest rates. Interest is like a price ratio (https://mises.org/blog/how-interest-rates-affect-time-preference-%E2%80%94-and-vice-versa), and fixing interest rates is therefore akin to price controls. Given that interest is not just any price, but the price of credit and with that the lifeblood of the economy, it is all the more devastating that its fate is in the hands of central planners.

Since interest rates are of crucial importance for the economy, and in view of the fact that negative interest rates have now been introduced (https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=newssearch&cd=1&cad=rja&uact=8&ved=0ahUKEwihyIeOm4vRAhUN82MKHRsGCMcQqQIIGygAMAA&url=http%3A%2F%2Fwww.bus negative-interest-rates-rewriting-textbooks-2016-12&usg=AFQjCNEMRgS7qt_zbYMJJMkzKvlRYq8aEA&sig2=3SYH4jTEwf96qoV-kLQoEQ&bvm=bv.142059868,d.cGc), one question that arises is: how low can they possibly go?

The Introduction of Negative Interest Rates

Negative interest rates have now been introduced in five currency areas, including the EU, Japan, Denmark, Sweden, and Switzerland. These currency areas represent 20% of global economic output. Negative interest rates effectively mean that as a lender you have to pay the borrower to lend them money. This turns classical economics on its head because for thousands of years it was the borrower who had to paid the lender, not the other way around. In the case of negative yielding bonds it means that the buyer of the bond is certain to book a loss if he/she holds the bond to maturity.

The obvious question is therefore: why have interest rates and yields turned negative?

The Opportunity Cost of Physical Cash

There are several possible explanations, but a major one concerns the opportunity costs of physical storage. Theoretically, if someone were to store physical cash in a safe place, they would have to pay for vaulting space, personnel, as well as security systems. This "cost of holding physical cash" means that there is a certain leeway with respect to how negative the deposit facility rate can go, which is the rate that commercial banks are forced to pay to the central bank for reserve deposits. If the cost of holding physical cash is higher than holding reserve deposits with the central bank, most commercial banks will logically tolerate a negative interest rate before physical storage of cash becomes economically viable for them.

But how deeply into negative territory can rates go before banks and savers start to look for alternatives?

In a fascinating study, Nomura examined (http://www.zerohedge.com/news/2016-02-03/how-low-can-bank-japan-lower-rates-ask-gold) how deeply into negative territory interest rates could potentially be pushed. They found that the storage cost of gold could be used as a benchmark. Nomura states:

> Theoretically, negative interest rates' lower bound depends partly on the cost of holding cash in the form of physical currency. When people hold cash out of aversion to negative interest rates, they risk losses due to theft and the like. The cost of avoiding this risk could be a key determinant of negative interest rates' lower bound, but it is hard to directly quantify. As a proxy for the cost of holding physical currency, we estimated the cost of storing gold based on gold futures prices. This cost has averaged an annualized 2.4% over the past 20 years, though it has varied widely over this time frame.
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> Interestingly, in a study by JP Morgan the bank concludes that interest rates could actually go significantly more negative than the storage cost of gold. The explanation for this assumption is that in a layered system (similar to Japan's) only a part of reserve deposits will be subject to negative interest rates, and therefore the negative interest will be offset by positive rates on the remaining deposits.
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> JP Morgan's analysts estimate that the ECB could manage to push negative rates to -4.5% if reserves in the amount of 2% of GDP were affected. They calculate a possible lower bound for negative rates for the US and Great Britain of -1.3% and -2.5% respectively, as the ratio of reserves to assets is higher in these countries.

The War on Physical Cash Supports the Case for Negative Interest Rates

> *Some observers are concerned about what they call "the war on cash." Don't worry — the war on cash is over and the government won. — Jim Rickards*

The 500 euro banknote was recently abolished. The argument is that criminals use high denomination banknotes and their criminal activities will therefore be thwarted by the abolition of large-denomination banknotes. The flaws in this argument are hard to overlook. Studies cited in support of the effectiveness of such a measure consist largely of politically motivated pseudo-science. There is not much evidence to support this argument and the hypocrisy is evident: recently, Larry Summers (who is an opponent of cash) wrote an article in the *Washington Post*, however the newspaper's editors felt obliged to point to his conflicts of interest with respect to the issue:

> Summers serves as an advisor or board member to a number of financial technology and payments companies.

However, the most important motive of these hypocritical cash opponents is crystal clear: the costs of storing cash will be increased when larger denomination notes are taken out of circulation, which in turn means that interest rates can go to even more deeply negative levels. The abolition of the 500 euro banknote primarily affects banks, which can henceforth only fill their vaults with €200 banknotes, which significantly increases the cost of holding cash — and this in turn enables the ECB to push its deposit facility rates significantly further into negative territory. In order to go "whole hog" with negative rates, cash currency would have to be abolished entirely. This would make it possible for commercial banks to pass negative interest rates on to savers without having to fear that they will resort to the weapon that is currently most feared by banks: the mattress, which grandma already used to hide her Reichsmarks.

Will Savers Actually Tolerate Negative Rates?

Above we pointed to research that argues that interest rates can go negative, and we have shown how an abolition of high denomination banknotes can also support the imposition of negative interest rates. But an important question we need to answer is: will savers actually tolerate negative interest rates?

A study by the Flossbach von Storch Research Institute came to the conclusion that German savers would react quite forcefully to negative interest rates. Only 7.6% of respondents would tolerate it if their bank were to charge negative interest rates. 44% would want to switch to a different bank, 28% would store their money physically, and 21% would invest their funds in different assets. In short, the abolition of cash would be an essential condition if the interest rate wizards really wanted to go to town with negative rates. However, in that case they would be counting their chickens before they have hatched, as the man in the street may resort to voting with his feet and choose alternative forms of money that the free market has deemed valuable — like crypto-currencies and gold.

Image source: Wikimedia