
Payden & Rygel
POINT *of* **VIEW**

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Our Perspective on Issues Affecting Global Financial Markets

MONETARY POLICY UNMASKED: OUR TAKE ON NEGATIVE INTEREST RATES

With four European central banks and one Asian central bank using NIRP (or “negative interest rate policy”), economics textbooks that teach that interest rates can’t go below zero are out of date. What did our professors get wrong, where is the real floor on interest rates and what does it all mean? (oh, and why did I have to pay \$120 for that relic of a textbook?) We inquire.

Monetary Policy Unmasked: Our Take on Negative Interest Rates

Investors feel like Alice when she tumbled down the rabbit hole into Wonderland. Except instead of encountering talking rabbits, incorporeal cats, and time that can run backwards, investors find themselves in a land where they must pay a bank for the right to hold a deposit and the bank pays them to take out a loan.

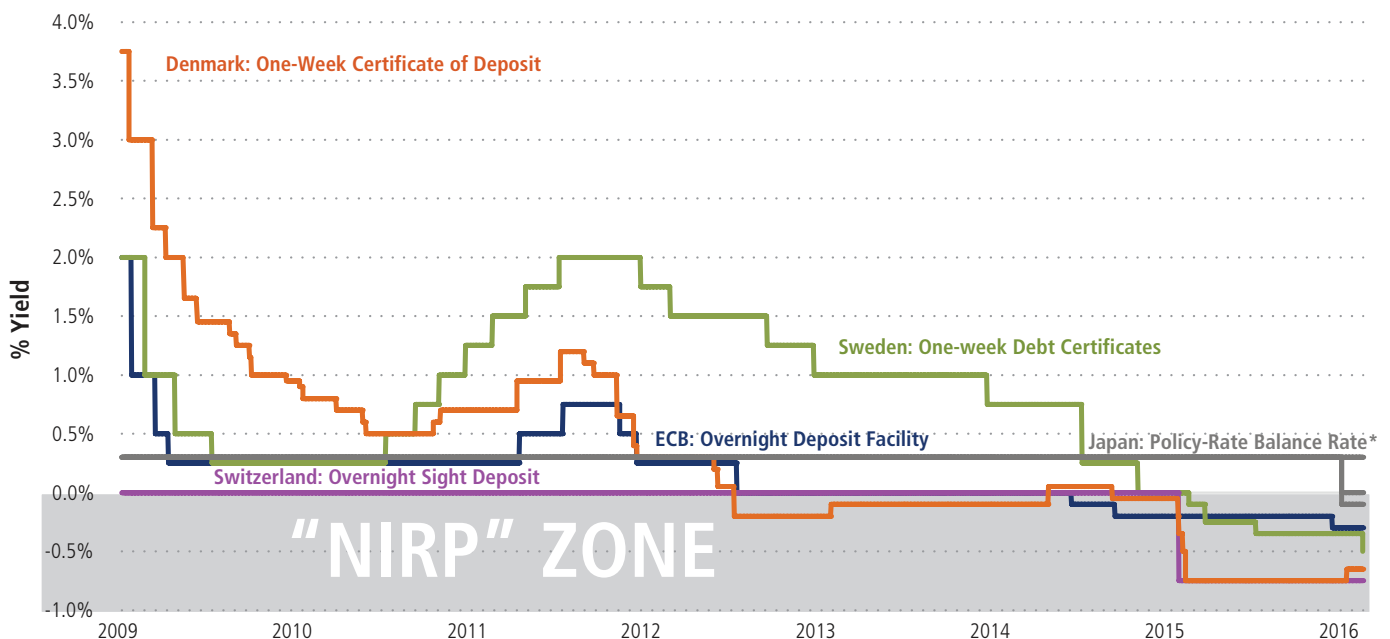
At least that's how it seems in our world where five global central banks have imposed *negative* interest rate policy (NIRP) (see Figure 1 below). The NIRP brigade includes the European Central Bank (ECB), the Swiss National Bank (SNB), Sweden's Riksbank, Denmark's NationalBank, and, most recently, the Bank of Japan (BoJ). Unlike Alice, you may not soon wake from this bad dream. It's reality.

Worse, we were told by our professors that negative interest rates were impossible, sort of like how it's impossible to exceed the speed of light in space travel (see *Did You Know* on the next page). Since "zero" appears to no longer bind, how can we make sense of this new world?

As we will argue, upon closer inspection, the innovative policy is not all that innovative. The effective lower bound may just be a little lower than previously assumed due to financial frictions. Central banks, meantime, are still pursuing the same strategies as before: attempting to induce spending and investment by lowering interest rates.

«INSTEAD OF ENCOUNTERING TALKING RABBITS, INCORPOREAL CATS, AND TIME THAT CAN RUN BACKWARDS, INVESTORS FIND THEMSELVES IN A LAND WHERE THEY MUST PAY A BANK FOR THE RIGHT TO HOLD A DEPOSIT AND THE BANK PAYS THEM TO TAKE OUT A LOAN»

fig. 1 WELCOME TO THE NEGATIVE INTEREST RATE POLICY (NIRP) ZONE:
FIVE GLOBAL CENTRAL BANK POLICY RATES ARE NOW BELOW THE ZERO LOWER BOUND (ZLB)



Source: Bank for International Settlements

*On Jan. 29, 2016 the Bank of Japan put in place a three tiered structure of rates, with one of their policy rates being negative (-0.10%)

The thing is, when operating below the zero lower bound, monetary policy is laid bare: it “works” by eroding your purchasing power in a more direct way than ever before. In the end, we doubt NIRP will help boost the economy.

TEXTBOOK THEORY: THE LOGIC OF POSITIVE INTEREST RATES

Here’s a challenge for you: go down to the nearest town square, pub, or Starbucks and offer \$10 bills in exchange for just a \$1 bill. Try it; we dare you.

At first, each passerby might think you’re crazy or a purveyor of counterfeit bills. But, soon, they may take you up on the lucrative offer, as \$1 gets them \$10—a guaranteed return for little risk/effort.

Then, on a subsequent day, try the opposite: ask for \$10 in return for \$1. The only taker would have to be as crazy as you.

Nobody wants to give up *more* today for *less* in the future.

The same intuition governs interest rates everywhere in the known universe. Since nobody is going to lend money at a negative rate when they can hold money at zero interest (in the form of dollar bills, for example), interest rates could never go below zero.

Don’t trust us? Take it from the pen of the godfather of modern economics, John Hicks, writing in 1937, “If the cost of holding money can be neglected, it will always be profitable to hold money rather than lend it out, if the rate of interest is not greater than zero. Consequently the rate of interest must always be positive.”¹

REALITY IS MESSY

Well, as it turns out, how low interest rates can go depends on the key assumption from our friend Hicks that depositors, will in fact, pull money out of the bank in the form of notes and coins that pay a zero nominal rate rather than save in investments that yield less than zero or lend money at a negative rate. But this assumption fails for two reasons.

First, as recently observed by the Bank for International Settlements, the actual implementation of NIRP equates to a tax or fee on a certain type of central bank deposit. At the BoJ, for example, a three-tiered system has been used, with only one rate (barely) negative one, and it applies to just 1-2% of bank reserves (See *Figure 1 on previous page*).

In Europe, the SNB originally instituted an exchange rate floor to stem the cross-border capital tide from euros to Swiss francs in 2011.

In 2015, when the ECB renewed its easing program, the SNB abandoned the currency peg and opted for a new strategy to fend off unwanted currency flows: a negative deposit rate instead.

But the SNB’s move wasn’t all that new. In 1973 the SNB also instituted a “deposit fee” of 2% per quarter on deposits by non-residents to stem the flow of capital into Switzerland that put upward pressure on the exchange rate. The Swiss later upped the fee to 3% per quarter in 1978. More broadly, for centuries central banks have raised or lowered discount rates to encourage or discourage capital inflows and outflows.

And that provides a good way of thinking about how negative rates have been implemented thus far: as a tax or a fee on certain types of deposits, namely those held at central banks. In short, the negative rates are charged to deposits that one must hold—they couldn’t get around it even if they tried by selling them to someone else.

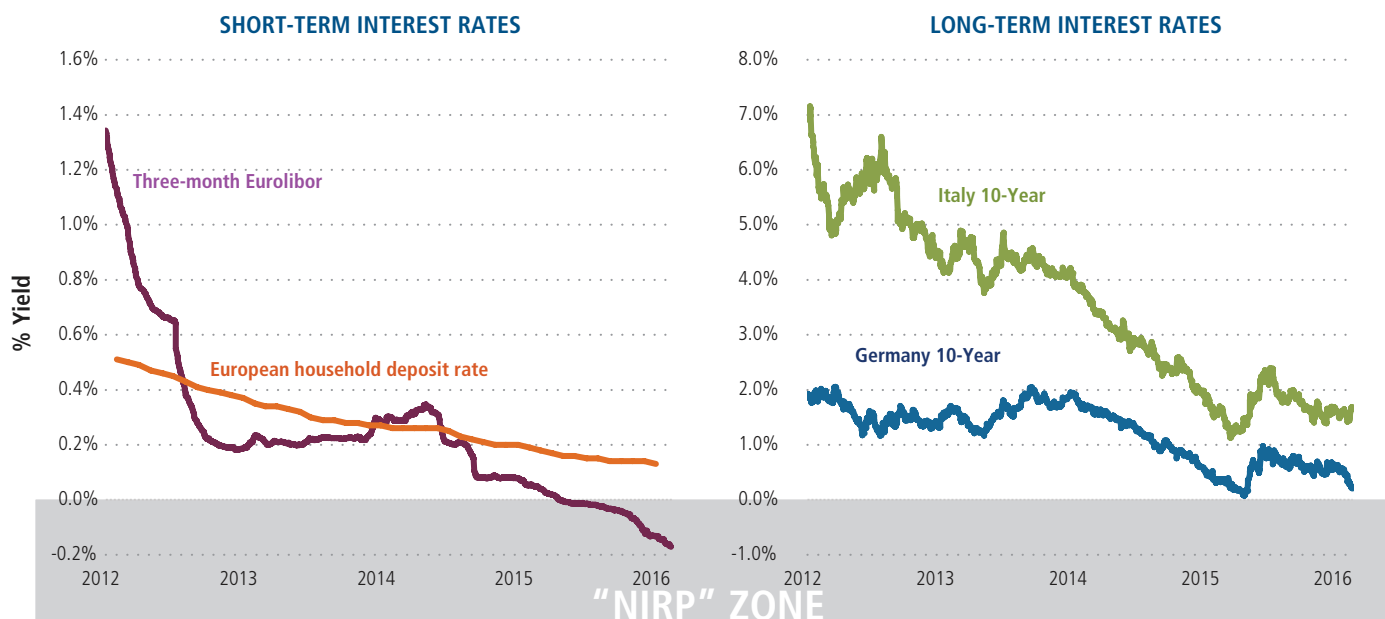
You might wonder though about negative yields on government bonds in Europe and Japan. Once again, these assets are “safe assets”—assets that must be used for capital requirements, liquidity, regulatory and collateral purposes. As a study of US Treasury bonds reminded us, investors holding such bonds do so not for the juicy yields, but “because safe asset investors have nowhere else to go but invest in US government bonds.”² This was true when rates were at just above zero and it remains true below the zero bound. There are no alternatives.

DID YOU KNOW?

The Textbooks Got It Wrong

We surveyed the top-selling macroeconomic textbooks. In fact, the top-sellers are woefully out-of-date. The most widely read introductory economics textbook in college, Greg Mankiw’s *Principles of Economics*, discusses the zero-lower bound of nominal interest rates. The textbook declares that “nominal interest rates cannot fall below zero: Rather than making a loan at a negative nominal interest rate, a person would just hold cash.” Another popular text by Paul Krugman and Robin Wells, entitled *Economics*, states that an interest rate below zero “isn’t possible” and “nobody would ever buy a bond yielding an interest rate less than zero because holding cash would be a better alternative.” Hopefully the new editions of these textbooks will fix these glaring errors. Until then, use those college economics books you keep as doorstops.

fig. 2 STILL FLOATING ABOVE? BOTH LONG-TERM AND SHORT-TERM RATES HAVE FALLEN IN THE EUROZONE, BUT HOUSEHOLD DEPOSIT RATES ARE STILL ABOVE ZERO



Source: Bank for International Settlements

Second, beyond central bank deposits and “safe assets,” in the euro area, for example, household deposit rates are low but still positive (see Figure 2 above), meaning NIRP has yet to hit retail investors and savers. When it does, we think savers will respond and seek out alternatives.

HOW LOW CAN THEY GO? IT'S UNKNOWN

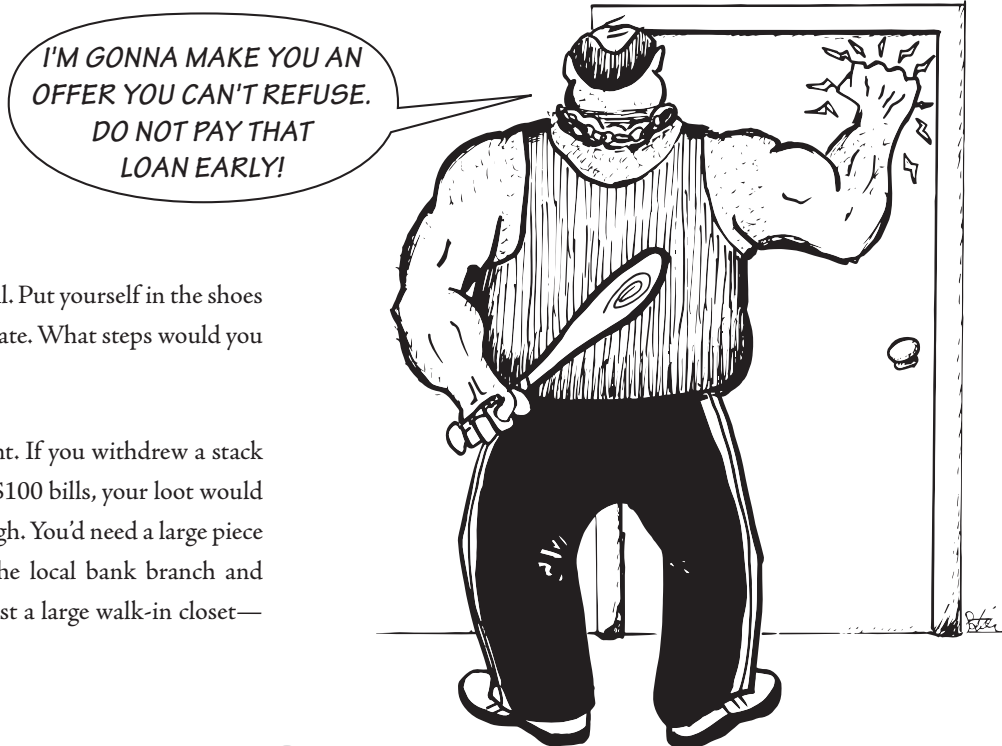
So how low can *nominal* interest rates go? It's unknown. Federal Reserve staff concluded in 2010 that negative rates below -0.35% would trigger currency hoarding among the American population. Both the Swedish Riksbank and SNB's negative rate regimes have exceeded that rate for sometime. The ECB's deposit rate just dipped to -0.4%.

In the short run, NIRP could go further still. Put yourself in the shoes of a saver facing the prospect of a negative rate. What steps would you take?

First, you could liquidate your bank account. If you withdrew a stack of 1 million US dollars comprised of only \$100 bills, your loot would weigh 22 pounds and tower nearly 4 feet high. You'd need a large piece of luggage to haul the cash home from the local bank branch and probably require an entire room—or at least a large walk-in closet—in your house for storage.

But, your problems wouldn't end there. You'd have to hire someone to keep an eye on the cash, count it, organize it, and insure it. It would be subject to fire, flooding, environmental degradation. For the average person's wealth, this wouldn't be much of a hassle. For anyone with a substantial stash of cash, the problems would mount.

Not quite vault-ready with the size of your savings? You could purchase gift cards as a way to “store value” (but then you are an unsecured creditor to a retailer). You could store value in non-cash, non-



bank assets (real estate), gold, jewelry, and Bitcoin. You could prepay your taxes—or overpay—and expect a refund (at a zero interest rate) when the tax day arrives. You could prepay your rent.

«IF YOU WITHDREW A STACK OF 1 MILLION US DOLLARS COMPRISED OF ONLY \$100 BILLS, YOUR LOOT WOULD WEIGH 22 POUNDS AND TOWER NEARLY 4 FEET HIGH»

Think these activities are merely hypothetical? Think again. In January 2016, the Canton of Zug (a state in Switzerland) requested that taxpayers delay paying their tax bills. In fact, the interest rate that was charged on late payments was abolished. In the Canton of Lucerne, there used to be 0.3% interest paid on early payments, which was also abolished last year. These cantons are obviously finding that holding cash when interest rates are negative impacts their finances adversely.³ In Japan, a chain of stores named Simachu ran out of a safe that cost \$700 and saw sales of safes soar by 2.5 times in a year.⁴ Presumably, Japanese savers are stuffing them full of yen notes.

Here's the important lesson: under NIRP, instead of boosting economic activity by saving and investing through the financial system, people waste precious time and resources circumventing the tax on their savings.

NIRP UNMASKS MONETARY POLICY

Oddly, the above horror story has done little to deter fervor for NIRP among monetary theorists. No, these folks, when faced with one obstacle, quickly find a novel solution. In this case, if the barrier to further negative rates is the ability of depositors to shift into cash (a 0% yielding asset), then why not just eliminate the asset? In Europe, talk of eliminating the EUR500 bill has emerged. In the US some economists have advocated the elimination of \$100 bills.⁵

But, importantly, NIRP unmask monetary policy. When nominal rates are above zero, central banks can use inflation to surreptitiously erode the value of money, lowering the real return earned and thus prompting consumers to spend and businesses to invest—or else lose purchasing power. Since inflation's effects are not spread uniformly across consumers and businesses, the effects are masked, less straightforward and perhaps less real.

By contrast, with low inflation and zero nominal interest rates, the NIRP tool is a full-frontal assault on purchasing power. Taxing or

charging interest to currency holders or charging negative rates on deposits would be uniformly-experienced. In short, it makes the central bank's strategy plain: erode purchasing power to encourage consumption and investment rather than hoarding.


CONCLUSION

Seen in this light, negative rates are hardly an Alice in Wonderland-type oddity. Instead, it's better to think of negative rates like taxes or fees on specific types of deposit accounts. By "raising the fee" (lowering the rate of interest into negative territory), the central bank seeks to achieve its ends. Investors will tolerate a certain "fee" or "tax" before seeking alternatives to preserve purchasing power.

In the end, we think NIRP will prove counterproductive. Since all monetary policy works through the financial system, central banks need the banks and financial markets to create and distribute credit. Forcing investors, savers and depositors to divert liquid assets elsewhere will not support credit creation.

Finally, it is instructive to think about what monetary policy seeks to achieve: a boost to spending and investment by a carefully-crafted erosion of money's purchasing power. You may not like it, but that's the simple truth. The big question we're asking: will it work? We think not.

A rising portion of institutional investors and maybe soon retail savers will be forced to pay for safety and liquidity. We doubt they will willingly comply—unless they have no alternative. What innovations will such negative rates breed?

While you ponder that question we hope we will soon be awakened and find that all the while we, like Alice before us, had just been slumbering in a bed of leaves in the English countryside. 

SOURCES

- 1 Morten Linnemann Bech and Aytok Malkhozov. "How Have Central Banks Implemented Negative Policy Rates?" *BIS Quarterly Review*, March 2016.
- 2 "What makes US government bonds safe assets?" Zhiguo He, Arvind Krishnamurthy and Konstantin Milbradt, January 28, 2016
- 3 *Financial Times*
- 4 *The Wall Street Journal*
- 5 *Financial Times*