Something economists thought was impossible is happening in Europe

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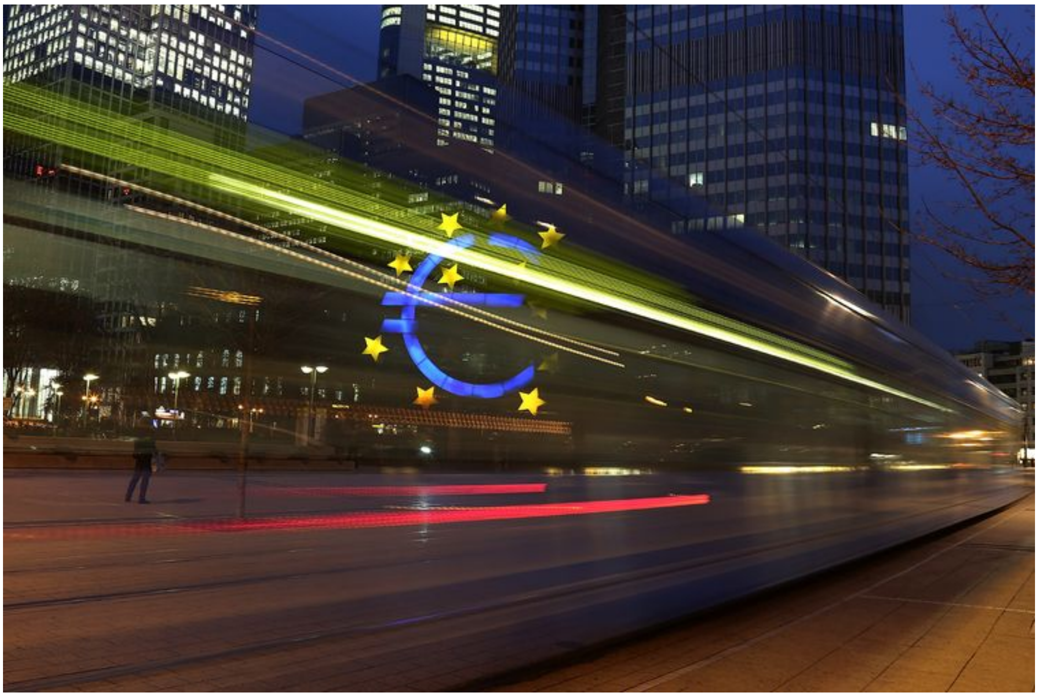

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Something really weird is happening in Europe. Interest rates on a range of debt — mostly government bonds from countries like Denmark, Switzerland, and Germany but also corporate bonds from Nestlé and, briefly, Shell — have gone negative. And not just negative in fancy inflation-adjusted terms **like US government debt (http://www.vox.com/2015/2/3/7971511/transp funding-debt)**. It's just negative. As in you give the German government some euros, and over time the German government gives you back less money than you gave it.

In my experience, ordinary people are not especially excited about this. But among finance and economic types, I promise you that it's a huge deal — the economics equivalent of stumbling into a huge scientific discovery entirely by accident.

Indeed, the interest rate situation in Europe is so strange that until quite recently, it was thought to be entirely impossible. There was a lot of economic theory built around the problem of the **Zero Lower Bound (http://en.wikipedia.org/wiki/Zero_lower_bound)** — the impossibility of sustained negative interest rates. Some economists wanted to **eliminate paper money (http://www.slate.com/articles/technology/techr** to eliminate the lower bound problem. Paul Krugman wrote a lot of columns about it. One of them said "the zero lower bound isn't a theory, it's a fact, and it's a fact that we've been facing for five years now."

And yet it seems the impossible has happened.

Why did economists think negative interest rates were impossible?

Well think about it. A bond with a negative interest rate is a guaranteed money-loser. Why would you buy one if you can just hold cash instead?

The traditional view has always been that no one would. People thought that the interest rate on bonds can't fall below zero because at that point people will just hold onto their money.

Where are negative interest rates happening?

Broadly speaking, borrowing at negative cost is happening on the European continent. Mostly in the Eurozone, but actually most severely in Switzerland.

> In early February, Nestlé (which is headquartered in Switzerland) saw its four-year euro-denominated bonds trading at a negative interest rate.
>
> Countries like the Netherlands, Sweden, Denmark, Switzerland, and Austria all saw bonds trade at negative rates.
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> In early February Finland became the first European government to see negative rates on the initial sale of bonds.
>
> On February 28, **[Germany sold five-year bonds at negative rates (http://www.wsj.com/articles/germany-sells-five-year-debt-at-negative-yield-for-first-time-on-record-1424871074)](http://www.wsj.com/articles/germany-sells-five-year-debt-at-negative-yield-for-first-time-on-record-1424871074)**, proving that the negative trend isn't a fluke trading trend _ a big, mainstream country is being paid to borrow money.

Why have interest rates gone negative?

In the most literal sense, negative interest rates are a simple case of supply and demand. A bond is a kind of tradable loan. Whoever is selling the bond is offering to pay the buyer interest in exchange for his money. If there isn't much demand for buying the bonds, the interest rate has to go up to make customers more willing to buy. If there's a lot of demand, the interest rate will fall. Mathematically speaking, nothing special happens to this process when the interest rate hits zero. If there's still a lot of demand, then the rate just goes negative. Simple.

In this specific case, a few things are driving the supply/demand dynamic.

One is that European investors seem very pessimistic about the overall economic outlook for the continent. That's making them reluctant to invest in risky, but potentially high-yielding ventures. Things like government debt from really well-run northern European countries or banal global food conglomerates are in high demand.

The other is that European governments are very reluctant to increase the supply of debt available. Germany, for example, is now running a budget surplus, which makes German debt scarce. A lot of people around the world would be happy if Germany went and gave a bunch of money to Greece and Spain, or announced a massive infrastructure building plan, or sharply reduced sales taxes. And if it did that, it would entail a lot of new debt, which would soak up demand. But northern European countries aren't responding to high demand for their debt with more borrowing. So prices just keep falling.

Isn't buying a money-losing bond insane?

It all got started with Denmark. Denmark doesn't use the euro as its currency. But as an official matter of government policy, it pegs the value of its krone to the value of the euro. But while Denmark's economy looks pretty similar to the economies of Eurozone members like Finland, Germany, or the Netherlands, it's much stronger than Greece or Portugal or Slovenia.

Because of that strength, foreign investors have the notion that in the long-term, the value of the krone is likely to go up relative to the value of the euro. If you think of buying Danish bonds as a *currency* play, then buying them at negative interest rates can make sense.

This was all a little strange, but not all that unexpected. It just turned out that the dynamics around small countries trying to maintain currency parity with much larger neighbors were a little bit weird.

Things changed in January 2015 when the Eurozone's central bank **launched a program of quantitative easing (http://www.bbc.com/news/business-30933515)** — in other words, printing money and using it to buy government bonds.

How did quantitative easing change things?

QE is supposed to help the economy by reducing interest rates. Increased demand for government bonds makes the interest rate on them cheaper, making them less attractive to private investors. That's supposed to inspire private investors to increase their demand for other investments — loans to businesses or homebuilders, for example — which boosts the economy.

But now, here's the catch. The Eurozone has one central bank — the European Central Bank — but there's no consolidated Eurozone debt, no "eurobonds."

So when the ECB goes out and buys bonds, it needs to buy the bonds of its member states — a little Belgium, a dollop of Portugal, a smattering of Finland, a dose of Italy, etc. But one consequence of the Eurozone crisis of 2010-2011 (http://www.vox.com/cards/eurozone-crisis/what-is-the-eurozone) is that people think the Eurozone might break up. If the Eurozone does break up, you're going to be way better off owning the debt of a rich and stable country like Germany than the debt of a country like Spain that's much poorer and facing an uncertain political situation (http://www.vox.com/cards/eurozone-crisis/podemos-spain) So whatever the interest rate on Spanish bonds, the rate on German bonds is sure to be lower.

In other words, if the ECB takes steps to make Spanish interest rates really low, then the interest rate on more creditworthy eurozone countries has to go below zero.

Okay, but still ... why would you buy a negative interest bond?

This is a very good question. The basic financial mechanics of negative interest rates are easy enough to see. But why not just hold cash in your bank account? It's not entirely clear what's happening, but here are three major motivations that market insiders say are in play:

> **Safety:** A bond is backed by the full faith and credit of the government that issues it. Bank accounts are only government-guaranteed up to a certain extent — most European countries cover 100,000 euros. Very rich people and big companies have more money than that and need to do something with it. Obviously you could fill shoeboxes with paper money, but there are safety risks with that, too.
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> **Passive funds:** Because people thought negative interest rates were impossible, few institutions have rules in place that were designed to accommodate this situation. Pension funds, mutual funds, and other impersonal investment vehicles have rules and formulae they're supposed to be following. To the extent that those rules call for the holding of safe bonds, some bond-buying can simply happen on autopilot.
>
> **Banks:** Banks can't store their spare money in a bank account. Instead, they store reserves with a government-run central bank. A certain amount of reserves are required by regulators. But banks can also store "excess" reserves. The European Central Bank is currently **charging a fee on excess reserves (**
>
> **http://www.ecb.europa.eu/press/key/date/2(**
>
> which means it makes more sense to park excess cash in

government bonds.

What are the implications going forward?

The big one is that central banks, including the United States', may want to consider being bolder with their interest rate moves. For years now, the Federal Reserve's position has been that it "can't" cut interest rates any lower because of the zero bound. Instead, it's tried various things around communications and quantitative easing. But maybe interest rates could go lower? Unlike the European Central Bank, the Federal Reserve pays a small positive interest rate on excess reserves. Fed officials normally say this doesn't make a difference in practice, but it looks like negative rates on excess reserves may be the key to negative bond rates.

At the moment, the Fed is debating how quickly to raise interest rates, but with inflation still running well below 2 percent **maybe it should try cutting them (http://www.allsides.com/news/2015-01-17-0955/janet-yellen-has-huge-opportunity-boost-economy)** — paired with a change in reserve policy, if necessary.

For Europe, one question this raises is whether issuing some Eurozone-wide debt might make sense. Voters in Germany and other more-creditworthy countries have historically been reluctant to share credit risk with the likes of Greece and Italy. But with the interest rates involved so incredibly low, it's not clear that this is a huge downside. And German savers might appreciate the creation of a new debt vehicle that would be safe and also have a positive interest rate.

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