NEGATIVE INTEREST RATES: COMING TO AMERICA?

In August 2019, Jyske Bank in Denmark began offering 10-year mortgages with negative interest rates of -0.5%. Most of us find it hard to comprehend a negative-rate mortgage. Even Jyske Bank's economist said, "I almost don't understand it either." In this example, customers will continue to make a monthly payment, but their principal will decline every month by more than they pay.

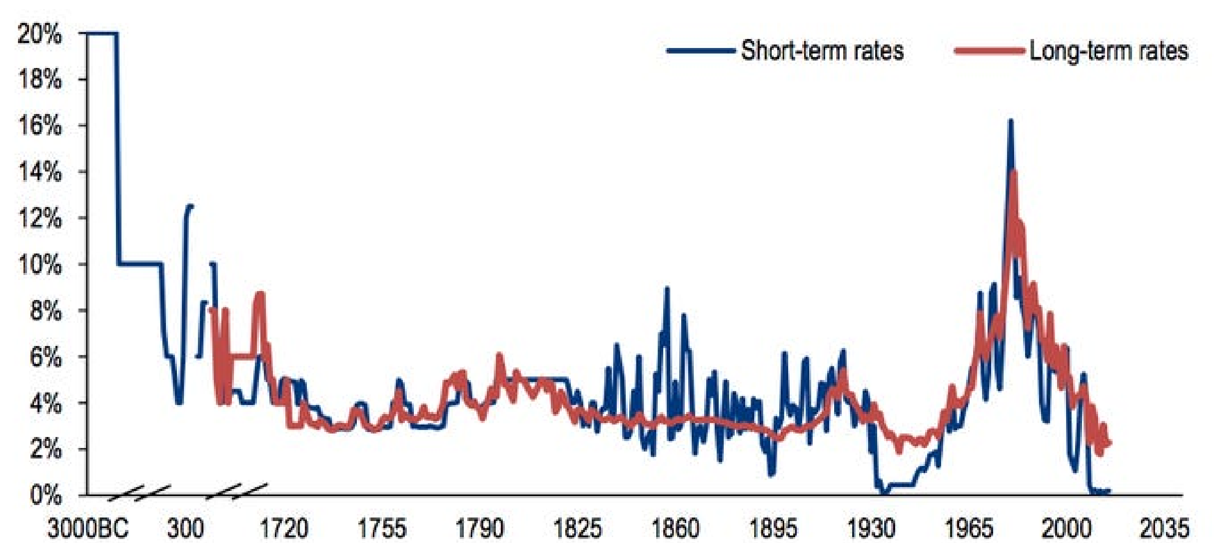
There is currently about $15 trillion of negative interest rate debt globally, representing about 25% of the global investment grade bond market. About half of all European government bonds have negative yields, providing a loss if held to maturity. Some countries have 10-year bonds with negative rates, and some, such as Switzerland, even have 30-year bonds with negative yields.

In this memo, we'll try to make some sense of this global trend of negative interest rates that is challenging long-held financial models and assumptions. We'll discuss how we got here, implications for the economy and capital markets, and the possibility of negative rates coming to the U.S.

HISTORY OF INTEREST RATES

Negative interest rates appear unique to recent times. In the book "A History of Interest Rates" by Sidney Homer and Richard Sylla, 5,000 years of interest rates were analyzed. The authors show that starting with Mesopotamia in 3,000 BC, and going through Babylon, ancient Greece, ancient Rome, and up to the present day, negative rates are a new phenomenon, as seen below.

Chart 1: Still the lowest interest rates in 5000 years!



Sources: Bank of England, Global Financial Data, Homer and Sylla "A History of Interest Rates"
Note: the intervals on the x-axis change through time up to 1700. From 1700 onwards they are annual intervals. Full methodology available upon request

Even during the Great Depression, rates stayed positive. It wasn't until the mid-1930s that short term rates approached zero. Longer term government bond yields largely stayed at higher levels than today.

Switzerland is believed to be the first government to implement a negative interest rate, in the late 1970s. Its currency was appreciating significantly, threatening the Swiss economy. In an effort to discourage foreign investors from buying Swiss Francs, the government cut rates below zero.

Negative rates were not seen again until after the recent financial crisis. Denmark was the first central bank to move to a negative rate monetary policy in July 2012, followed by the European Central Bank in June 2014, Switzerland in January 2015, Sweden in February 2015 and Japan in January 2016.

WHY ARE RATES NEGATIVE?

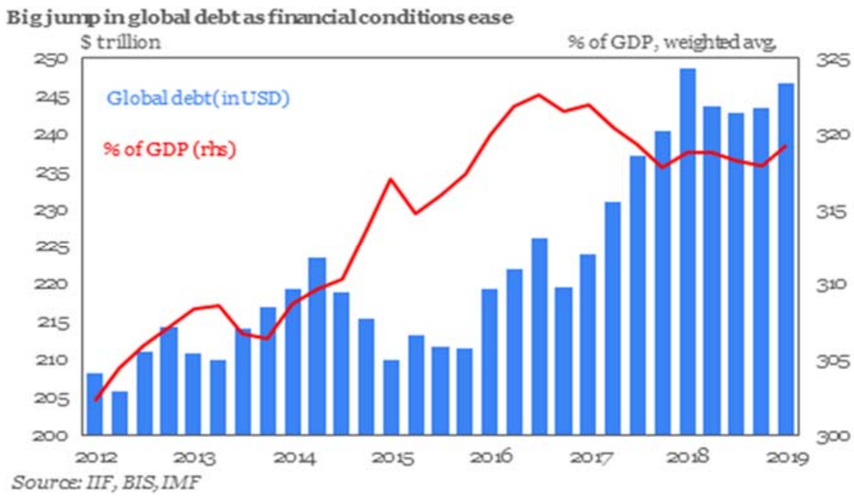
Several structural factors have led to slow economic growth and low inflation around the world, including aging demographics, lower productivity, and high debt levels. As a result, interest rates have been declining for years, and central banks have been trying to stimulate growth and inflation by driving rates down further.

Negative rates are designed to provide banks the incentive to lend money and businesses to spend money rather than pay fees to keep cash safe at a bank. Ideally, this strategy would help stave off deflation. Negative rates are also used to put downward pressure on a local currency to stimulate trade by making exports cheaper and imports more expensive.

After the financial crisis, governments and investors were concerned about the safety of banks and returning to economic growth. Regulators mandated banks maintain higher and safer amounts of capital. Similarly, investors sought safer investments, moving their money to safe countries such as Switzerland and Denmark. The influx of capital caused currencies in these countries to appreciate. To dissuade investors from buying the Swiss Franc and the Danish Krone, the countries' monetary authorities pushed their rates below zero.

Meanwhile, many governments around the world had large deficits and high debt levels. Concerns that debt would create another crisis led governments to austerity policies. Governments did not attempt to stimulate their economies with deficit spending, leaving central banks to restart growth. The primary tool for central banks to stimulate growth is to lower interest rates. With policy rates near zero, central banks began buying bonds, regardless of price or interest rate.

One reason rates have stayed low is that debt has been growing faster than income and economies have been getting less and less growth out of each dollar of debt. Total global debt as a percentage of GDP has risen to about 320% (the U.S. has a similar number), higher than in 2007 at the start of the financial crisis. Central banks realize the implications of rising interest rates in a world with so much debt could be devastating, and therefore are trying to maintain economic growth by lowering interest rates.



It is estimated that in many developed countries, more than 10% of companies are "zombie companies" that cannot cover their interest expense with their current earnings, staying in business only by refinancing their debt into lower interest rate obligations. If rates go up, many companies could go bankrupt.

ECONOMIC IMPLICATIONS

Since we've had a few years of negative interest rates in some countries, we can analyze the effectiveness of these policies. One takeaway is that banks seem reluctant to pass on the cost of negative interest rates to their depositors because doing so may encourage them to withdraw their assets from the bank. Therefore, the negative interest rates the bank is paying the central bank for its reserves acts as a tax by reducing bank profits. Swiss and German banks tried to charge negative rates to their depositors (essentially charging a fee on savings), but when customers started to withdraw their assets, the banks quickly reversed their negative rate decisions.

Another consequence is that as bank profits suffer, banks might try to offset this "tax" by raising lending rates to their customers. This is the opposite of what is intended with negative interest rate policy. According to Jamie Dimon, JPMorgan Chase's CEO, negative interest rates will have "adverse consequences that we do not fully understand." Banks will need to rethink their business models. Also, the messaging of negative rates could be harmful, as consumers might be encouraged to be more conservative and reduce their spending.

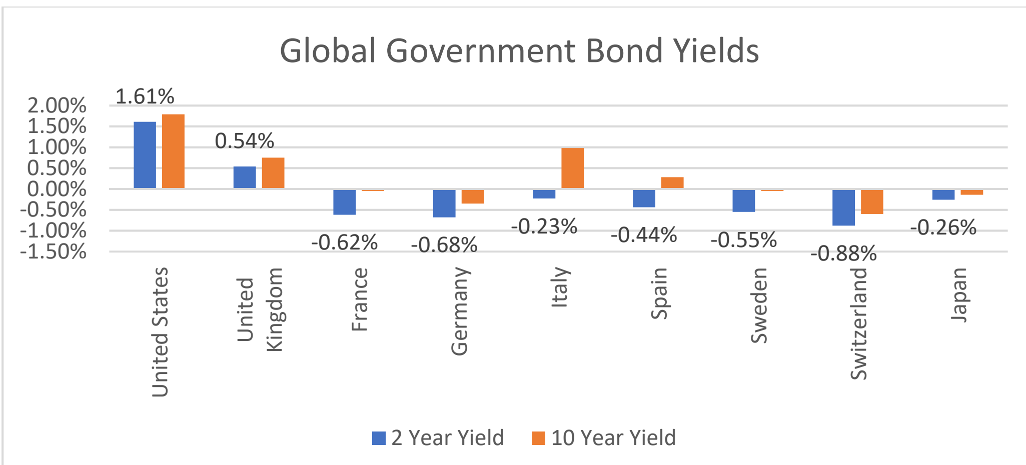
On the positive side, borrowers are less likely to default with such low interest rates. Also, with negative interest rates, investors tend to search for better returns in foreign markets, which would lower that country's currency valuation, all else being equal, making exports more affordable to foreign consumers.

However, at some point, the detrimental effects on the banking sector outweigh the benefits of negative rates in other sectors of the economy.

New research from Harvard, Brown University and Norges Bank in Norway shows the contractionary effects on economies from negative interest rates. The authors (which included Larry Summers, former U.S. Treasury Secretary) found "once the deposit rate becomes bounded by zero, interest rate cuts into negative territory lead to an *increase* rather than a decrease in lending rates." In Sweden, they found that a negative policy rate has both increased borrowing rates *and* reduced economic output, clearly unintended consequences.

MARKET IMPLICATIONS

Many long-held financial models and assumptions are being tested and re-evaluated. Finance 101 teaches that higher risk assets carry higher yields, to compensate investors for taking on more risk. Currently, the U.S. is seen as the global safe haven. Yet, countries that are much riskier have lower yields than U.S. Treasuries. Almost every European country has negative yields on 2-year bonds. Even Greece, which a few years ago had skyrocketing yields during the height of its financial crisis, now has yields lower than those seen in the US. In early October 2019, Greece issued short term debt with a negative yield. Below is a sample of government bond yields around the world, as of late October:



Why would anyone own a negative yield bond? Governments are issuing bonds with negative yields and central banks are buying existing bonds as part of their monetary policy to drive down rates to negative territory. Also, many institutional investors, such as pension funds, have investment policies in place that mandate ownership of certain types of bonds.

An interesting implication of negative yield bonds is that bond prices become more volatile and riskier. As rates decline, "duration" (a measure of a bond's sensitivity to interest rates) increases, making the bond more volatile. If rates turn negative, duration can actually be higher than the term of the bond (i.e. a 10 year bond could have a duration of 12 years), further increasing the risk.

What about stocks? Another Finance 101 tenet is that the value of any asset is the present value of the future cash flows. In a present value calculation, as the discount rate declines toward zero, the value of the asset approaches infinity. While we don't expect stocks to move toward infinity, all else being equal, lower interest rates could help with valuations. Of course, all else might not be equal in an environment that has such low interest rates. The weak economy might outweigh the valuation benefit of such low rates. Another implication of such low rates is that companies are issuing debt to buy back more of their stock, further supporting stock prices.

IS THE U.S. HEADED TOWARD NEGATIVE RATES?

While short-term T-bills occasionally have had slightly negative yields, the Federal Reserve has never had negative rate monetary policy. In fact, it appears the Fed currently does not have the legal authority to impose negative interest rates on bank reserves. That legal constraint would have to be addressed.

From a policy perspective, according to a Federal Reserve Bank of San Francisco newsletter in mid-October 2019, "negative interest rates could become an important policy tool for fighting future economic downturns" because "negative rates may be an effective monetary policy tool to help ease financial conditions." The newsletter goes on to state that "negative U.S. policy rates from 2009 to 2011 could have supported higher economic growth and eventually pushed up inflation closer to the Federal Reserve's target." While Federal Reserve Chairman Jerome Powell has stated he has no intention to use negative interest rates, it seems all options could be on the table when the next recession hits.

From a market perspective, many bond investors in Europe looking for positive-yield investments are turning to the U.S. bond market. This demand could drive rates further down in the U.S., continuing the 37-year downtrend.

It is unclear where the lower bound for interest rates is, but we do not seem to have reached it. According to the Central Bank of Sweden, "the mattress is not a realistic alternative for storing and handling large amounts of cash. Costs for storage, security and handling imply that the public may be willing to accept a slightly negative interest rate."

Many of the structural factors responsible for negative interest rates, such as demographics and debt levels, are longer-term trends. However, other structural factors may not be. New technologies could increase productivity to help the economy grow faster. Fiscal policy expansion, if done properly, can help increase inflation, which should increase interest rates. Therefore, negative interest rates in the U.S. are not an impending certainty. But the factors that can boost the economy (such as productivity) are more difficult to predict than those that can restrain the economy (such as demographics).

PARAGON PERSPECTIVE

Negative interest rates appear to be ineffective, but could be a feature of the next domestic economic downturn, depending on the severity of the recession. Despite low yields, Paragon Capital Management is maintaining exposure to bonds, because as rates decline bond prices appreciate. We are sticking with high quality issuers, including government bonds, which will do well in the next downturn. We are not interested in stretching for higher, riskier yields at this late stage in the economic cycle. However, at some point, as rates approach zero, we likely will sell bonds. The next recession, whenever it arrives, will be interesting from an interest rate perspective.