# Forward Perspectives

# The Sub-Zero Zone

## Will Negative Interest Rate Policies Freeze Economic Growth?

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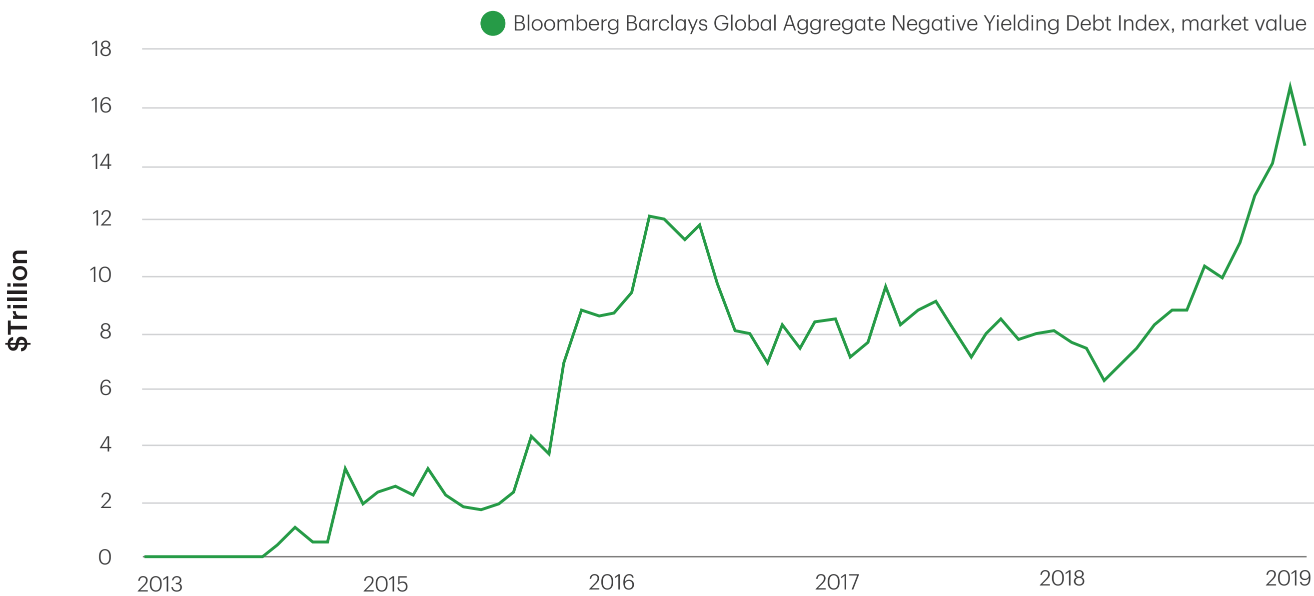
### At a Glance

- **Negative yielding bonds are near all-time-highs across the globe -** approximately $15 trillion of sovereign government bonds have negative yields; predominately in Europe and Japan.
- **Three possible reasons negative interest rate policies by central banks may not be sustainable longer-term:**
  1. Low rates may force investors to save more to meet investment objectives.
  2. Negative rates may fail to generate higher capital expenditures for corporations.
  3. They can negatively impact the profitability of the banking sector.
- **TD Wealth Asset Allocation Committee's (WAAC) View:** Our experience has shown that negative interest rate policies have not delivered the higher levels of economic growth that central banks strive for. The persistence of such policies, despite their low efficacy on the economy, suggests that central banks may be running out of options.

## Is it counterintuitive to purchase a fixed income product that is guaranteed to give you back less than your initial investment if held to maturity?

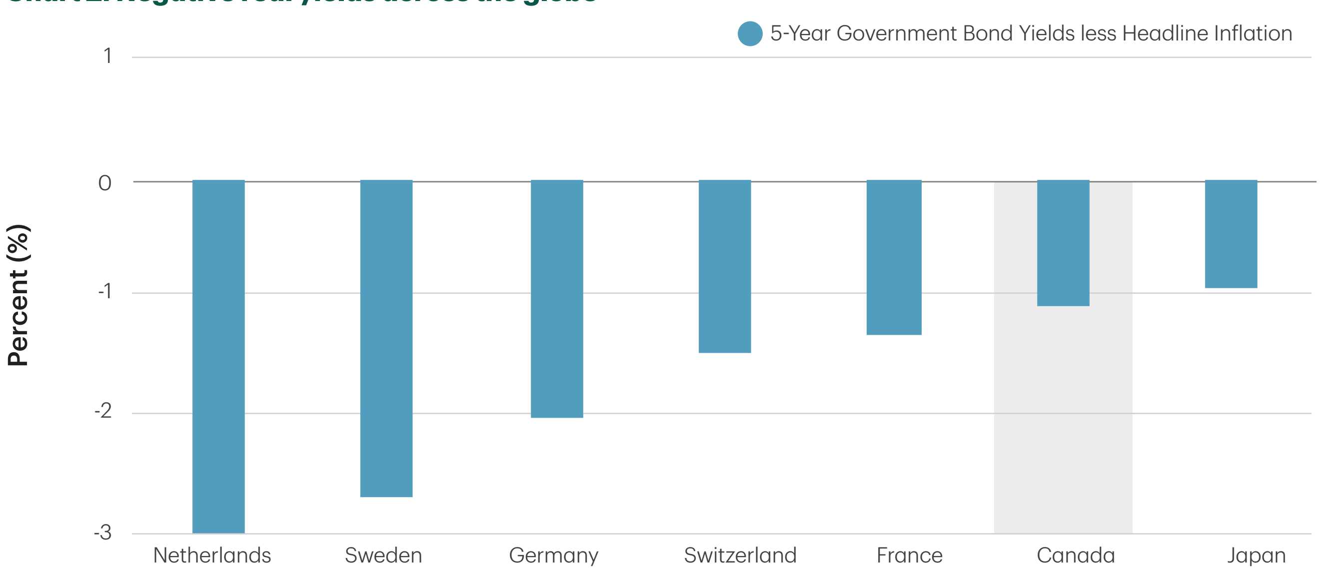
**If negative bond returns sound appealing, then there are myriad opportunities on offer across the globe.** With negative yielding debt around all-time highs **(Chart 1)**, the phenomenon of negative interest rates could have significant implications for the global fixed income landscape down the road. Japan, Germany, France, Netherlands, Switzerland, and Sweden are all posting negative nominal interest rates (interest rate before taking inflation into account) for bond maturities of at least five years. Canada has also entered the fray, where falling global yields, declining inflation expectations, and cooling global economic growth have pulled 5-year Government of Canada (GoC) bond rates into negative real yields territory—that's when interest rates are below prevailing inflation levels **(Chart 2)**.

### Chart 1: Negative-yielding debt at all-time highs




Source: Bloomberg L.P. as of September 30, 2019.

### Chart 2: Negative real yields across the globe



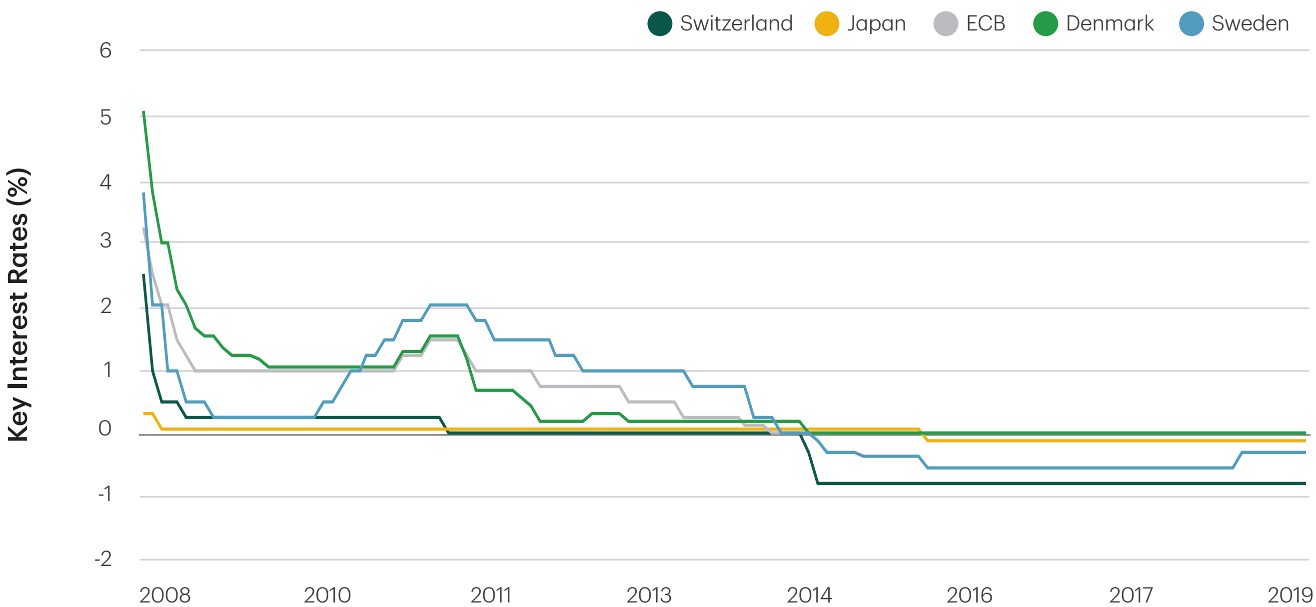

Source: Bloomberg L.P. as of May 31, 2019.

**This report examines the long-term sustainability of zero or negative interest rate policies, what it might mean from an investment perspective, and the potential implications for global economies.**

## What are negative interest rate policies?

Negative interest rate bonds emerged following the implementation of negative interest rate policies (NIRP) by global central banks to support the economy in the years following the 2008 financial crisis. The main objective of NIRP is to boost economic spending and investment. When global central banks set their policy rates to negative, it creates a scenario where cash deposits of commercial banks incur a charge for storage at a central bank, rather than receiving interest income on the deposit. In theory, this strategy is designed to incentivize commercial banks to lend more to businesses and individuals, which should stimulate the economy and increase inflation. As shown in **Chart 3**, several major central banks of developed economies have implemented negative or zero policy rates – a phenomenon that continues to spread around the world.

**Chart 3: Governement key policy rates**




Source: Bloomberg L.P. As of Jun 28, 2019.

## How do negative yielding bonds occur?

When issued directly by a government, a bond can have a slightly positive coupon, which is the interest rate the bond pays. However, when the bond starts trading in the market, high or low investor demand will influence its price. If demand is high, investors may pay a premium (the price paid above its par value) or conversely, purchase it at discount if demand is weak. These bond market dynamics are similar to the supply/demand characteristics that drive stock prices in equity markets. Additionally, interest rates and bond prices have an inverse relationship - so when one goes up, the other goes down.

To answer our own question: bond yields become negative when the bond is purchased at a premium, and the total amount of interest payments received throughout the lifetime of the bond is less than the premium paid - therefore delivering a negative return. In consequence, the investor has purchased what is considered a negative yielding bond.

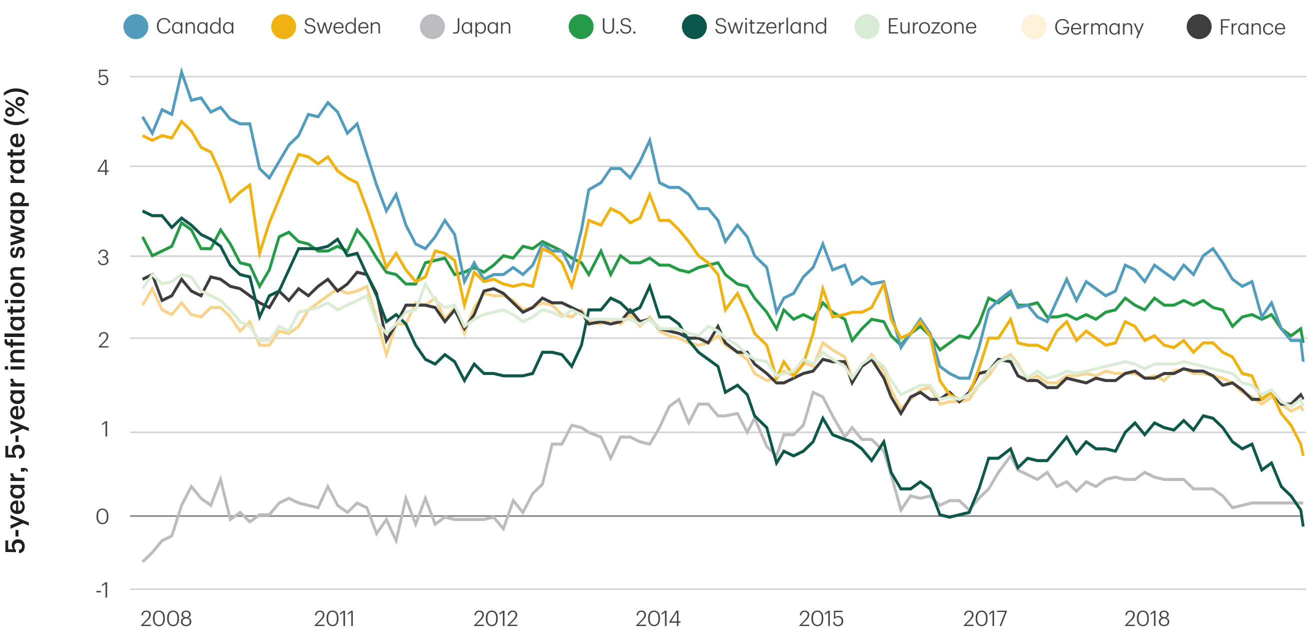
## Why invest in a bond that has a negative yield?

In the investment world, developed market government bonds are considered one of the safest assets available. Therefore, during periods of market stress and economic uncertainty, large investors such as pension funds, insurers, and banks will continue to invest in government bonds to store wealth due to the lack of safer investment alternatives. Moreover, government bonds are highly liquid (can be bought and sold easily) and considered low risk as they are guaranteed by issuing governments. Investors are therefore willing to buy government bonds at a premium and potentially accept an investment loss in exchange for holding these high-quality assets.

## In what environment would negative interest rates make sense?

In a deflationary environment, where general prices in the economy are decreasing, negative interest rate policies could make sense. Real return rates, which are nominal interest rates minus expected inflation rates, could be positive in a declining price environment. For example, if a sovereign government bond (debt issued by a national government) yield is expected to be -0.1% and the inflation rate is expected to be -0.2% then the real return of the bond would be +0.1%. In other words, negative nominal interest rates seem rational if we were to experience a sustained period of deflation going forward. With the current U.S.-China trade war and decelerating global economic growth, inflation expectations for most developed countries have been trending downward as shown in **Chart 4**, which can partially justify negative interest rate policies.

**Chart 4: Falling expected inflation across the globe**




Source: Bloomberg L.P. as of Jul 31, 2019. Inflation expectations are measured by the 5-year, 5-year inflation swap rates. The 5-year, 5-year inflation swap rate is a common measure, which is used by central banks and dealers, to look at the market's future inflation expectations.

**The WAAC does not currently anticipate a long-term deflationary environment and believes the market may be too aggressively pricing lower inflation.**

Given the current economic environment, our global outlook is for a slowing expansion but not a recession, at least not for North America. Moreover, if the U.S.-China trade tensions persist, there is a potential for higher U.S. inflation. This could occur because the tariff war may result in "de-globalization", where U.S. companies no longer have access to optimal labour costs – whether it be cheaper labour or more qualified labour - which could drive prices higher.

## Three possible reasons zero or negative interest rate policies may be unsustainable for the economy

**There are three reasons we believe negative interest rate policies may be unsustainable for the global economy.** First, they can force investors to save more as their investment returns get lowered. Second, they can result in the misallocation of capital, particularly among corporations. Lastly, they can increase stress on the profitability of the banking sector, which is required for credit growth.

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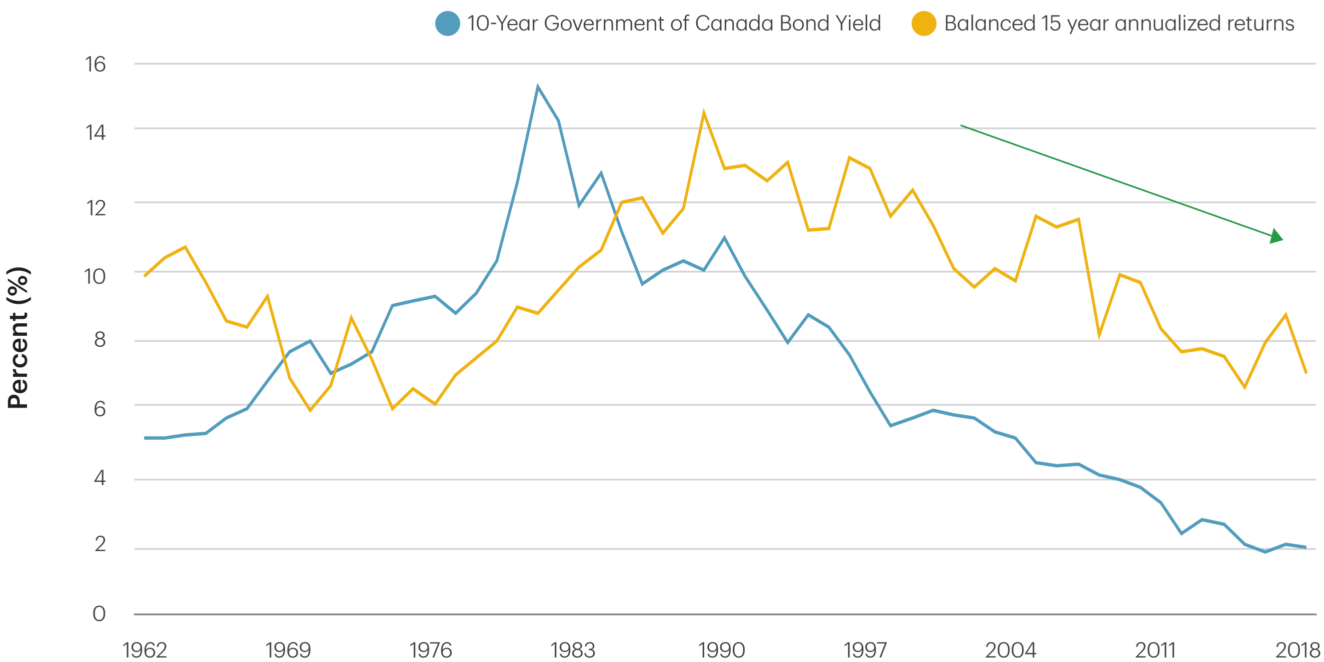
### Required savings rates must increase to meet investment objectives

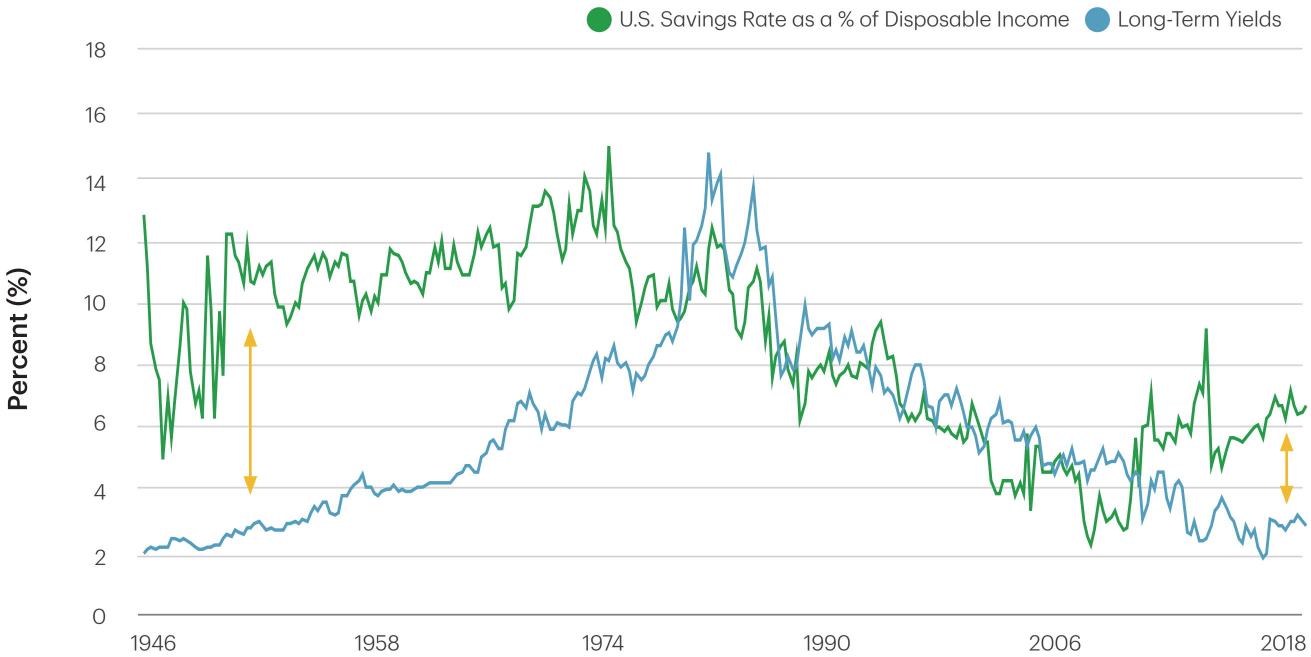
Low interest rates can force investors to save more as returns from the fixed income portion of a portfolio will be lower. Investors will have to save more to replace these diminishing returns. The blue line in **Chart 5** plots the GoC 10-year bond yield. We can see the impact that falling yields can have on portfolio returns as the green arrow reveals the trend of falling annualized returns on a balanced portfolio consisting of 60% stocks and 40% bonds. If we roll this forward, today's yields can provide insight toward even lower expected returns in the future.

**Chart 5: Lower yields reduce returns**




Source: Bloomberg Finance LP, St. Louis Fed. Balanced portfolio composed of a 60/40 split between S&P/TSX Composite and FTSE Long Bond Index. As of Jun 28, 2019.

**Chart 6: Investors are encouraged to save at zero rates**




Source: Bloomberg. Morningstar. As of Mar 31, 2019.

Lower fixed income returns could be an important driver behind the higher saving rates we've witnessed in recent years as shown by the green line in **Chart 6**. History supports the notion of higher savings rates during periods of very low interest rates. Savings rates were elevated throughout much of the century before falling into the 1980s and 1990s.

We can also see the connection between savings rates and interest rates by looking at bond yields as represented by the blue line. The falling savings rate in the last 30 years has coincided with yields falling from initially high levels. However, as yields began to reach low levels in 2008, we've witnessed a divergence as savings rates began to rise while yields continued to trend lower. This is consistent with the period before the 1970s, where very low interest rates coincided with higher saving rates.

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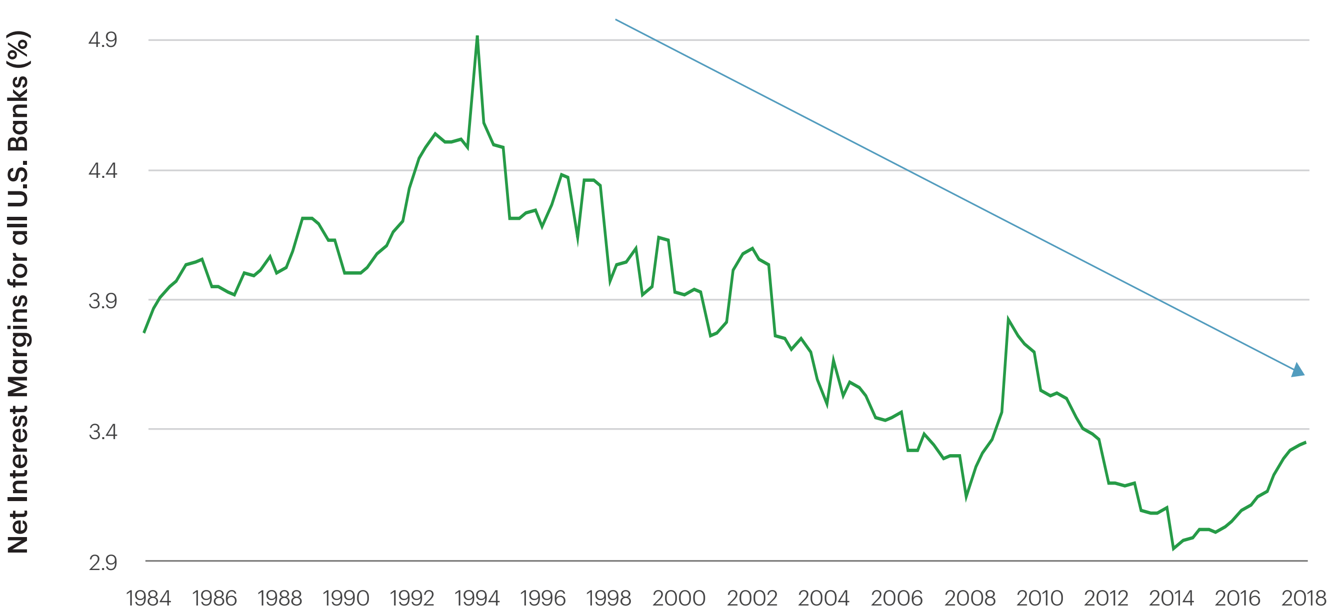
## Disincentives for capital expenditures

Between 2012 and 2016, when the federal funds rate was at historically low levels, lower rates failed to generate higher capital expenditures by U.S. corporations - a traditional driver of growth in low interest rate environments. Instead of investing in long-term projects, corporations took advantage of low rates to increase leverage and participate in share repurchases, which recently reached all-time highs. This is positive for shareholders, but has less of a lasting impact on economic growth rates. If near zero or negative interest rates persist, this could have a chilling effect on corporate investment and broader economy over the long-term.

## 3 Negative impact on bank profitability

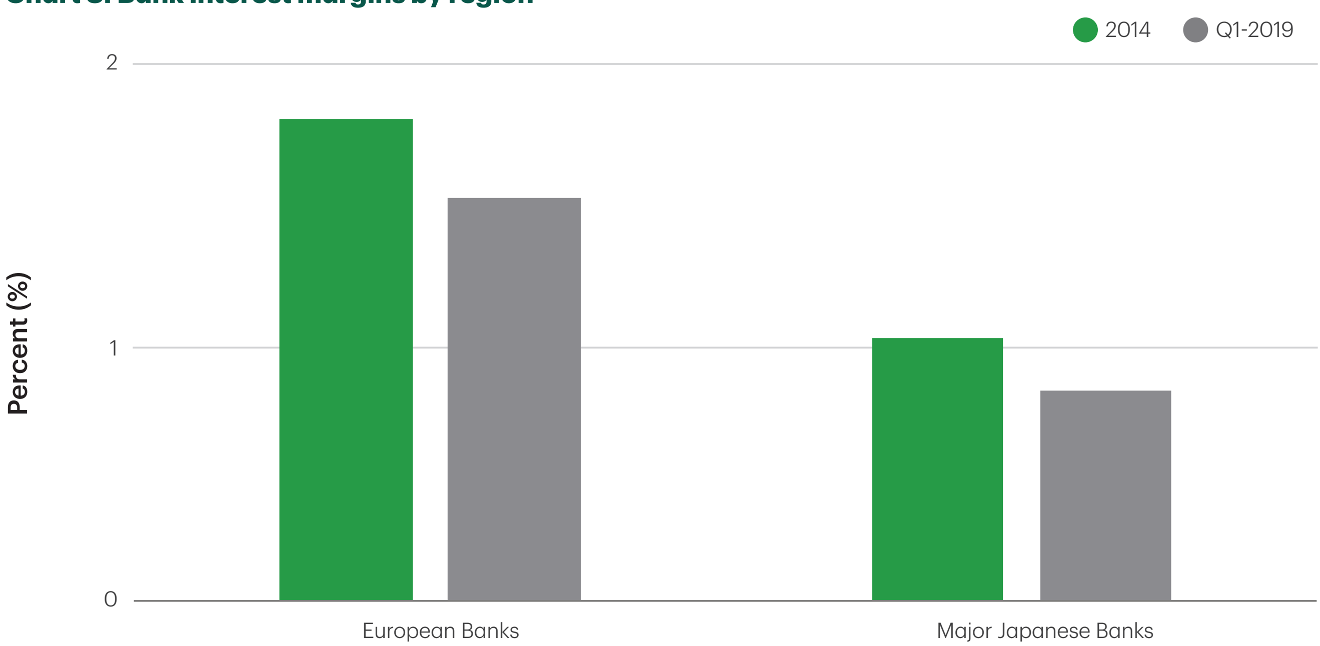
Negative or zero interest rate policies have proven to have an adverse impact on the banking sector. Bank profits are based on the difference between the interest rates banks charge on loans and the interest rates they pay to obtain financing—referred to as net interest rate margins. Because of falling long-term interest rates, U.S. banks have experienced shrinking net interest rate margins over the years, which has reduced their ability to assist economic growth through credit creation **(Chart 7)**. The same trend has been experienced in Europe and Japan as shown by the declining bars in **(Chart 8)**.

**Chart 7: Adverse impact to U.S. bank profitability**




Source: Federal Reserve Bank of St. Louis. As of Dec 31, 2018

**Chart 8: Bank interest margins by region**




Source: European Central Bank, Bloomberg L.P. Spread between lending and borrowing rates in Europe weighted by banks' share in total lending. Blended domestic and overseas loan spread as reported by the biggest four Japanese banks, weighted by their share in total lending. As of Mar 31, 2019.

## WAAC's view on implications of zero and negative interest rate policies

Since the financial crisis in 2008, central banks across the globe have been using aggressive monetary policies to stimulate the economy. In the U.S., the Federal Reserve launched the Quantitative Easing program (asset purchases by central banks to inject liquidity into the economy), which drove interest rates to low levels. Central banks in Europe took a step further and implemented negative interest policies during the 2011 sovereign bond crisis. During the recent economic slowdown, negative bond yields have returned to focus in global markets, raising the question of the sustainability of negative or zero interest rate policies. Experience has shown that negative interest rate policies have not delivered the higher levels of economic growth that central bank policy makers hoped for.

The persistence of such policies despite their low efficacy on the economy suggests that central banks are running out of options.

Many investors who purchase negative-yielding bonds are betting that the value of the security will keep rising, in effect, wagering that there are other potential investors that will have to accept an even lower yield.

We are monitoring this environment closely and will continue to assess the longer-term implications for fixed income markets and the potential impacts on the **global economy.**



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