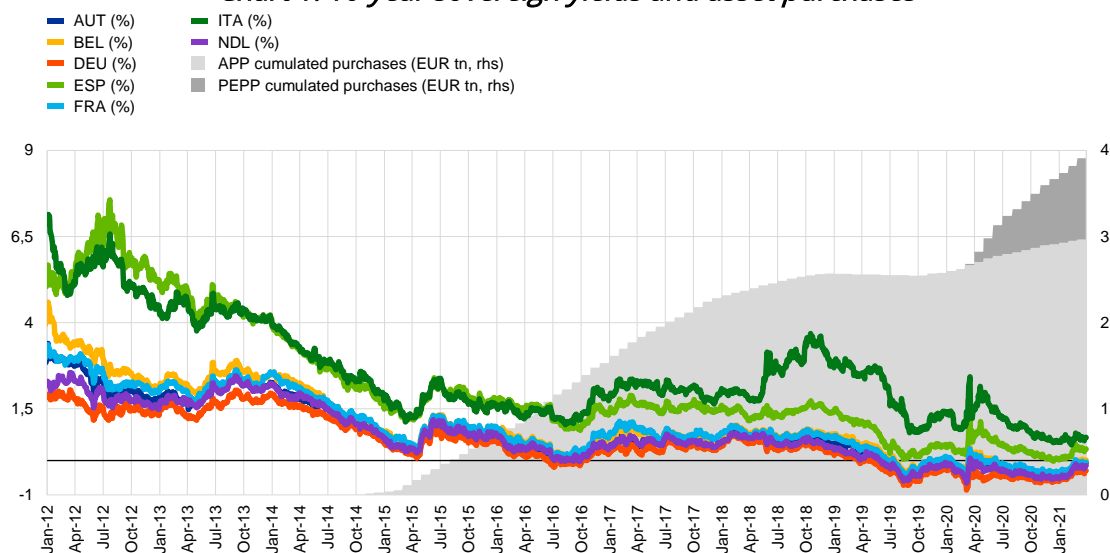


Why can sovereign and corporate borrowers in some countries borrow at negative rates?

by Sylvérie Herbert, Maria Sole Pagliari and [Adrian Penalver](#)

For several decades, advanced economies have seen their borrowing costs decrease, including amid the coronavirus pandemic. This is especially true at the long end of the yield curve. Even long-term bonds issued by some private corporations in the euro area trade at negative interest rates. This decrease in borrowing costs primarily reflects a decline in the natural real rate of interest due to population ageing and slower productivity growth, as well as the more recent compression of the long end of the yield curve resulting from central banks' bond purchases.

Chart 1: 10-year sovereign yields and asset purchases



Sources: Bloomberg, ECB

Nominal interest rates in the euro area have decreased in recent years

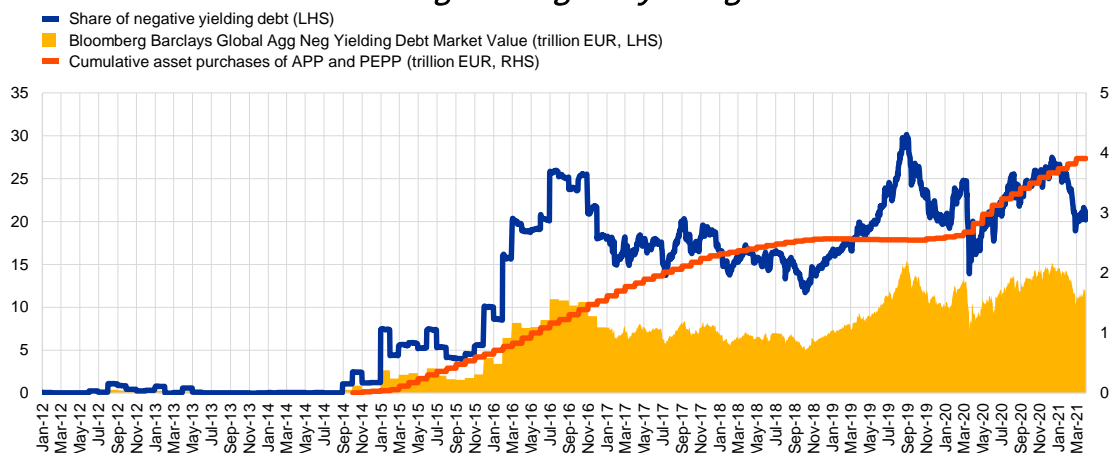
As of mid-2020, many euro-area sovereigns including Austria, Belgium, France, Germany and the Netherlands have been able to borrow at negative interest rates, even at long maturities. Even while euro area governments have increased their debt issuance to provide fiscal stimuli aimed at containing the pandemic-induced economic downturn, sovereign rates have stayed close to historically low levels. This has also been the case for countries with already very high debt levels and higher associated credit risk, such as Italy and Greece. Following a brief spike at the start of the crisis and an increase over recent weeks, average 10-year sovereign yields have decreased by around 15bps over the period March 2020-March 2021 (Chart 1).

Debts with negative yields now comprise around a fifth of global debt

Negative nominal interest rates are a very unusual phenomenon because investors pay borrowers to issue debt. Banknotes, which are an alternative means to hold nominal wealth, do not pay any interest rate (positive or negative). Therefore, in principle no investor should hold assets with a negative nominal rate of return, switching to currency instead. In practice, however, the costs of storing and securing large amounts of currency are too high and investors often have regulatory reasons to hold sovereign bonds.

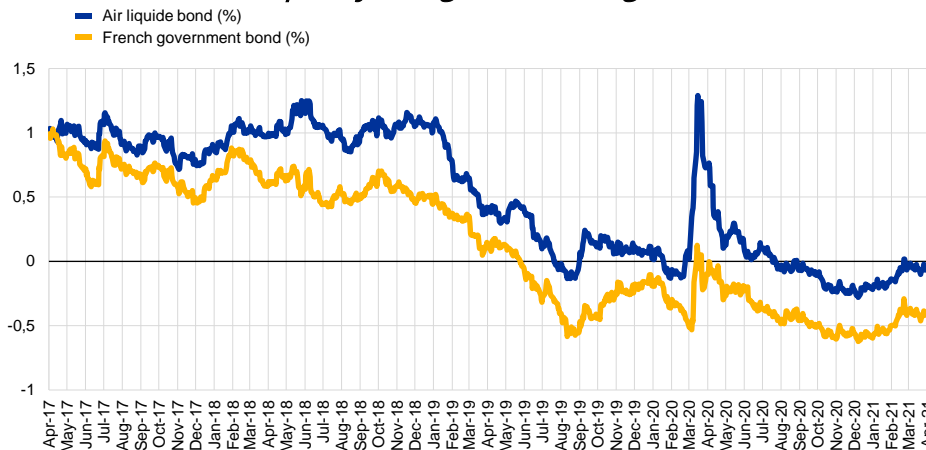
The global stock of negative-yielding debt (both public and private) has increased significantly over the last five years and its total value surpassed EUR 11 trillion in March 2021. Around 20% of bonds in the Bloomberg Barclays Global Aggregate Universe (which covers both sovereign and corporate bonds) are currently trading at negative rates (Chart 2).

Chart 2: global negative yielding debt



Sources: Bloomberg

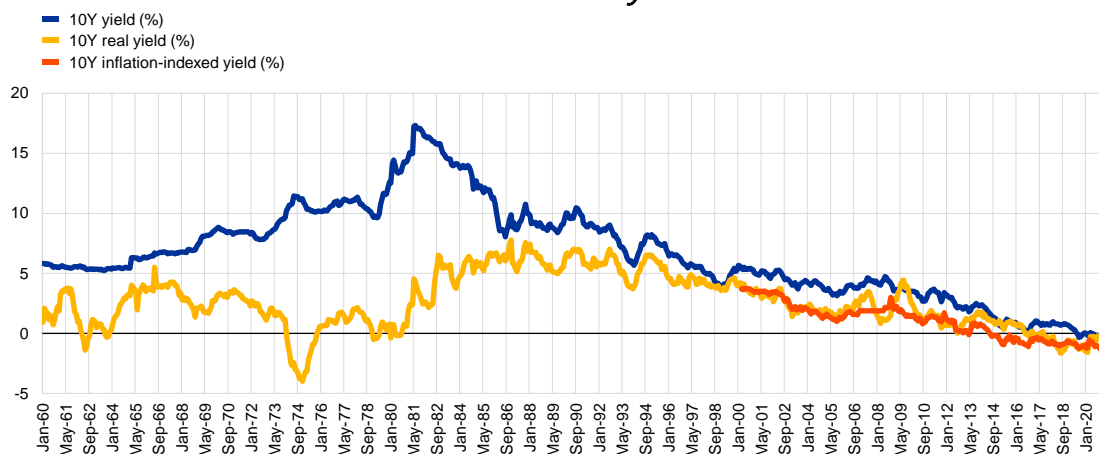
Despite massive borrowing on the part of both governments and companies during the Covid crisis, corporate bonds also currently trade at negative yields, even though corporate debt usually trades at higher yields because of higher credit risk. For example, the Air Liquide bond illustrated in Chart 3 has traded as low as -0.28% . Chart 3 also shows that Air Liquide's corporate yields have largely tracked a French government bond with similar maturity. Whilst very few corporates benefit from negative yields, corporate bond yields have generally trended down in line with sovereign yields in the same jurisdiction. This illustrates how measures to lower sovereign yields are transmitted to more general financial conditions. It should be noted that borrowers pay the yield at issuance and not the market-implied yield. Some corporates have managed to issue debt at negative yields.

Chart 3: Air Liquide yield against French government bond

Sources: Bloomberg and Thomson Reuters Eikon

Notes: Air Liquide 1% coupon bonds issued on 02/03/2017 and maturing on 08/03/2027, and French government bonds issued on 04/04/2017 and maturing on 25/05/2027.

Falling real and nominal yields are a long-term trend

Chart 4: nominal and real yields for France

Sources: OECD and Bloomberg.

Low nominal and real interest rates are not a recent phenomenon but reflect long historical trends. Chart 4 shows that nominal 10-year government bond yields in France peaked at 16 % in 1981, having risen from around 5% in the early 1960s. Most of this increase in nominal yields reflected rising inflation. Indeed, there were several episodes of negative real rates of interest during the 1960s and 1970s, comparable with the real rates of return observed today. Real rates of interest peaked at around 6-7% in the mid-1980s and early 1990s. Real rates have been declining ever since. This is not just a French or European phenomenon but has been a global trend related to a decline in the natural real rate of interest. The underlying drivers of the drop in natural rates include structural elements such as demographics changes, as well as the slowdown of global productivity growth (see [Penalver \(2017\)](#) and [Garnier, Lhuissier, Penalver \(2019\)](#)). These long-run structural forces affect the relative supply of savings and demand for borrowing for investment and therefore the rate of interest that equilibrates the capital market. An ageing population, for example, has a growing supply of savings as households plan for retirement. This also means that there is

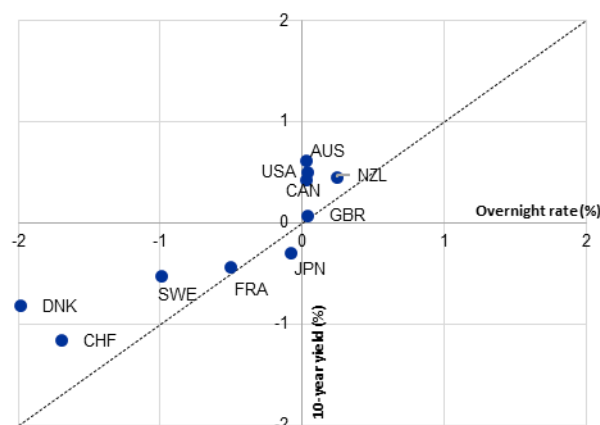
less need for investment because the growth rate of the working age population is rising more slowly. Lower expected productivity growth reduces the average expected rate of return on investment.

Monetary policy plays a role in pushing yields into negative territory

Long-term yields have also been compressed by monetary policy and in particular by asset purchase programmes by the ECB and other central banks. When short-term nominal policy rates reached their effective lower bound, central banks sought other means to provide more accommodative monetary policy. Under asset purchase programmes (also known as Quantitative Easing (QE)), central banks buy sovereign and corporate bonds, financed by the issuance of central bank reserves. These operations shorten the average maturity of public debt (government plus central bank) held by the private sector, raise bond prices and reduce long-term yields by compressing the term premium, thereby helping to ease financing conditions generally. Since March 2015, the Eurosystem (ECB plus the national central banks of the euro area) have purchased around EUR 3.9 trillion under the APP and PEPP (the Pandemic Emergency Purchase Programme, a QE programme initiated in March 2020 and which is specifically tailored to address the economic consequences of the coronavirus crisis (see [Odendahl et al \(2020\)](#)). – see Chart 1.

Negative long-term rates, however, are not a global phenomenon. Although the recent compression in yields seems to have occurred across the board in advanced economies between mid-2020 and the beginning of 2021, long-term rates have fallen below zero only in those countries whose short-term policy rates are (or have been) negative (Chart 5). This, together with the major role played by asset purchases in shrinking sovereign borrowing costs, suggests that lowering short-term policy rates has influenced long-term yields. Theoretically, long-term bond yields are comprised of the expected future short-term rate and term premia. Except in unusual circumstances when term premia are negative, the lower bound on short-term policy rates will also be the lower bound on long-term rates. By setting negative policy rates (the Deposit Facility Rate in the euro area is currently -0.5%), the ECB has lowered the floor on long-term rates, thereby permitting negative rates on sovereign and corporate bonds in the euro area.

Chart 5: 10-year yields against overnight rates - international comparison



Sources : Bloomberg and Datastream

Notes: datapoints correspond to the minimum values over the period January 2015- March 2021.