

# Negative Interest Rates

## Clemens Fuest and Timo Wollmershäuser Low Interest Rates: Global Causes and Policy Implications for Germany

In Germany, low interest rates and the role of monetary policy in this development are currently the subject of intense discussion. Critics of the European Central Bank (ECB) claim that expansionary monetary policy is a major cause of low interest rates. According to them, the aim of this policy is to relieve the highly indebted economies in southern Europe. The result is a redistribution at the expense of savers with small and medium incomes in particular. Moreover, this expansionary monetary policy leads to a ‘zombification’ of the European economy, i.e., weak economic growth, as a result of companies without a sustainable business model and therefore with low productivity growth being kept alive by cheap loans. These accusations triggered defenders of the ECB, who in turn claim that low interest rates are primarily caused by the real economy, in particular through high savings and weak demand for capital. They argue that the ECB’s expansionary monetary policy is a prerequisite for ensuring that the economy does not become even weaker. This group often demands that the German government should take on more debt, so that interest rates would rise.

In order to understand the current situation on the capital markets, it is useful to take a longer perspective. Real and nominal interest rates have been following a downward trend for decades. This trend began long before the establishment of the common European currency. According to analysis by

Del Negro et al. (2019), the average global real interest rate for ‘safe’ and liquid assets has historically been around 2 percent for long periods of time, rising temporarily to around 2.5 percent after World War II and starting to fall steadily around 1980 (Del Negro et al. 2019). Today, it stands at about 0.5 percent (Figure 1). While in the decades before 1980 average real interest rates still varied widely across countries, the opening up of global capital markets contributed to the fact that most countries have since been equally affected by the fall in interest rates, so that today the differences between average real interest rates are only very small.

The decline in nominal interest rates was even more pronounced than in real interest rates because inflation rates have fallen significantly. In Germany, for example, average inflation was 4 percent at the beginning of the 1980s, whereas today it is only 1.5 percent. If this decline of the average inflation rate of 2.5 percentage points is added to the decline of the average real interest rate of 2.0 percentage points, the average nominal interest rate in Germany has fallen by 4.5 percentage points since 1980.

### REAL DRIVERS OF LOW INTEREST RATES

The decline of the trend in real interest rates can be explained by a simple capital market diagram where the interest rate is the price determined by the intersection of the supply of capital and the demand for capital. Various changes in these two behavioral

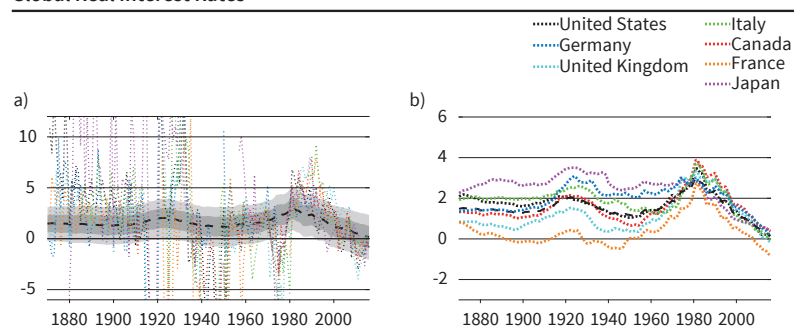


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Figure 1  
Global Real Interest Rates



Note: Panel a) shows the actual short-term real interest rates for major economies. The black dashed line is the estimated global trend, and the shaded areas are the 68 and 95% confidence intervals. Panel b) shows the estimated national trends in short-term real interest rates.  
Source: Del Negro et al. (2019).

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relationships can account for the trend towards ever lower real interest rates. On the supply side, factors such as demographics, income distribution, and exceptionally high savings in emerging markets can be cited here. In recent decades, demographic change has led to a growing proportion of the world's population at the age between 30 and 60 with medium or high incomes wishing to build up savings for their retirement. In addition, pay-as-you-go social security systems will make a shrinking contribution to pension schemes with ever fewer contributors and ever more recipients. As other forms of old-age provision become more important, this increases the propensity to save.

The distribution of global income has also changed significantly since the 1980s. While the rise of emerging market economies such as China and India has lowered global income inequality, in many advanced economies, and above in all the United States, top income earners' share of total income has increased. Since the savings ratio of households increases with income, this may be one of the reasons for a growing supply of savings.

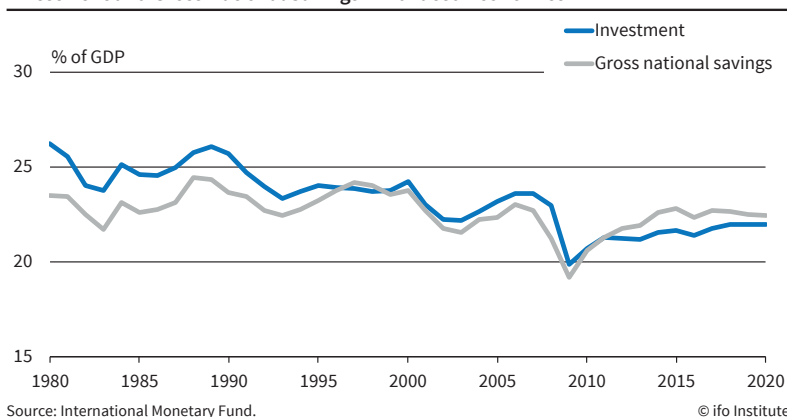
In addition, developing and emerging market economies have played a special role in the global capital market. Economic theory predicts that countries that are trying to catch up with advanced economies should attract international capital inflows in order to finance the investments associated with the catch-up process. However, while developing and emerging market economies have indeed experienced an investment boom, especially in the first decade of the 21st century, they have financed these investments entirely from their own savings, and in some cases their savings have even exceeded domestic investments (Figure 2). This has helped to

increase global capital supply and to lower global interest rates.

On the capital demand side, the main factors are declining trend growth in GDP and a corresponding weakening of investment demand, especially in the advanced economies. However, the fall in the investment-to-GDP ratio since the 1980s, which is shown in Figure 3, implies that the slowdown in investment growth has even been stronger than the decline in trend growth of GDP. According to IMF estimates, weak public investment in advanced economies has contributed to this decline.<sup>1</sup> Since 1980 the public-investment-to-GDP ratio in advanced economies has fallen from roughly 5 percent of GDP in 1980 to 3.5 percent in 2015. In addition, a price effect may have contributed to the decline of the investment-to-GDP ratio, as capital goods have become considerably cheaper relative to consumer goods in recent decades. The consequences for investment expenditure depend on the elasticity of demand for capital goods to price changes. Rachel and Smith (2017) argue that the price reduction has been stronger than the increase in the quantity of capital goods, which means that overall demand for capital has fallen.

Another important factor in the decline of the safe real interest rate is a shift in demand away from risky and towards safe investments. As a result, the spread between the returns on risky and safe investments has increased significantly. One reason for this has been the growth in demand for government bonds from central banks in the aftermath of the global financial crisis. According to Caballero et al. (2017), this development may have been reinforced by a significant decline in the supply of safe assets, as many issuers of

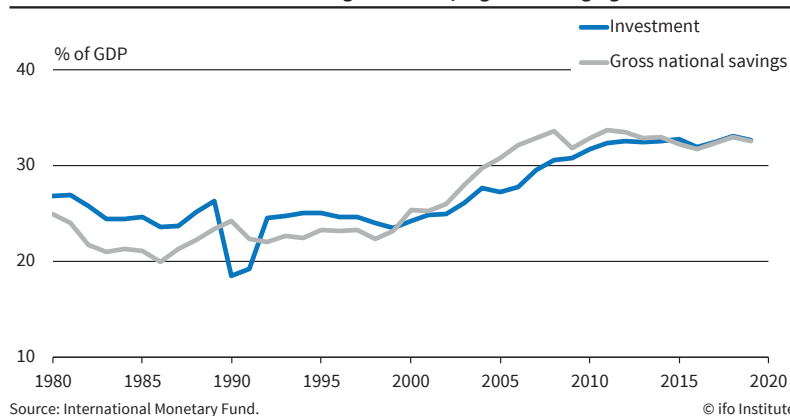
**Figure 3**  
Investment and Gross National Savings in Advanced Economies



Source: International Monetary Fund.

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**Figure 2**  
Investment and Gross National Savings in Developing and Emerging Market Economies

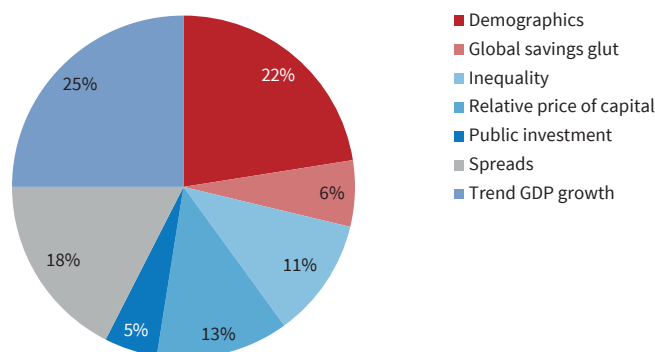


Source: International Monetary Fund.

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<sup>1</sup> International Monetary Fund, Fiscal Affairs Department, *Investment and Capital Stock Dataset*.

**Figure 4**  
**Factors behind the Decline of the Trend in Global Real Interest Rates since 1980**



Source: Rachel and Smith (2017).

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assets suddenly lost their safe status between 2007 and 2011.

Rachel and Smith (2017) provided a quantitative estimate of the importance of the various factors on the supply and demand side of the capital market for the decline of the trend in the global real interest rate since 1980. Figure 4 gives an overview of their result. According to their analysis, an increase in the propensity to save due to demographic changes and declining growth expectations are the two main drivers of the decline of the trend in the global real interest rate. It should be emphasized that this quantification is based on a number of methodological premises that need not be shared. In particular, both the trend in the global real interest rate and its determinants are not observable, which increases the uncertainty surrounding their estimates. However, the analysis of Rachel and Smith (2017) also underlines that simple and monocausal explanations for the phenomenon of low interest rates are misleading.

### **MONETARY POLICY ALSO CONTRIBUTES TO THE FALL IN INTEREST RATES**

In addition to these long-term real economic factors, the ECB's zero interest-rate policy and its large-scale asset purchases have also contributed to the fall in nominal interest rates over the past ten years. Given the current estimates for the trend in the real interest rate of around 0.5 percent and the trend in the German inflation rate of around 1.5 percent, it can be assumed that if monetary policy were to normalize, nominal interest rates in Germany would rise from currently zero to around 2.0 percent. However, if one believes the ECB's current announcements, there is still a long way to go before this normalization of monetary policy takes place. In its economic analyses, the ifo Institute has pointed out that even after taking into account the declining trend in real interest rates the stance of ECB policy has been significantly more expansionary since 2017 than in comparable situations in the first ten years of the common European currency (Wollmershäuser et al. 2018).

Accordingly, the ECB would have had to abandon its zero interest-rate policy and raise key interest rates already in the course of 2017.

However, the ECB's policy, which was too expansionary from this perspective, did not significantly accelerate inflation in the euro area. Even at the peak of the economic cycle at the beginning of 2018, inflation was well below the ECB's price stability target. This means there are good reasons to believe that

the channels of monetary policy transmission have changed and that the same monetary stimulus is now producing different effects than before. Given the low rate of inflation, one can argue that the ECB's present stance should be to risk raising interest rates too late rather than too early. However, it should be borne in mind that there is currently little scope for monetary policy to react to a possible downturn with an interest-rate cut.

This poses major challenges for the ECB. The longer its zero interest-rate policy lasts, the more negative side effects it will have and the greater the risk that the abundant liquidity provided will be unloaded elsewhere and contribute to the formation of price bubbles in the financial markets. As mentioned at the beginning, criticism is repeatedly voiced – especially in Germany – that the ECB's expansionary monetary policy not only lowers actual interest rates, but also causes a decline of the trend in real interest rates because it slows down productivity growth ('zombification'). It cannot be ruled out that low interest rates will lead to the survival of companies that would be forced out of the market if interest rates were higher. Nor can it be ruled out that production factors could be channeled more quickly into more productive uses if interest rates were higher. So far, however, compelling empirical evidence for this zombification thesis is lacking. Using interest rate hikes as a kind of 'productivity whip' – an argument also familiar from the debate on minimum wages – seems risky in any case. It does not seem plausible that the current weakness in growth could be overcome in this way.

### **HOW GERMANY MAY BENEFIT FROM LOW INTEREST RATES**

In view of the persistent global trend towards lower interest rates in internationally integrated financial markets, it is not convincing to identify national policies and national economic developments as the main determinants of interest rate developments. One of the consequences of this is that the claim that

the abandonment of the ‘black zero’ in German fiscal policy would allow interest rates to rise again is misleading. The influence of German fiscal policy on global interest rates is too small.

However, one must certainly ask whether, in view of the low interest rates on German government bonds, it makes sense from the point of view of the optimal structuring of public assets to further reduce the supply of German government bonds, which from a global perspective are perceived as safe assets. There are various ways of exploiting the currently very good borrowing conditions without impairing the sustainability of German public finances. This certainly applies to public investment. However, public investment in Germany currently fails less because of fiscal space than because of approval processes or the resistance of the local population to infrastructure projects.

One could, however, also use the German government’s good borrowing conditions to build up a sovereign wealth fund, as envisaged by the concept of the Citizens’ Fund (Fuest et al. 2019). The concept is simple. The German government would set up an entity that is endowed with funds generated by issuing German government debt. The fund would be used to acquire an internationally diversified portfolio of riskier but also higher-yielding assets. The investment policy would be similar to that of other sovereign wealth funds like, for instance, the Norwegian oil fund. Of course, in contrast to Norway, Germany does not have oil revenues that can be invested through the wealth fund. While the German government can borrow at unusually low interest rates, returns on assets are generally also low, so why should a wealth fund financed with German government debt generate any profits? Here, the particular situation of Germany as the largest eurozone economy and as an anchor for economic stability plays an important role. Due to this unique position, global investors pay a premium for holding German Bunds, which means that the interest rate the German government has to pay is systematically lower than that paid by other EU member states. The wealth fund concept exploits this premium. The income generated by such a sovereign wealth fund could be used to supplement the old-age provision of low-income population groups in particular.

Fuest et al. (2019) consider a scenario where the German government would increase its debt issuance by 0.5 percent of GDP per year and transfer the proceeds to the wealth fund for investment. The analysis shows that, if the difference between the cost of public debt and the return on the fund is equal to 2 percent, and after a buildup phase (of admittedly several decades,) every German citizen would receive a lump sum payment on their 67th birthday amounting to over EUR 16,000. The investment volume of the fund would be equal to roughly 11 percent of German GDP.

## REFERENCES

- Caballero, R. J., E. Farhi and P. O. Gourinchas (2017), “The Safe Assets Shortage Conundrum”, *Journal of Economic Perspectives* 31(3), 29–46.
- Del Negro, M., D. Giannone, M. P. Giannoni and A. Tambalotti (2019), “Global Trends in Interest Rates”, *Journal of International Economics* 118(C), 248–262.
- Fuest, C., C. Hainz, V. Meier and M. Werding (2019), *Das Konzept eines deutschen Bürgerfonds*, <https://www.ifo.de/DocDL/ifo-studie-2019-fuest-et-al-buergerfonds.pdf>.
- Rachel, L. and T. D. Smith (2017), “Are Low Real Interest Rates Here to Stay?”, *International Journal of Central Banking* 13, 1–42.
- Wollmershäuser, T., S. Delrio, M. Göttert, C. Grimme, J. Güntner, C. Krolage, S. Lautenbacher, R. Lehmann, S. Link, W. Nierhaus, M. Reif, R. Šauer, T. Schuler, M. Stöckli, K. Wohlrabe and A. Wolf (2018), “ifo Konjunkturprognose Sommer 2018: Gewitterwolken am deutschen Konjunkturhimmel”, *ifo Schnelldienst* 71(12), 33–87.