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ECB powerless?

How the FED is shaping the decline in German interest rates

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Abstract

The decline in interest rates on long-term German government bonds since 1989 is largely due to the FOMC meetings of the FED. The ECB has almost no influence on long-term interest rates.

The interest rate[1] on the 10-year German government bond has been on a long downward trend. In 1989, the yield to maturity on the German government bond was still just under seven per cent but had fallen by almost eight percentage points by the time it reached its low point in 2020. The interest rate only rose again to two per cent in the wake of the latest wave of inflation.

One of the prevailing narratives to explain the decline in interest rates in Germany and the US has so far been so-called secular stagnation, which is said to have occurred independently of central bank monetary policy. The ageing population in western industrialised countries and technological progress have created a global savings glut (Eichengreen 2015, Bernanke 2005), which has reduced demand for investment and consumption (Gordon 2017), with the result that interest rates are said to have fallen continuously.

However, Sebastian Hillenbrand (2024) from Harvard University showed in a study that the fall in interest rates on long-term US government bonds since 1989 can be attributed exclusively to the US Federal Reserve (FED). The fall in interest rates can be attributed to short time windows around the monetary policy press conferences (FOMC meetings). This is particularly noteworthy as the central bank's primary instrument for a long time was the control of short-term interest rates and not the control of long-term interest rates. It therefore appears that interest rates were lowered by the central bank and not by the market (Mayer 2024).

This study shows that a considerable proportion of the decline in interest rates on German long-term government bonds (called Bundesanleihe or Bund) can also be attributed to the FED. In the period from 1989 to the global financial crisis from 2007 onwards, two thirds of the total fall in interest rates on the German government bond occurred during FOMC meetings. Since then, the correlation has increasingly diminished, but a third of the fall in interest rates can still be attributed to the FED. The reason for the diminishing correlation could be related the that the vanishing creditworthiness of issuers of government bonds in the eurozone has played an increasingly important role in pricing on the German bond market since the euro crisis.

In contrast, the influence of the European Central Bank (ECB) on the interest rate of long-term Bundesanleihe is negligible. Only during the period of loose monetary policy since 2008 has there been a rise in interest rates triggered by ECB meetings. This rise in interest rates contrasts with the long-term trend of falling interest rates until 2022. One possible explanation for this is that the FED's communication has already shaped expectations regarding interest rate cuts by the ECB, which has led to falling interest rates. This expectation

[1] In this study, the term "interest" refers to the interest on the remaining term of a bond.

was not fully realised at the ECB's press conferences, which led to a slight rise in interest rates. This explanation fits in with the narrative that prevailed at times that the ECB would follow the FED in its decisions (Belke and Gros 2005).

A new, deviating pattern can be observed for both long-term German and US government bonds from 2022 onwards, which did not fall within the observation period of Hillenbrand's study (2024). While interest rates rose significantly from 2022 onwards outside the FED's interest rate window, they fell during the FOMC meetings. One possible explanation is that since the recent rise in inflation, the FED's actions have been driven by the rise in inflation and the economic situation, whereas previously the FED had more or less successfully tried to proactively shape the economic situation while inflation remained low. As the FED did not fully live up to expectations of possible interest rate hikes, interest rates fell during the FOMC meetings, although they were otherwise on an upward trend.

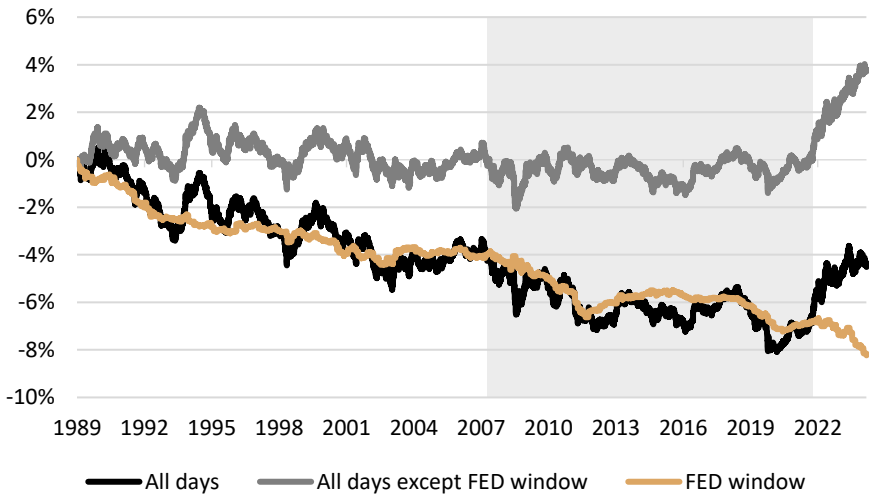
The following section first replicates the core statement of Hillenbrand's study (2024). Hillenbrand's methodology is then used to analyse the influence of the FED and the ECB on the fall in interest rates on German government bonds. Finally, implications for investors are discussed.

The FED and the interest rate on long-term US government bonds

The FED communicates its monetary policy decisions at fixed press conferences following the Federal Open Market Committee (FOMC) meetings. In order to document the influence of the meetings on interest rate developments, Hillenbrand (2024) defines a three-day time window that frames the day of the press conference. The time window includes the day on which the results of the FOMC meeting are announced, the last trading day before and the first trading day after. This time window is referred to as the FED window.

Following Hillenbrand, the observation period of this study starts in June 1989, as it is documented from this point in time onwards when market participants actually became aware of the monetary policy measures of the FOMC meetings (Kuttner 2001). The end of the observation period is at the end of August 2024 and thus extends two years further than Hillenbrand (2024).

Fig. 1: Cumulative change in interest rates of the 10-year US government bond during the FOMC meetings of the FED



Source: Refinitiv, own calculation Flossbach von Storch Research Institute, as at 01/09/2024.

The considered interest rate corresponds to the interest rate to maturity on a 10-year US government bond. The charts show the cumulative change in the interest rate to maturity on 10-year US government bonds. These are calculated from the daily absolute differences in interest rates, which are added together since the start of the observation window.

The black line in figure 1 shows the cumulative change in interest rates on 10-year US government bonds. The fall in interest rates is clearly visible in the black line and amounts to eight percentage points by the end of 2020. The gold line, which only takes into account the change in interest rates during the FED window, shows a similar trend to the black line until the end of 2021. This means that the complete fall in interest rates by 2022 is due to the short three-day windows around the FOMC meetings. The grey line, which cumulates the change in interest rates on the remaining days, runs sideways until 2022.

The grey box divides the period into three phases. The first phase (Jun. 1989 to Aug. 2007) covers the period up to the global financial crisis, during which the FED pursued a conventional monetary policy in which it attempted to control economic growth and inflation. During this phase, the FED begins to provide forward guidance for the first time, in which it communicates its expectations regarding future monetary policy so that market participants can form their expectations. In the second phase of expansionary monetary policy in response to the global financial crisis (Sep. 2007 to Feb. 2020), central banks focused on very low interest rates and other expansionary, sometimes unconventional monetary policy measures. Dot plots were also published for the first time from 2012 as part of the FED's forward guidance.

The dot plots are a graphical representation of the FOMC members' interest rate forecasts, which show their assessment of the key interest rate in the coming years and therefore also implicitly provide estimates of long-term interest rates.

The first two phases comprise the so-called secular stagnation. The fall in interest rates in these phases is often attributed to the expectation of falling inflation (Bauer and Rudebusch 2020), a demographically induced sponge of savings (Bernanke 2005), low investment opportunities (Summers 2014) or declining productivity (Gordon 2017). However, these explanations do not match the pattern observed by Hillenbrand that the decline in interest rates is attributable to the FOMC meetings. In addition, the FED's monetary policy in the first phase focusses on the short end of the yield curve and not on the long end considered here. According to Mayer and Schnabl (2021), the prolonged monetary policy expansion could have paralysed investment and long-term growth and thus also reduced long-term interest rates. Alternatively, according to Hillenbrand (2024), it could also be that the market only learns about secular stagnation as a result of the FED's actions. However, this assumes that the FED actually has better information about the development of the economy than the market, which can be questioned.

The third phase up to the current margin, which is no longer part of Hillenbrand's study, begins in March 2022 with the gradual tightening of monetary policy and increase in key interest rates. Monetary policy will also become increasingly data-dependent (see Powell (2019) and Powell (2023)). This phase shows a changed correlation, as the pattern described above ends at the beginning of the phase. The sharp rise in interest rates on 10-year US government bonds only occurs on days outside the FED window. The decline in interest rates continues during the FED window, which actually slows down the rise in interest rates on US government bonds. This means that the information relevant to the market that led to a rise in interest rates became known outside the FED window or the market no longer follows the information that the FED announces to the market during the FOMC meetings (Armelius et al. 2024).

One possible explanation for the pattern is that since the recent rise in inflation, the FED's actions have been more strongly influenced by inflation and the current economic situation than in previous phases. In the past, the FED made attempts to proactively steer both inflation and economic growth. Now it seems to have to react more to inflation and external economic developments. The fall in interest rates in the FED window indicates that the market was expecting interest rates to rise even more sharply and that this expectation was only partially fulfilled during the meetings. The FED's monetary policy appears to be an active but not long-term successful

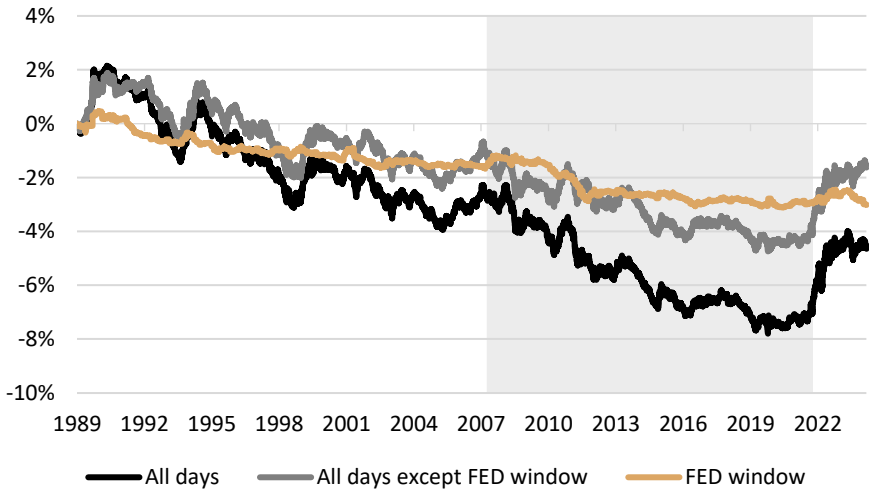
countermeasure to the current market situation. In addition, the FED's forward guidance, which was a possible explanation for the pattern in the first two phases, also appears to be influencing the market in the opposite direction.

The FED and the interest rate of the long-term German government bond

Hillenbrand's observation (2024) raises the question of whether long-term interest rates on German government bonds are also influenced by the FED's decisions. The following chart shows the interest rate development of the 10-year German government bond during the FOMC meetings, which is considered representative for interest rates on long-term German government bonds.

In the first phase up to the global financial crisis, the interest rate on the German government bond shows a significant fall in interest rates after a brief rise. The golden line accumulates the fall in interest rates during the FED window. At the end of the first phase, half of the fall in interest rates is attributable to the FED window and half to the remaining days. However, as the FED window only covers ten per cent of the total trading days, the FOMC meetings have a decisive influence on the fall in interest rates.

Fig. 2: Cumulative change in the interest rate of the 10-year German government bond during the FOMC meetings of the FED



Source: Refinitiv, own calculation Flossbach von Storch Research Institute, as at 01/09/2024.

At the beginning of the second phase of loose monetary policy, a significant proportion of the fall in interest rates can still be attributed to the FED window. While the interest rate on long-term government bonds fell by four percentage points between 2007 and 2012, half of this decline was attributable to the FED window. After 2012, no clear trend is recognisable in the FED window and the golden line moves sideways. One possible explanation is that the influence of the FED on European bond markets has waned with the euro crisis, as the creditworthiness of the eurozone countries and a shift of capital within the eurozone have increasingly influenced interest rates on government bonds. To some extent, this can be seen in the fact that the fall in interest rates on German government bonds during the euro crisis was greater than the fall in interest rates on US government bonds.

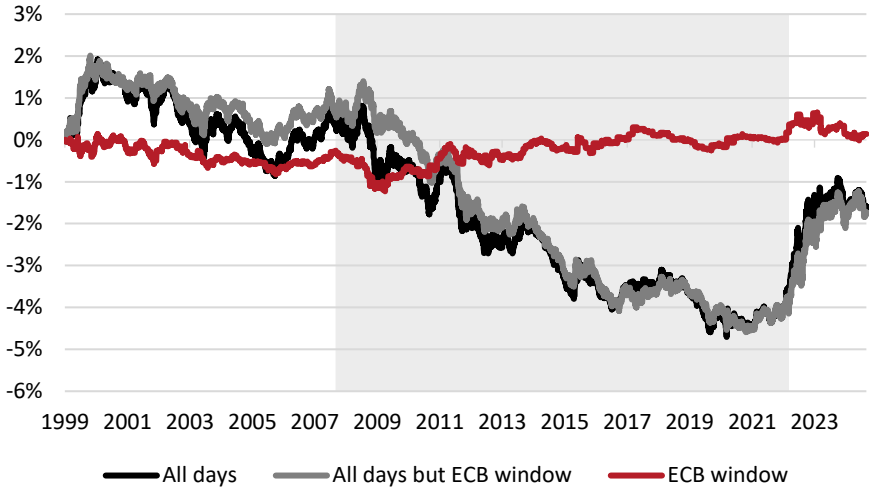
In the third phase of the now data-driven monetary policy, there is no discernible structural link between the FED windows and the interest rate on German government bonds. The interest rate on German government bonds is rising sharply, but the increase is occurring outside the FED window.

The cumulative decline in interest rates on the German government bond in the first two phases amounts to 6.8 percentage points. The FED window accounts for slightly less than half of this. As the start and end dates vary, the proportion of the interest rate decline explained by the FED window also changes. However, it always remains significantly higher than the proportion of total trading days accounted for by the FED window. This shows that the FED's actions have a significant information content for the interest rate development of German government bonds. At the same time, as expected, the influence of the FOMC meetings on German government bonds is significantly lower than the influence on US government bonds. In addition, the correlation diminishes over time and is no longer present in the third time window.

ECB meetings and the long-term German government bond

As the ECB is the central bank responsible for monetary policy in the eurozone, the question arises as to what influence the ECB's monetary policy meetings have on the interest rate of 10-year German government bonds. Hillenbrand's methodology is again used as a basis for this, whereby an ECB window is used instead of the FED window. The ECB window comprises the day on which the results of the Monetary Policy Meetings are announced to the public in an ECB press conference, as well as the last trading day before and the first trading day after. For the analysis, the same three temporal phases are used as for the FED analysis, but the observation period only begins in 1999, when the ECB started its monetary policy work

Fig. 3: Cumulative change in the interest rate of the 10-year German government bond during the ECB's Monetary Policy Meetings



Source: Refinitiv, own calculation Flossbach von Storch Research Institute, as at 01/09/2024.

In the first phase, there is only a slight parallel movement of the cumulative interest rate in the ECB window and the actual development. Only in the second phase (Sep. 2007 to March 2022), which includes the European financial crisis, the euro crisis, the Draghi put and the period of low inflation, are weak correlations discernible. At the beginning of the second phase (2007 to 2009), the interest rate of the German government bond falls sharply, one third of which can be attributed to the ECB window.

However, this is followed by a trend reversal. While the interest rate on German government bonds falls by a further 3.7 percentage points from 2009 to its low point in 2021, interest rates actually rise by more than one percentage point during the ECB windows. The opposite trend indicates that the ECB meetings provide the market with information that contradicts prevailing expectations. The ECB's monetary policy announcements, such as key interest rate cuts and the announcement of bond purchase programmes, cause interest rates to rise in the short term, but this is immediately offset and exceeded. This pattern cannot be observed either in the FED window or for US government bonds.

In the third phase, from March 2022, which includes the sharp rise in inflation and the rise in interest rates, interest rates rise almost entirely outside the ECB window. This means that the ECB decisions do not result in any new information for the pricing of long-term German government bonds reaching the market, or the results have already been priced in or the market is not guided by the new information (Armelius et al. 2024).

Of the entire interest rate movement in the period under review, a parallel

trend between the ECB meetings and the change in interest rates can only be identified in a small section (2007 to 2009). In the period of loose monetary policy from 2007 onwards, on the other hand, there was an opposite trend.

Comparison of the influence of the FED and the ECB on German government bonds

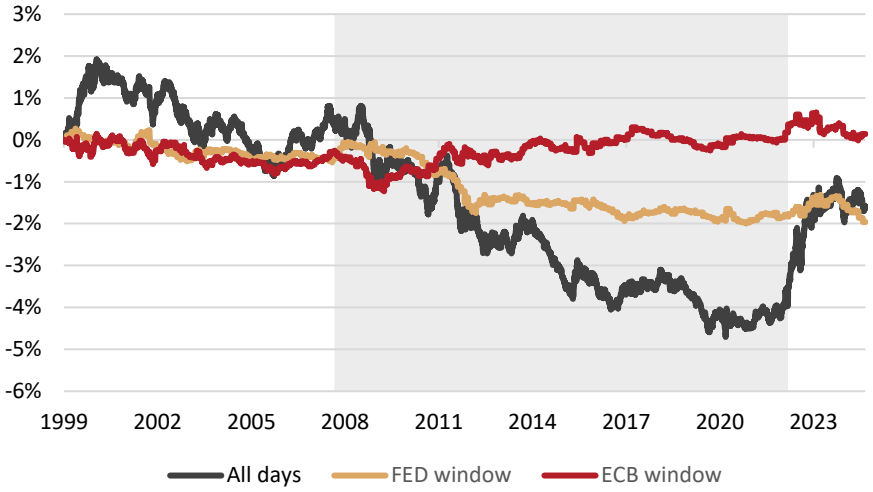
The following chart shows the cumulative change in interest rates for 10-year German government bonds during the respective central bank windows. The gold graph shows the development in the window around the FED meetings, while the red graph shows the interest rate in the window around the ECB meetings.

If we again distinguish between the three phases, we recognise a similar interest rate trend in the FED and ECB windows in the first phase. Only in the second phase do clear differences emerge. From the end of 2009, the gold and red lines diverge significantly. While the FOMC meetings lead to a fall in interest rates, the ECB's press conferences support interest rates upwards. However, as interest rates are subject to a decline during this phase, the FED window characterises the decline. Compared to their height, the rise in interest rates during the ECB window is significantly weaker than the fall during the FED window. Information that reaches the market through the FOMC meetings appears to have a stronger influence on the interest rate of the long-term German government bond than the findings from the ECB meetings. This could mean that the market attaches greater importance to the FED statements than to the ECB.

This development can also be explained by the fact that in the second phase, the FED's monetary policy actions set the tone for other central banks. In addition, specific interest rate expectations were published with the dot plots from 2012 onwards. This may also have shaped expectations as to the direction that future monetary policy actions by the ECB could take. However, the subsequent ECB press conferences did not fully fulfil expectations, resulting in a correction in interest rates. This gives the impression that during the FED window, the interest rate trend follows the general downward trend of the phase. At the same time, during the ECB window, interest rates move against the general trend and cause a correction.

In the third phase, the influence of both central banks on the German government bond is practically non-existent. The rise in interest rates occurs entirely outside the central bank windows.

Fig. 4: Cumulative change in interest rates of the 10-year German government bond in the window around the FED and ECB meetings



Source: Refinitiv, own calculation Flossbach von Storch Research Institute, as at 01/09/2024.

Conclusion

Over the observation period, the FED's monetary policy actions, which are announced at the FOMC meetings, have a stronger influence on the long end of the yield curve for German government bonds than the ECB's monetary policy meetings.

For investors in long-term US government bonds, both until the financial crisis and during the period of expansive monetary policy, the days in the FED window were crucial for benefiting from rising bond prices through falling interest rates. Even in previous years, when interest rates had risen and bond prices had fallen significantly, investors who were only in the market during FOMC meetings were able to profit.

For investors in long-term German government bonds, the trading days in the FED window were more profitable than in the ECB window, as investors were able to realise a significant price increase within the 3-day window. From 2009, the ECB window was even slightly price-reducing due to slightly rising interest rates. The FED therefore has a greater influence on long-term Bunds than the ECB.

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