The monetary policy non-puzzle in bond markets

Isabel Schnabel, Member of the ECB’s Executive Board

Bond Market Contact Group, Frankfurt am Main, 15 September 2021
Exceptionally low yield environment proves persistent despite recovery

10-year US Treasury and euro area GDP-weighted yield (percentage)

Source: ECB calculations and Bloomberg.
Latest observation: 10 September 2021.

10-year sovereign bond spreads over German Bunds (basis points)

Source: ECB calculations.
Latest observation: 10 September 2021.
Inflation expectations are rising, putting upward pressure on nominal rates...

**Decomposition of nominal 10-year euro area OIS rate**
(cumulative change since January 2021; percentage points)

- **10Y real OIS rate**
- **10Y inflation swap rate**
- **10Y nominal OIS rate**

**Euro area 5y5y inflation swap forward rate**
(percent)

Sources: ECB calculations.
Latest observation: 10 September 2021.

Source: Bloomberg.
Latest observation: 10 September 2021.
… but real yields are declining to new historical lows

Real 10-year OIS rates

(Percent)

<table>
<thead>
<tr>
<th>Euro area</th>
<th>US</th>
<th>average euro area since 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>-2.0</td>
<td>-1.6</td>
<td>-1.2</td>
</tr>
<tr>
<td>-0.8</td>
<td>-0.4</td>
<td>0.0</td>
</tr>
<tr>
<td>0.0</td>
<td>0.4</td>
<td>0.8</td>
</tr>
<tr>
<td>0.4</td>
<td>0.8</td>
<td>1.2</td>
</tr>
<tr>
<td>1.2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Bloomberg.
Notes: 10-year real OIS rate computed as the 10-year nominal OIS rate less the 10-year inflation swap rate.
Latest observation: 10 September 2021.
Delta variant affects bond yields and prolongs supply bottlenecks

Drivers of 10-year US Treasury yield
(contribution in basis points)

- 10-year Treasury
- foreign macro
- domestic macro
- foreign policy
- domestic policy
- global risk

Euro area PMI manufacturing: suppliers’ delivery times
(50 indicates no change over previous month)

Sources: Sources: Refinitiv Datastream and ECB.
Note: Shock contributions are estimated using a daily BVAR model for the US using a combination of sign, magnitude and narrative restrictions.

Source: Markit
Latest observation: August 2021
Bond markets may be overpricing risks of Delta variant for global growth

Consensus real GDP growth forecasts for 2022 (percentage)

Sources: Bloomberg and ECB calculations.
Latest observation: 10 September 2021.

Ratio of credit rating upgrades over downgrades (1 indicates that the number of upgrades equals downgrades)

Source: Bloomberg.
Notes: The bars indicate ratios between number of long-term credit rating upgrades over downgrades for investment grade firms by S&P, Moody’s and Fitch. Quarterly data. Due to an extreme outlier, the Q2 2021 downgrade observation for Europe is the average number of downgrades between the time period Q1 2017 and Q1 2021.
Continued rally in stock markets is mainly driven by better earnings outlook

**Equity market developments**
(index: Jan-20 = 100)

- **EURO STOXX**: Line graph showing the index from January 2020 to September 2021, with an increase of 38%.
- **S&P 500**: Line graph showing the index from January 2020 to September 2021, with an increase of 16%.

Source: Bloomberg.
Latest observation: 10 September 2021.

**Drivers of equity prices in the euro area**
(cumulative change since January 2020, percentages)

- **Equity risk premium**
- **Risk-free discount rates**
- **Longer-term earnings expectations**
- **Short-term earnings expectations**
- **Dividends and share buybacks**
- **EA Total Economy Index**

Sources: Refinitiv, IBES, Consensus Economics, Bloomberg and ECB calculations.
Notes: The decomposition is based on a dividend discount model. The model includes share-buybacks, discounts future cash-flows with interest rates of appropriate maturity, and includes five expected dividend growth horizons. See ECB Economic Bulletin, Issue 4/2018 for more details.
Latest observation: 3 September 2021 (weekly data).
Stock of acquired assets is putting persistent downward pressure on bond yields

Sources: ECB.
Notes: The free-float measure for the four largest euro area economies (Germany, France, Italy and Spain) is defined as holdings of general government bonds by price-sensitive private-sector investors as a share of total outstanding bond supply, both expressed in ten-year maturity equivalents. Price sensitive investors are defined as all sectors other than the foreign official sector, insurance companies and pension funds, and the Eurosystem. Latest observation: March 2021 (quarterly data).

Sources: ECB calculations.
Notes: Impacts derived from the model of Eser et al. (2019) and a recalibrated version of the model so that the model-implied yield reactions to the March PEPP announcement match the two-day yield changes observed after 18 March (average estimates). Results refer to GDP-weighted averages of the zero-coupon yields of the big-four sovereign issuers (DE, FR, IT, ES). Future assumptions are based on results from the ECB’s survey of monetary analysts, i.e. APP (PEPP) end of net purchases: June 2024 (March 2022); APP (PEPP) end of reinvestments: June 2026 (December 2024). Latest observation: March 2021 for past estimates.
Market participants are expecting monetary policy to be more patient.

**US 1y forward OIS and inflation swap rates in 3 years time**

(percentage)

- 2010-Feb 2020 (ex. 2012-13)
- March 2020-today
- Last obs (10-Sep-21)

**Euro area 1y forward OIS and inflation swap rates in 3 years time**

(percentage)

- 2010-Feb 2020
- March 2020-today
- Last obs (10-Sep-21)

Source: Bloomberg, ECB calculations
Latest observation: 10 September 2021.
New strategy and revised forward guidance truncate risk distribution from the top

Probabilities of future evolution of 3-month Euribor
(percentage)

7 July 2021 (pre-strategy announcement) 23 July 2021 (post-July GovC)

Source: ECB calculations.
Markets increasingly price risks of higher inflation

**Probability of inflation exceeding 2% over the next five years**
(percentage)

- **Euro area**
- **US**

![Graph showing probability of inflation exceeding 2% over the next five years for Euro area and US](image)

**Sources:** Bloomberg and ECB calculations.

**Notes:** Probabilities implied by five-year zero-coupon inflation options, smoothed over five business days. Risk-neutral probabilities may differ significantly from physical, or true, probabilities. Latest observation: 10 September 2021.

---

**10-year inflation risk premium**
(percentage)

- **Euro area**
- **US**

![Graph showing 10-year inflation risk premium for Euro area and US](image)

**Source:** Refinitiv, Haver and ECB calculations.

**Notes:** The euro area inflation risk premium represents average estimates based on two affine term structure models applied to ILS rates adjusted for the indexation lag as in Camba-Mendez and Werner (2017). This estimation method follows Joslin, Singleton and Zhu (2011). The US inflation risk premium is estimated by the Federal Reserve Board DKW Model. Latest observation: August 2021.
Thank you for your attention!