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CHALLENGES OF MONETARY POLICY NORMALIZATION IN THE EURO AREA

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XVII MEETING OF HEADS OF MONETARY POLICY

CEMLA

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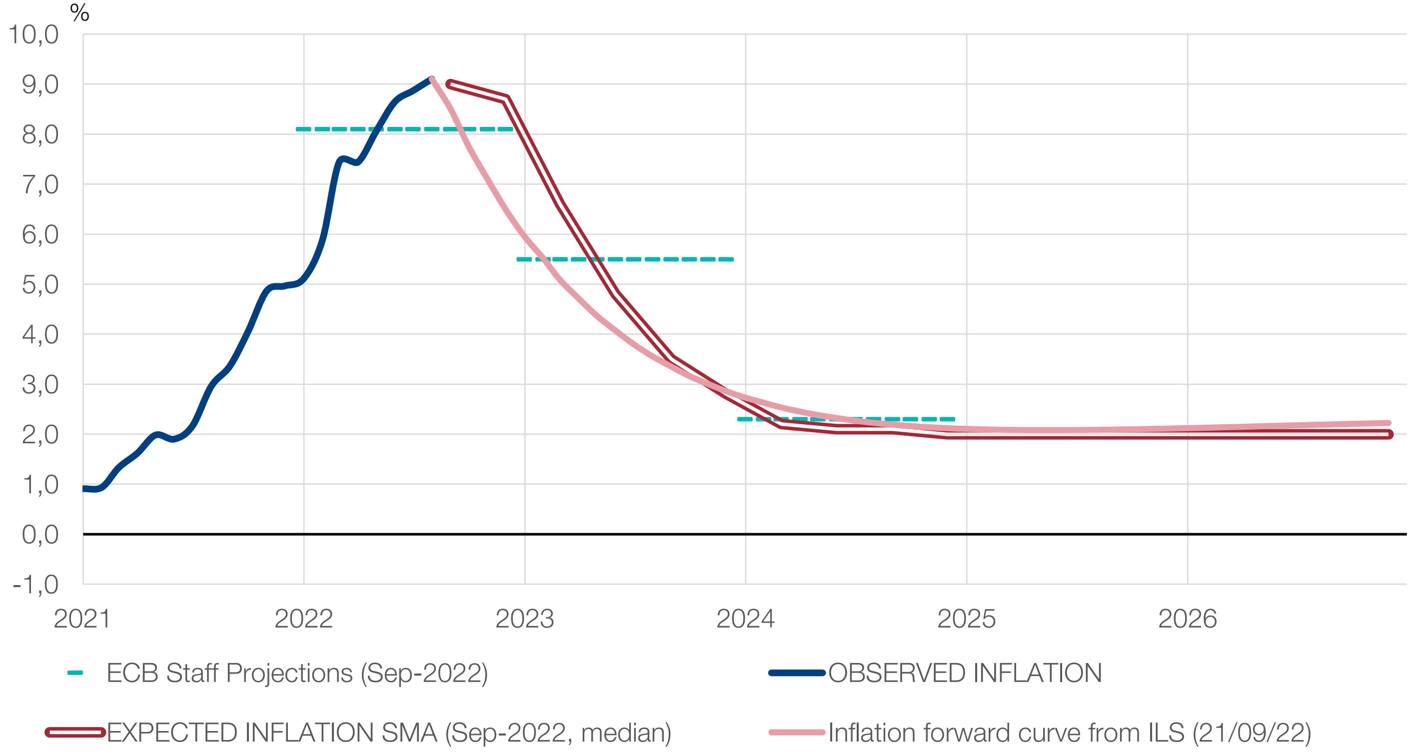
- Inflation pressures have continued to strengthen and broaden, mainly due to energy prices
- Outlook: inflation likely to remain at high levels for some time, risks primarily on the upside

EURO AREA: INFLATION RATE, INFLATION EXPECTATIONS AND SMA



Sources: Refinitiv Datastream, Survey of Monetary Analysts (SMA) and Banco de España.
Note: Inflation rate measured by the Harmonised Index of Consumer Prices (HICP).

THE ECB STARTED A MONETARY POLICY NORMALIZATION PROCESS AT END 2021

- In July, the ECB raised its key interest rates for first time in 11 years (50 bp)
- In September: largest single-meeting increase in the history of the euro (75 bp)

MARCH 2022
End of net asset purchases under the PEPP*

JUNE 2022
End of net asset purchases under APP, announcement of intention to raise the key interest rates in July

JULY 2022
Interest rates increase (+50 pb) and TPI** announcement

SEPTEMBER 2022
Interest rates increase (+75 pb)

* Pandemic Emergency Purchase Program

** Transmission Protection Instrument

The GovC's future policy rate decisions will be data-dependent and follow a meeting-by-meeting approach.

INTEREST RATE EXPECTATIONS HAVE BEEN REVISED SIGNIFICANTLY UPWARDS

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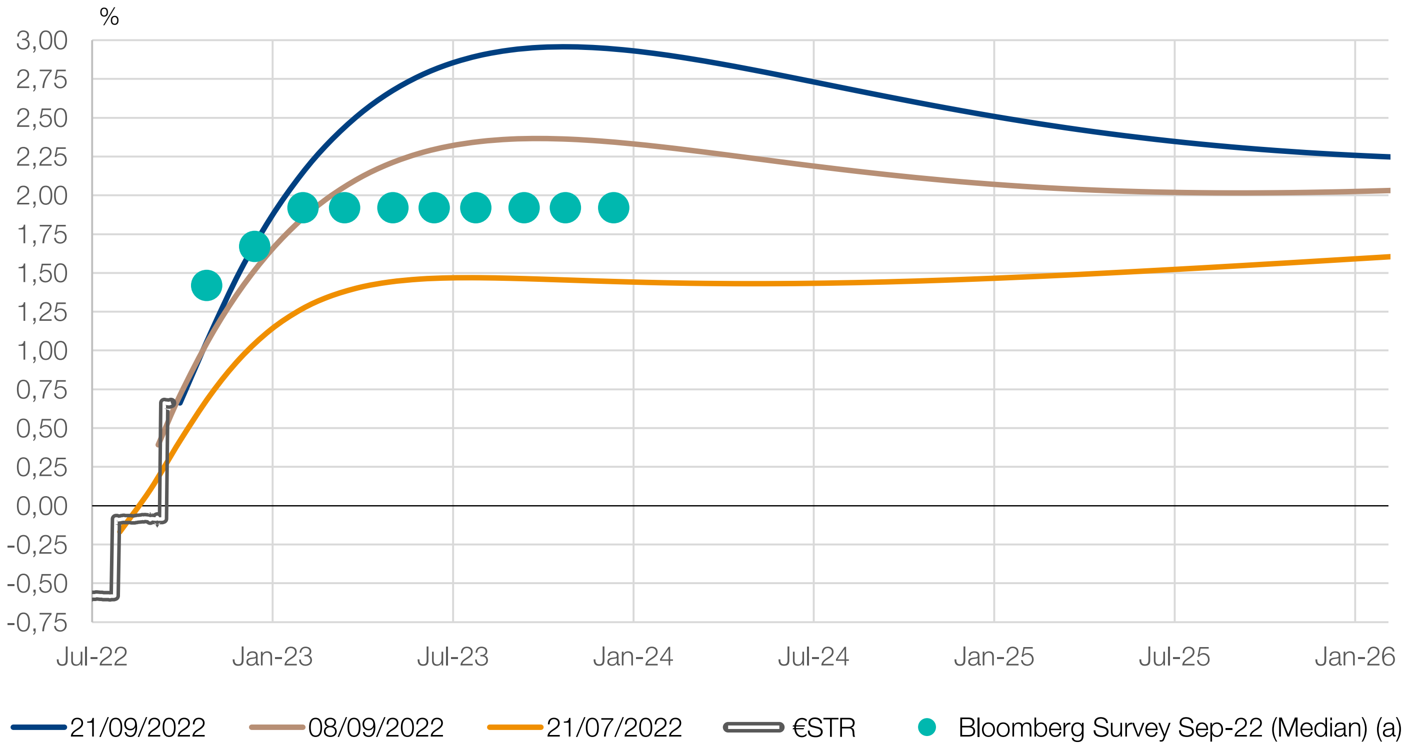
- Inflation data and latest GC decisions have led to upward movements in interest rate expectations.
- Forward curves may overstate expectations due to term premia, especially at medium and long term horizons.

OIS €STR FORWARD CURVE



Sources: Refinitiv Datastream, Bloomberg, Banco de España.
(a) Bloomberg survey was released on 19 September: responses were collected between 9 and 15 September.
Survey values are adjusted by the DFR-€STR spread (-8 bp) to be aligned with the OIS pricing.

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IN THE CONTEXT OF A MONETARY UNION, THE CENTRAL BANK NEEDS TO ENSURE THAT MONETARY POLICY TRANSMITS SMOOTHLY ACROSS ALL COUNTRIES

Mon. Pol. Decisions

- ECB monetary policy decisions should lead to similar reaction in financing conditions across countries, to preserve a smooth transmission throughout the euro area.

Sovereign yields

- Sovereign yields are a good reference to assess the transmission of monetary policy: they act as a benchmark for determining financing conditions for banks, firms and households.

Financing conditions

- In the euro area, sovereign yields differ across countries due to idiosyncratic factors (public debt, deficits or long-run growth rates)
- But **when the divergence between yields is unwarranted by economic fundamentals, this poses a serious threat to the transmission of monetary policy across the euro area.**

Preventing unwarranted fragmentation allows the Governing Council to adjust its monetary policy stance at the appropriate pace to reach its inflation target (2% in the medium term)

THE EXPERIENCE OF THE PEPP: SIGNIFICANT DROP IN PERIPHERAL SPREADS AFTER ITS ANNOUNCEMENT IN MARCH 2020

- After the outbreak of the pandemic, the sovereign yields increased sharply in those countries more affected by the pandemic and whose fiscal situation was less sound
- The Pandemic Emergency Purchase Program (PEPP) was instrumental in addressing fragmentation

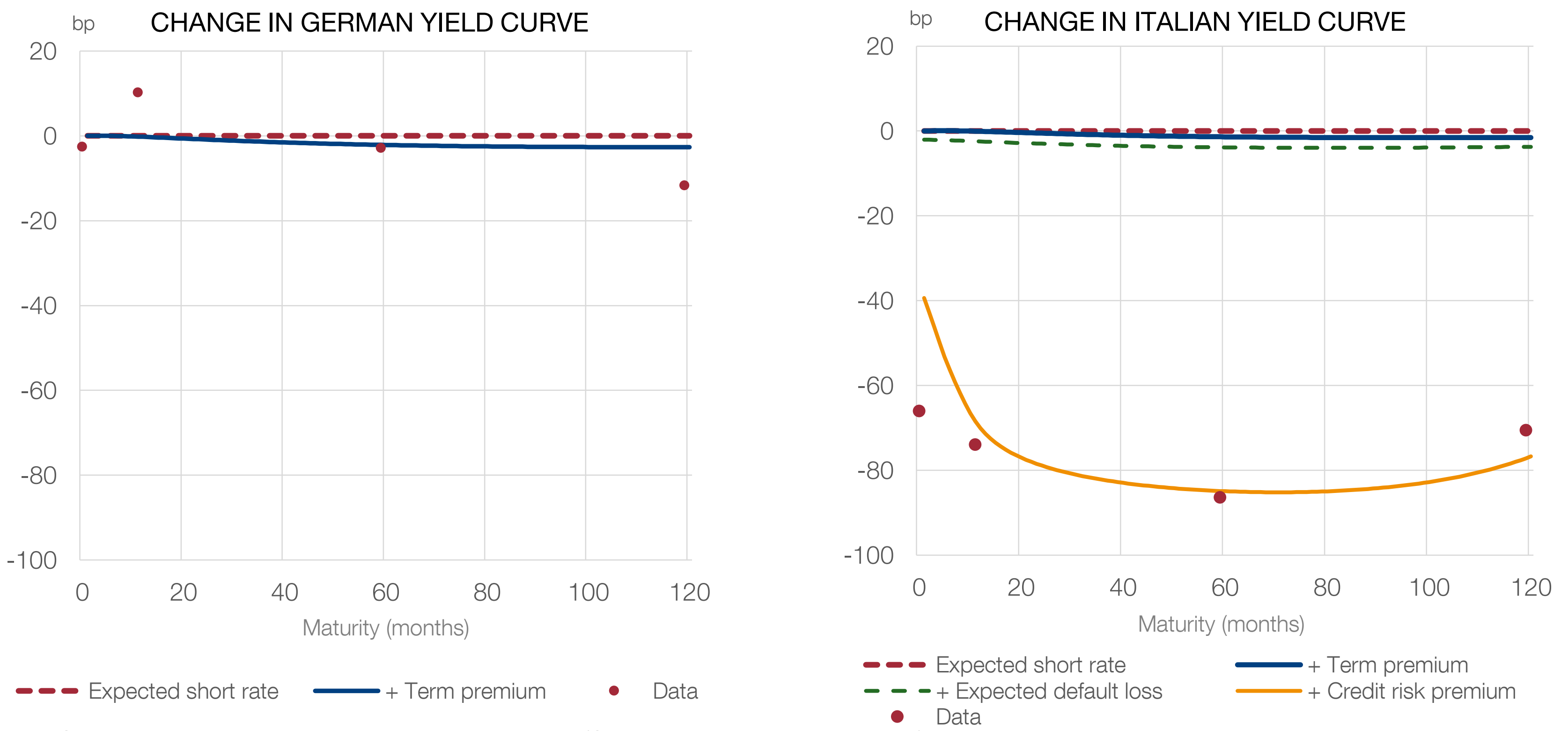
10-YEAR SOVEREIGN BOND SPREAD AGAINST GERMAN YIELDS

Source: Refinitiv Datastream. Latest observation: 31/12/2020.

THE MAIN CHANNEL OF TRANSMISSION OF THE PEPP WAS DEFAULT RISK EXTRACTION

- Structural model of sovereign yield curves –in which peripheral bonds have default risk that is endogenous to bond purchases– suggests that the credit risk premium accounts for most of the decline in peripheral yields.

DECOMPOSITION OF THE IMPACT OF PEPP ANNOUNCEMENT BETWEEN 18-20 MARCH

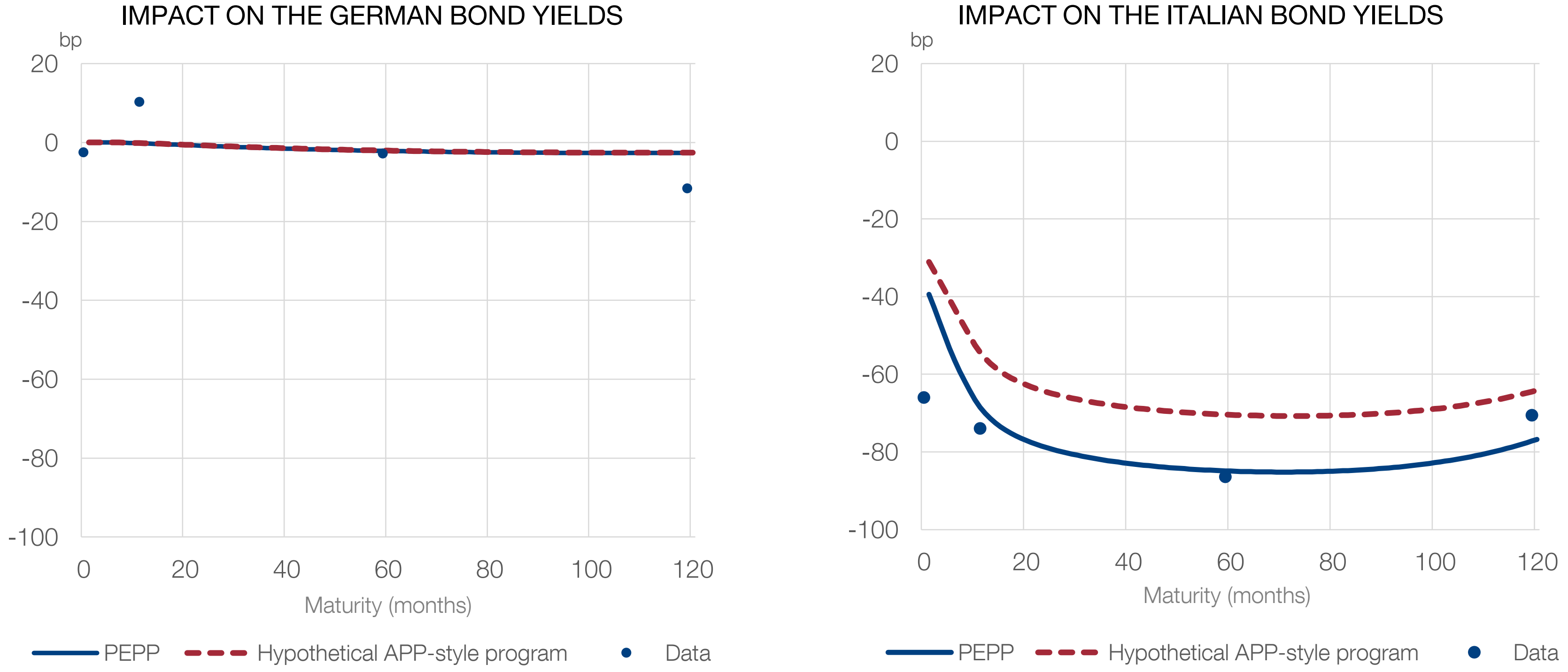


Source: The Term Structure Of Interest Rates In A Heterogeneous Monetary Union (Costain, Nuño and Thomas, 2022).
Notes: Costain et al (2022) extended the Vayanos and Vila (2021) term structure model to allow for sovereign default risk in a monetary union. In this model, sovereign yields can be decomposed into four terms: expected future interest rates, term premium, expected default loss (expected loss due to the possibility of default over the residual life of the bond) and credit risk premium (compensation required by risk-averse investors –over and above expected default losses- for bearing default risk).

PEPP'S FLEXIBILITY –ACROSS TIME, ASSET CLASSES AND JURISDICTIONS– BOOSTED ITS EFFECTIVENESS SIGNIFICANTLY

- By tilting purchases towards those countries where financial stress was more severe, the PEPP had a larger impact on Italian yields than an APP-style program would have had.
- PEPP's stronger impact was attributable to its flexible timing and, especially, to its flexible cross-country allocation (vis-à-vis APP's capital key criterion)

COMPARING YIELD CURVE RESPONSE BETWEEN PEPP AND APP-STYLE PROGRAMS



Source: The Term Structure Of Interest Rates In A Heterogeneous Monetary Union (Costain, Nuño and Thomas, 2022).
Notes: The graphs show the difference between the PEPP baseline scenario and a hypothetical scenario in which a program with the APP design would have been developed, with a constant purchase pace and cross-country allocations by capital key. Costain et al (2022) extended the Vayanos and Vila (2021) term structure model to allow for sovereign default in a monetary union. In this model, sovereign yields can be decomposed into four terms: expected future interest rates, term premium, expected default loss (expected loss due to the possibility of default over the residual life of the bond) and credit risk premium (compensation for the risk in ex post yields due to the possibility of default over the residual life of the bond).

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THE PANDEMIC LEFT VULNERABILITIES WHICH CONTRIBUTE TO THE UNEVEN TRANSMISSION OF THE MONETARY POLICY NORMALIZATION ACROSS JURISDICTIONS

- Since the process of policy normalization was initiated in December 2021, the ECB has pledged to act against reemergence of fragmentation risks.

- Two instruments at the ECB Governing Council's disposal:

Flexibility in PEPP reinvestments

- *Ad-hoc* 15 June meeting: ECB decides to apply flexibility in reinvesting redemptions coming due in the PEPP portfolio, with a view to preserving the functioning of the monetary policy transmission mechanism. (Current PEPP reinvestment horizon: end 2024.)
- Additionally, the design of a new anti-fragmentation instrument was announced.

TPI

- In July, the ECB announced the Transmission Protection Instrument (TPI) to ensure the smooth transmission of the normalization of monetary policy.

WHAT DOES THE TRANSMISSION PROTECTION INSTRUMENT (TPI) CONSIST OF?

- Purchases in secondary market of public sector securities issued in jurisdictions experiencing a deterioration in financing conditions not warranted by country-specific fundamentals, in order to counter risks to the transmission mechanism.

Purchase parameters

- Public sector securities with a remaining maturity of between 1 and 10 years.
- Private sector securities could be considered, if appropriate.

Eligibility

- Compliance with the EU fiscal framework.
- Absence of severe macroeconomic imbalances.
- Fiscal sustainability.
- Sound and sustainable macroeconomic policies.

Activation

- Activation based on comprehensive assessment of market and transmission indicators, evaluation of eligibility criteria, and judgement that TPI activation is proportionate to the ECB's primary objective.
- Purchases to be terminated either upon a durable improvement in transmission, or based on an assessment that persistent tensions are due to country fundamentals.

Relation to mon. policy stance

- TPI purchases would be conducted such that they cause no persistent impact on the overall Eurosystem balance sheet and, hence, on the monetary policy stance.

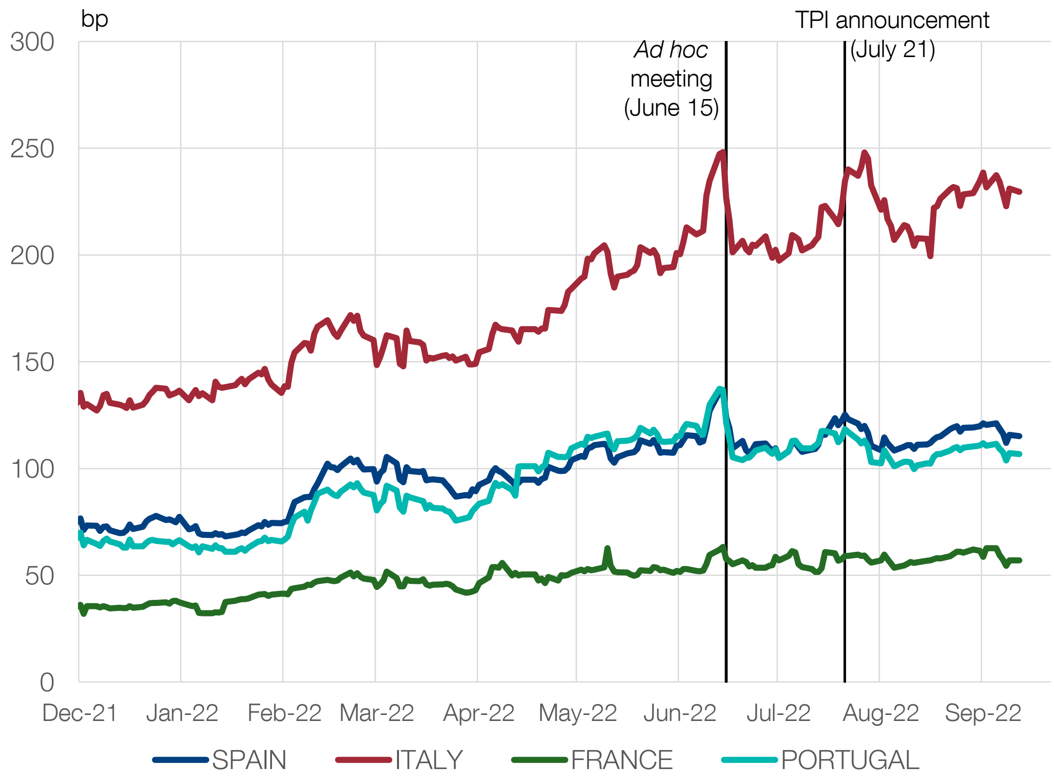
SINCE THE TPI'S ANNOUNCEMENT, THE DEGREE OF FRAGMENTATION IN SOVEREIGN DEBT MARKETS REMAINS BELOW THE LEVELS OF MID-JUNE

FRAGMENTATION IN THE EURO AREA DEBT MARKETS (a)

STANDARD DEVIATION (b) (01/01/2020 = 100)

Source: Refinitiv Datastream and Banco de España. Latest observation: 21/09/2022
(a) Countries included in the analysis: Germany, France, Italy, Spain, the Netherlands, Belgium, Austria, Ireland, Finland, Portugal, Greece, Slovakia, Slovenia, Lithuania, Cyprus and Malta.
(b) The standard deviation of the spreads of each country between its 10-year bond yield and that of the euro area aggregate is calculated as the GDP-weighted average of the yields of the countries included.

10-YEAR SOVEREIGN BOND SPREAD AGAINST GERMAN YIELDS



Source: Refinitiv Datastream. Latest observation: 21/09/2022.

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THANK YOU FOR YOUR ATTENTION