



EUROPEAN CENTRAL BANK

EUROSYSTEM

Euro Money Market Study

Key developments in 2023-2024

EMMEC meeting
18 June 2025

María Encío and Raúl Novelle – ECB



Introduction

Biennial publication by ECB for over 20 years

- It examines 5 segments: (1) secured, (2) unsecured cash, (3) short-term securities, (4) FX swaps, and (5) OIS

Originally, it relied on survey data (Q2 volume) collected from selected banks,

- with DGM analysing activity per segment and DGS providing updated charts & tables in non-publication years

In 2018, transformation to base the study on granular MMSR data, collected since 2016.

- Analysis expanded to include trends and drivers, covering also maturities, counterparties, and prices.
- The market participants appreciate the publication and have expressed interest in having it released annually.

In this fourth edition, the structure of the study has been adjusted:

- Part 1 will focus on topical and qualitative insights
- Part 2 will feature consistent charts, to support the possible publication of regular updates.

Part 1

2023-2024

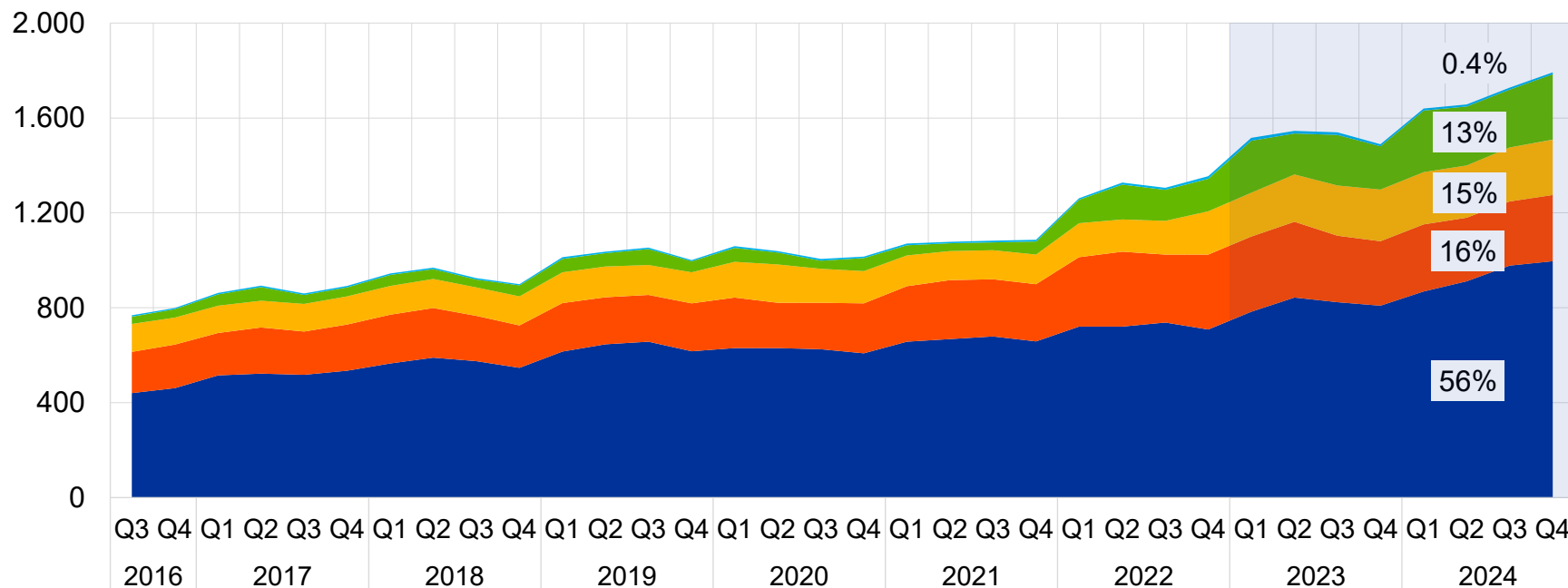
Main developments

Drivers of the observed dynamics

MM Volume: Expanding activity

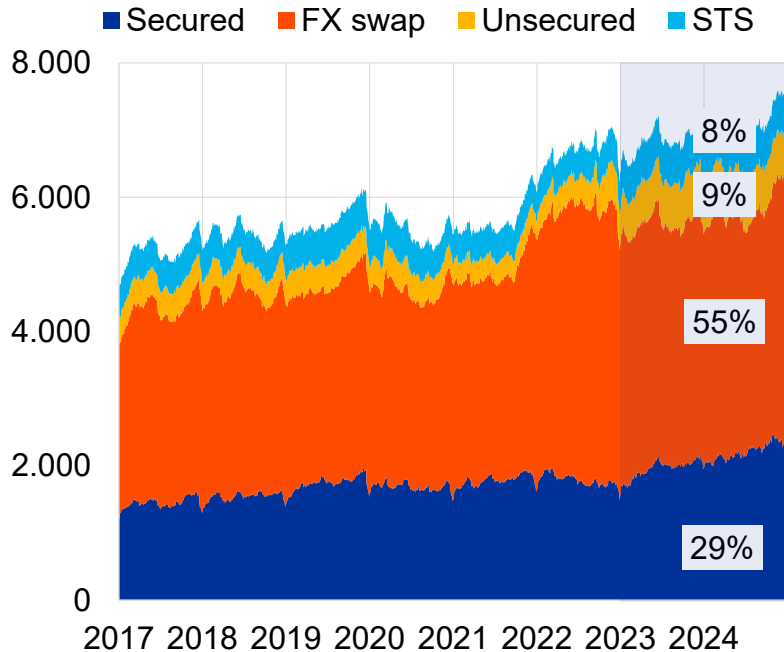
Daily average turnover
(EUR Bn)

■ Secured ■ FX swap ■ Unsecured ■ OIS ■ STS

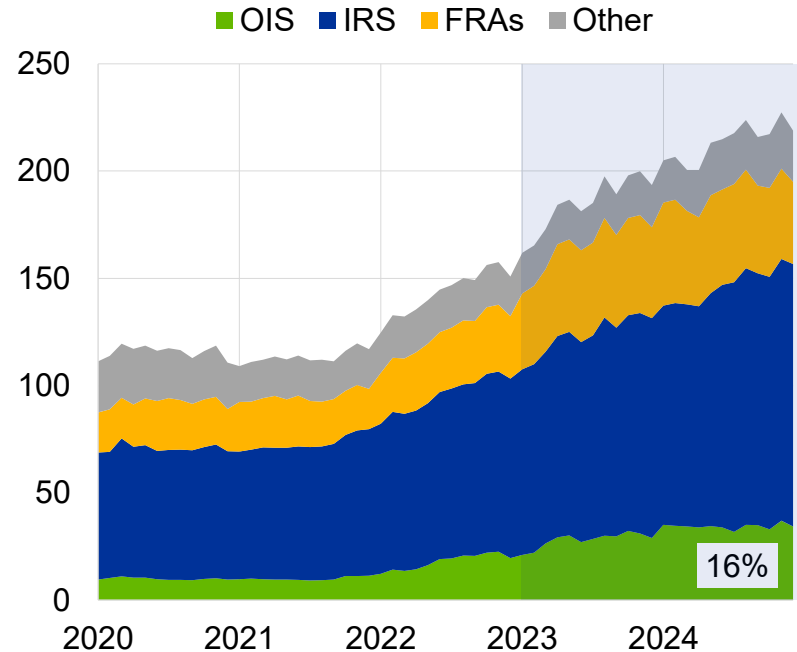


Source: MMSR, CSDB, SHS

Money market outstanding amounts (EUR bn)



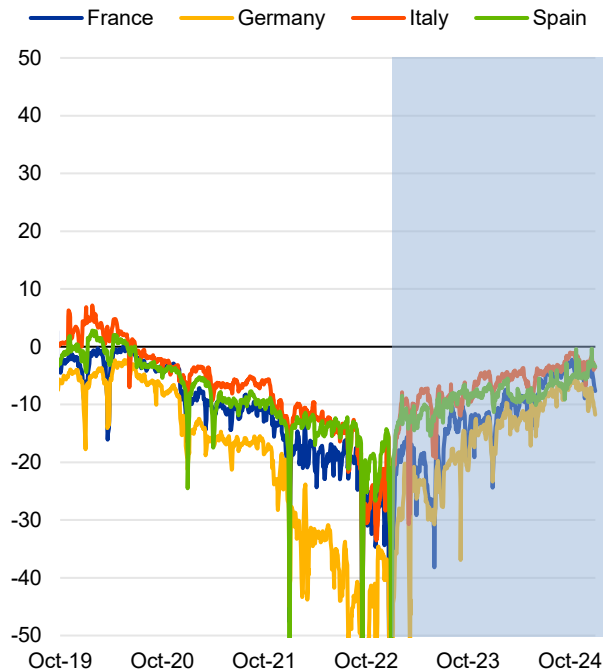
Source: MMSR, CSDB & SHS



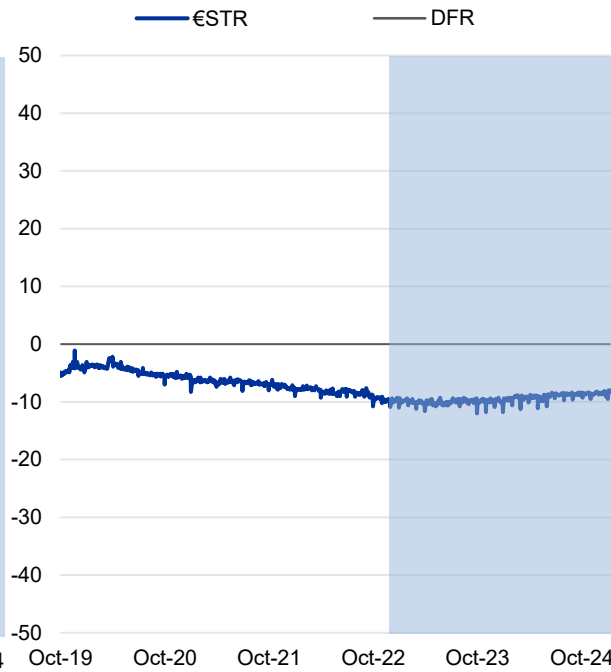
Source: EMIR

MM Rates: Convergence towards policy rates

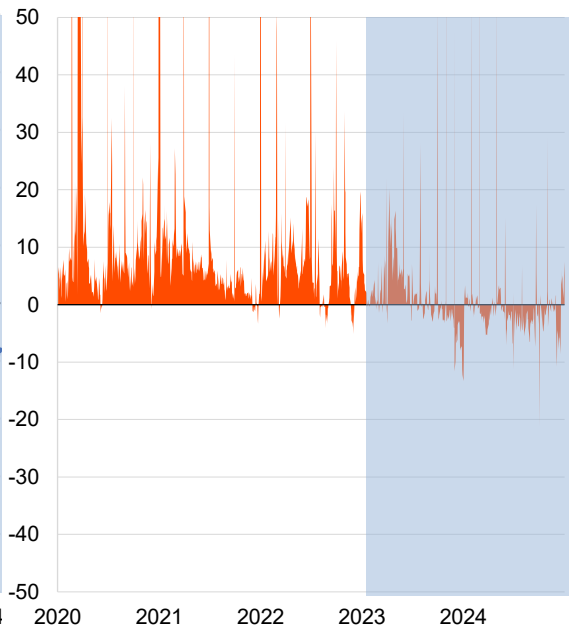
Secured rate spread to DFR
by country of the collateral issuer
(Basis points)



Unsecured rate spread to DFR
(Basis points)



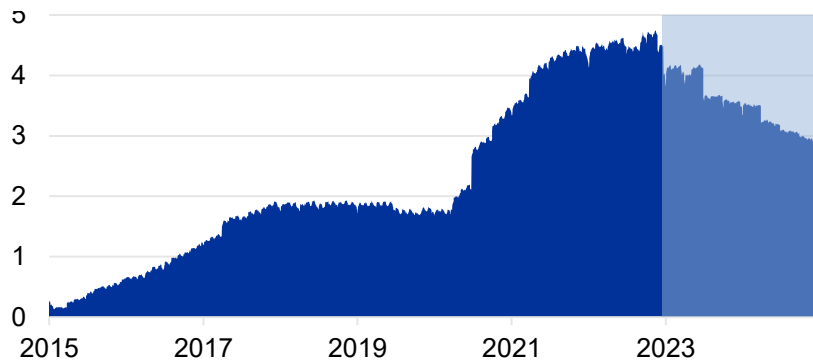
USD FX swap Covered Interest Parity
(Basis points)



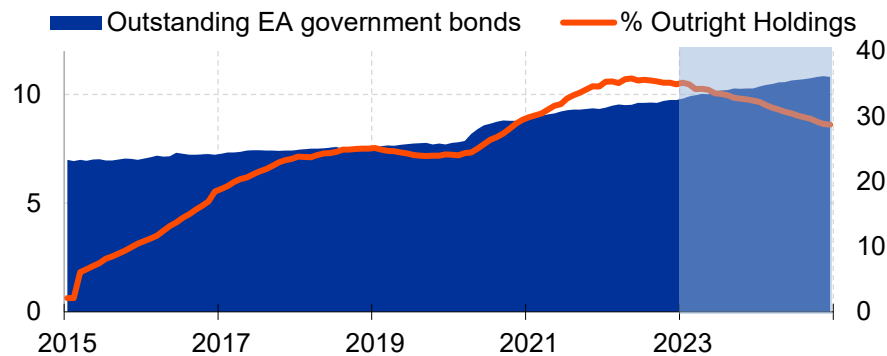
Source: MMSR

Main drivers in a nutshell

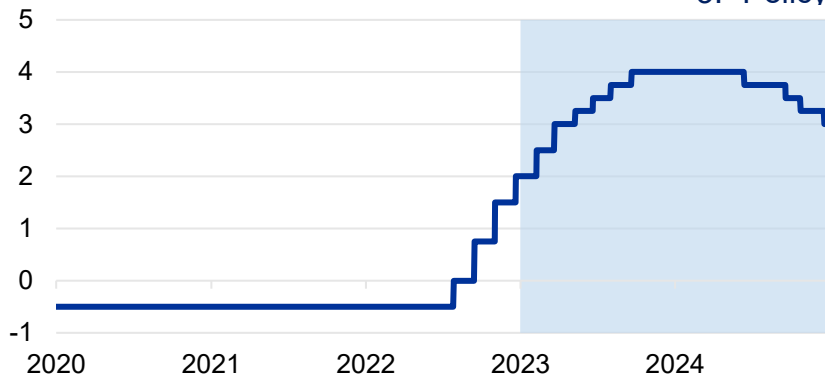
1.- Excess liquidity
(EUR Tn)



2.- Collateral availability
(LHS: EUR Tn; RHS: Percentage points)



3.- Policy adjustments

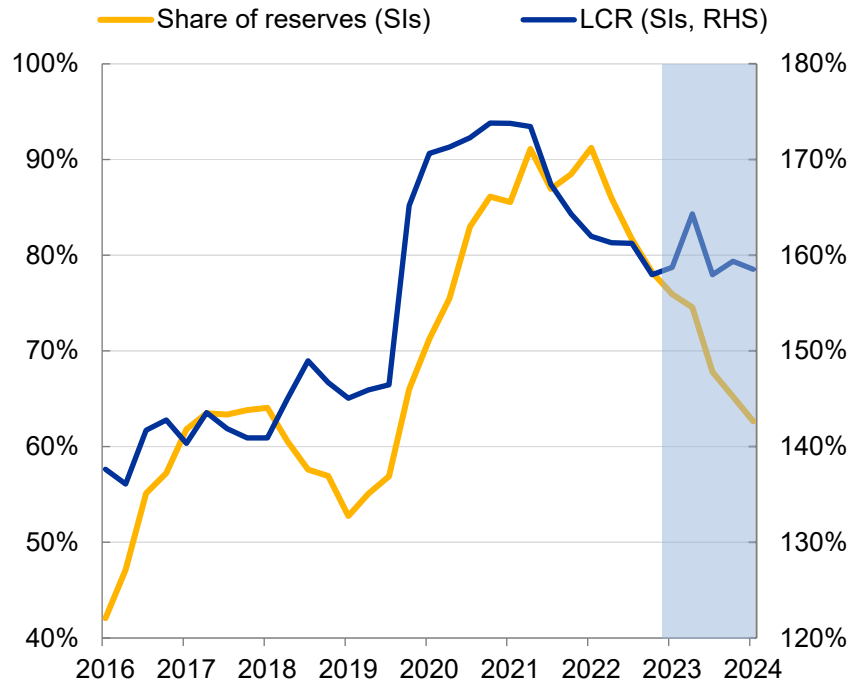


May 2023: Change in NMPD remuneration to €STR-20 bps
Sep 2023: Change in MRR remuneration to zero

March 2024: Operational framework review – first outcome
September 2024: Change in MRO rate: to DFR+15 bps

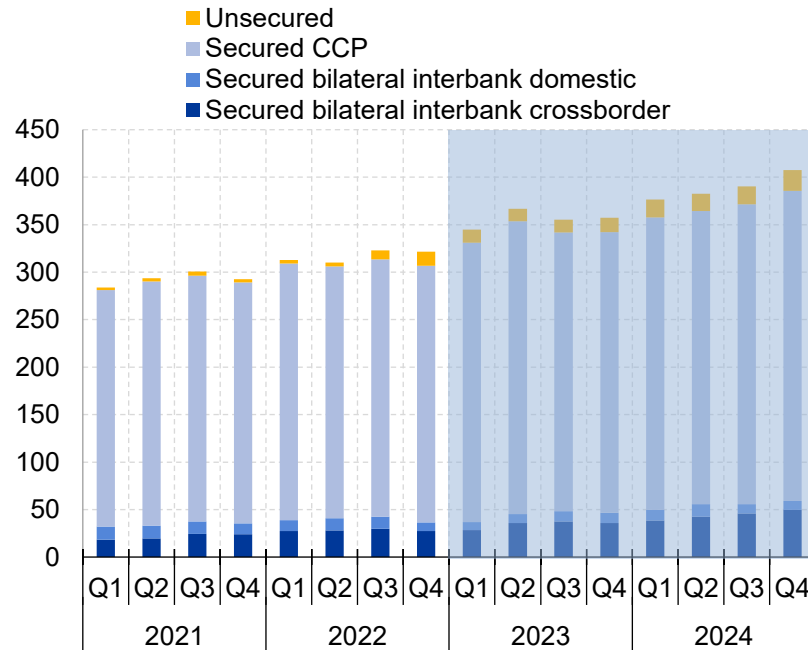
1.- Excess liquidity reduction (1/2): Preserve HQLA

LCR and share of reserves in HQLA
(Percentage points)(EUR Bn)



Source: Eurosystem, ECB, ECB calculations

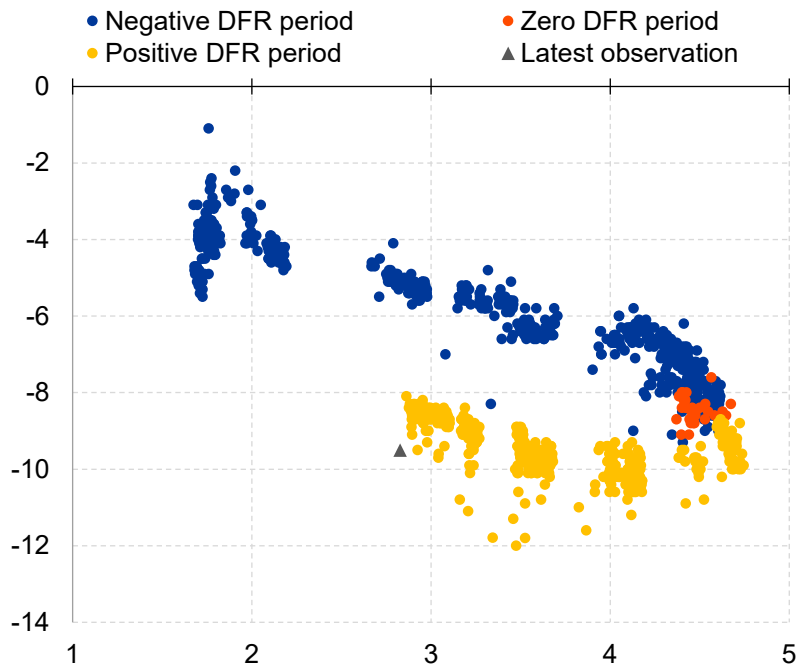
Interbank borrowing in EA money markets
(EUR Bn)



Source: MMSR

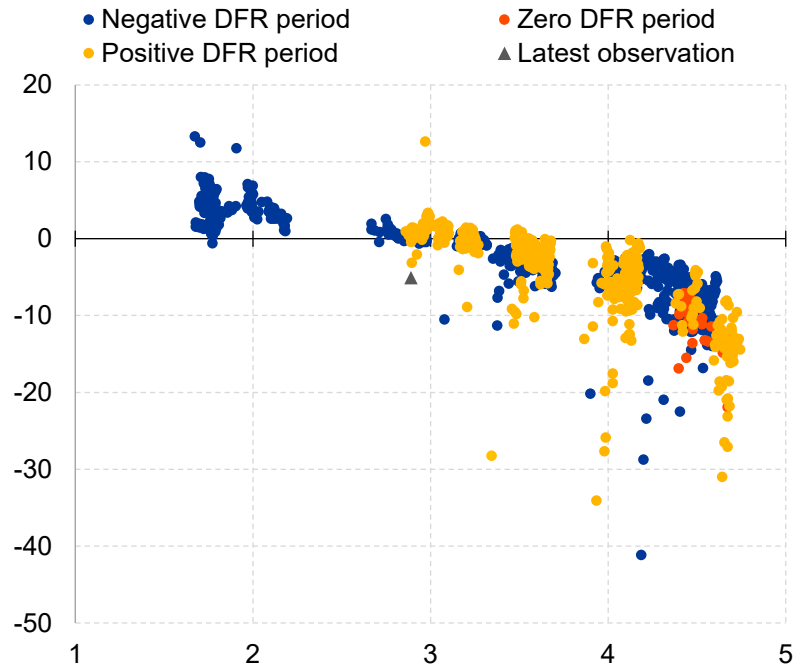
(2/2): Unsecured less reactive than secured...

Excess liquidity vs €STR-DFR spread
(Y-axis: Basis points; X-axis: EUR Tn)



Source: MMSR

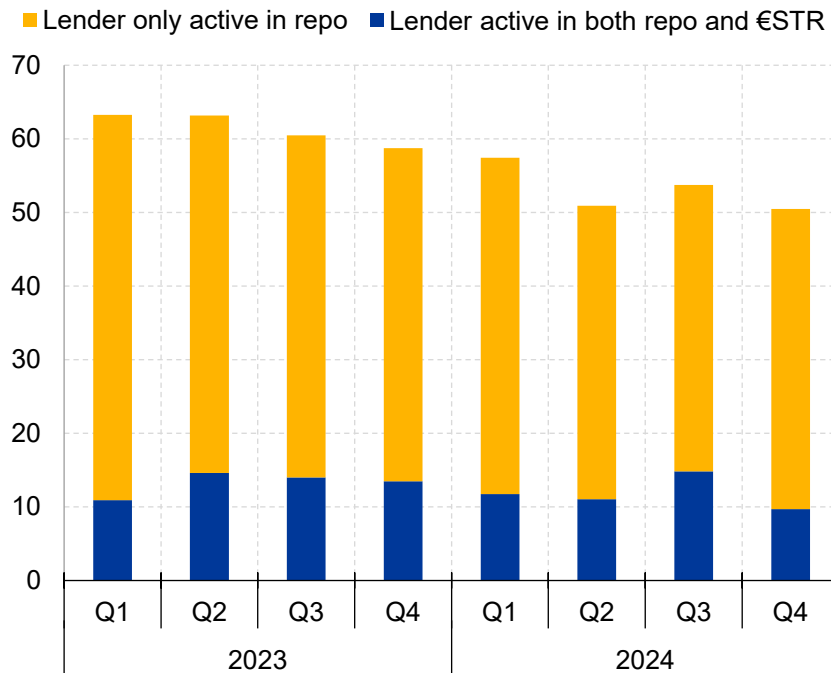
Excess liquidity vs GC Secured-DFR spread
(Y-axis: Basis points; X-axis: EUR Tn)



Source: MMSR, Brokertec

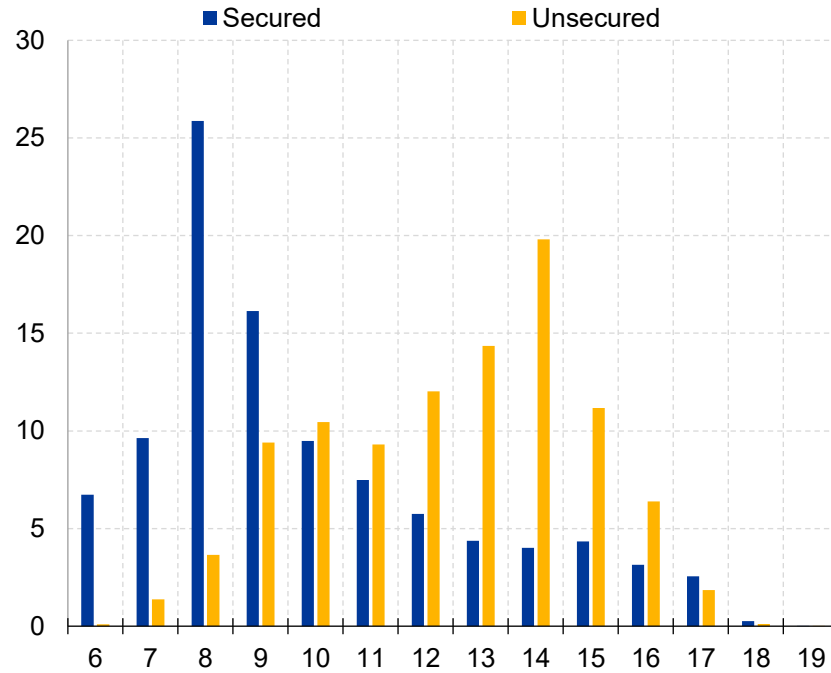
... also structural factors behind the unexploited spread

Repo trading volume by lenders also present in €STR
(EUR Bn)



Source: MMSR

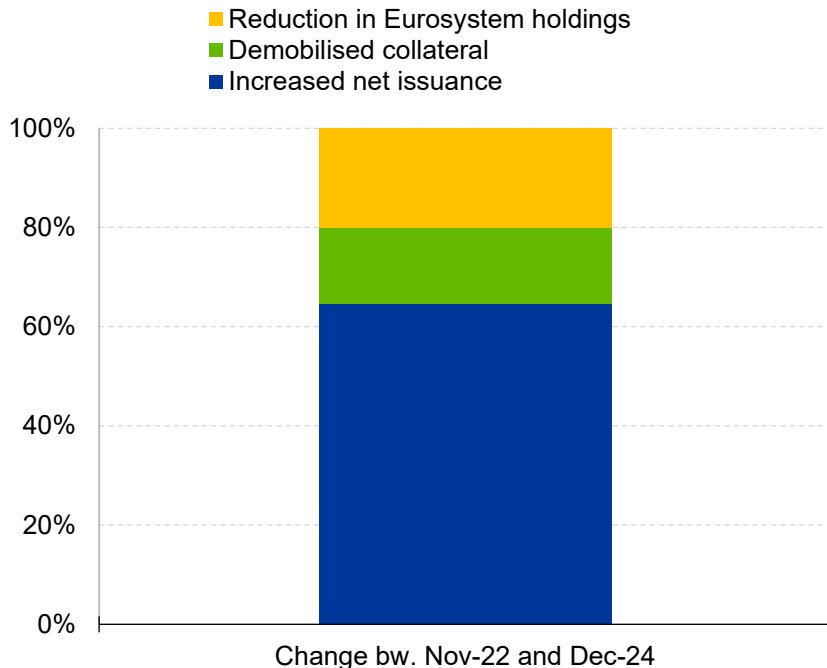
Time of trade execution (share of daily trading volume per hour)
(Percentage points)



Source: SFTD

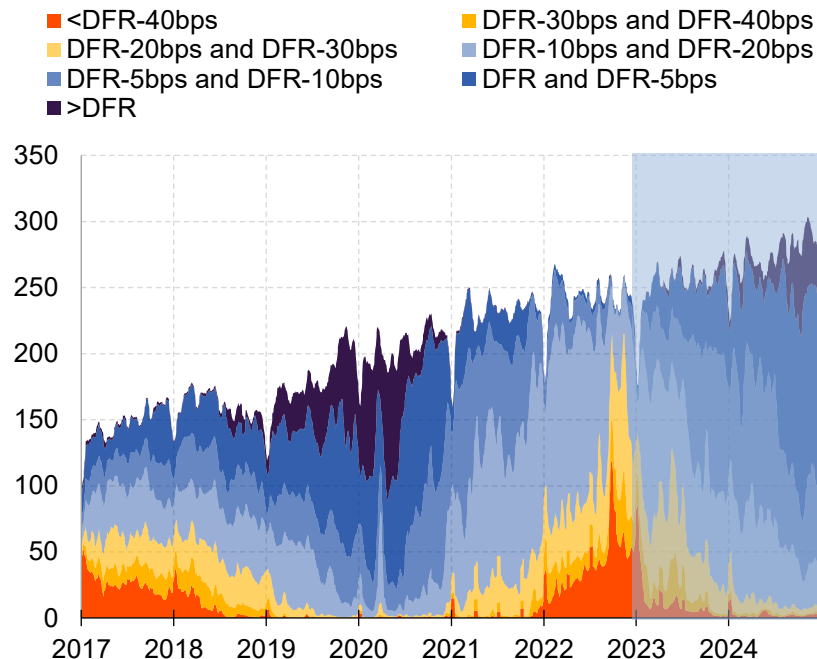
2.- Collateral availability (1/2): increased c. supply

Contributors to the increasing EGBs availability
(Percentage points)



Source: CSDB

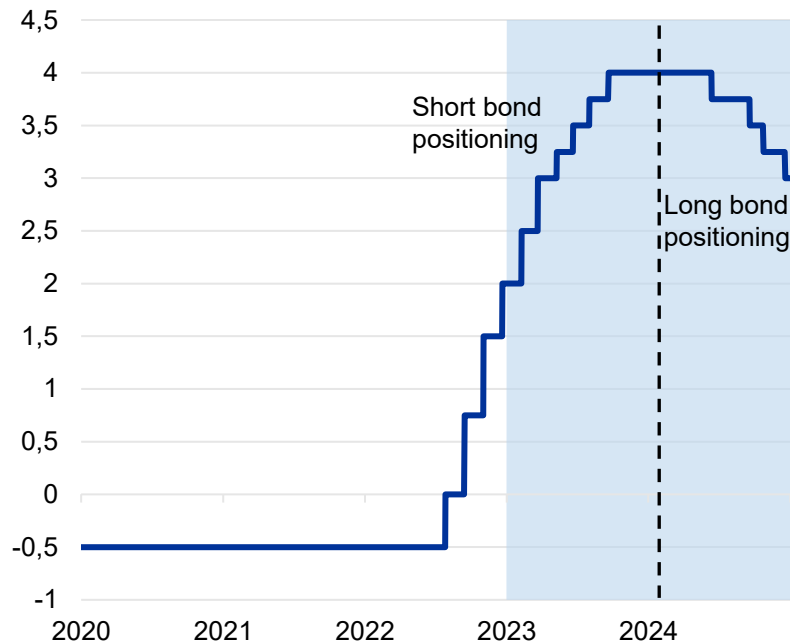
Repo volumes by brackets of spread to DFR
(EUR Bn)



Source: MMSR

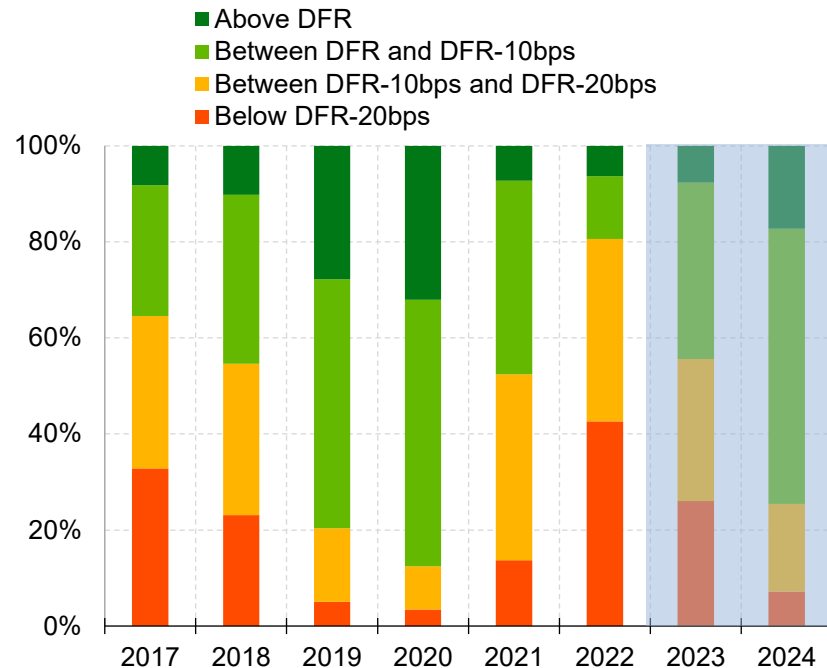
... (2/2) and reduced collateral demand

ECB's deposit facility rate evolution
(Percentage points)



Source: MMSR, ECB calculations

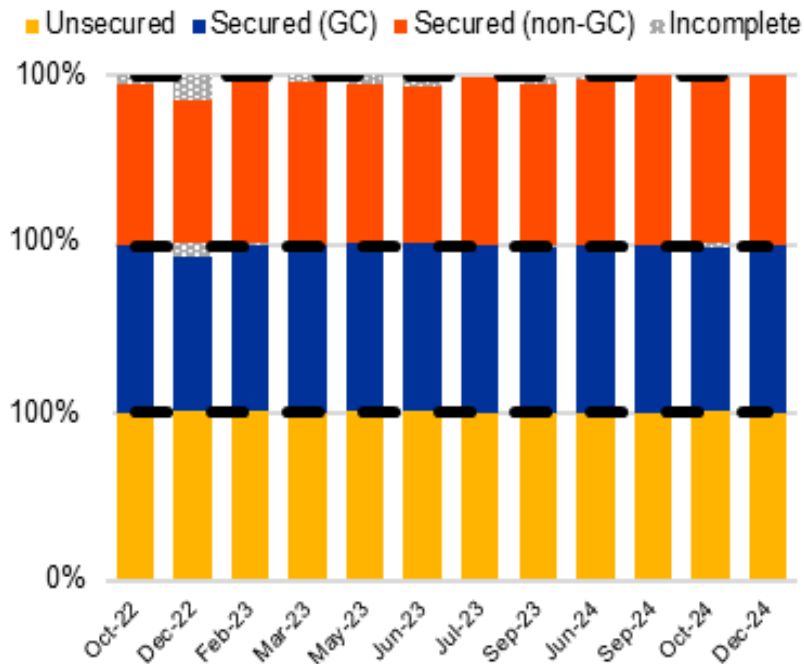
Percentage of specialness
(Percentage points)



Source: MMSR

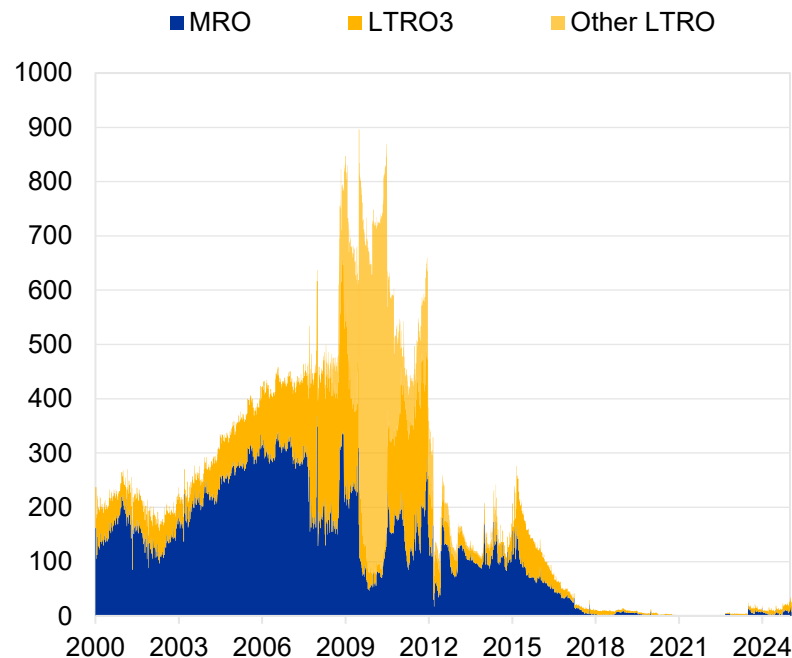
3.- ECB policy adjustments (1/3): Good pass-through and muted SRO post TLTRO

Pass-through of policy rate changes
(Percentage points)



Source: MMSR, BrokerTec, MTS, Bloomberg

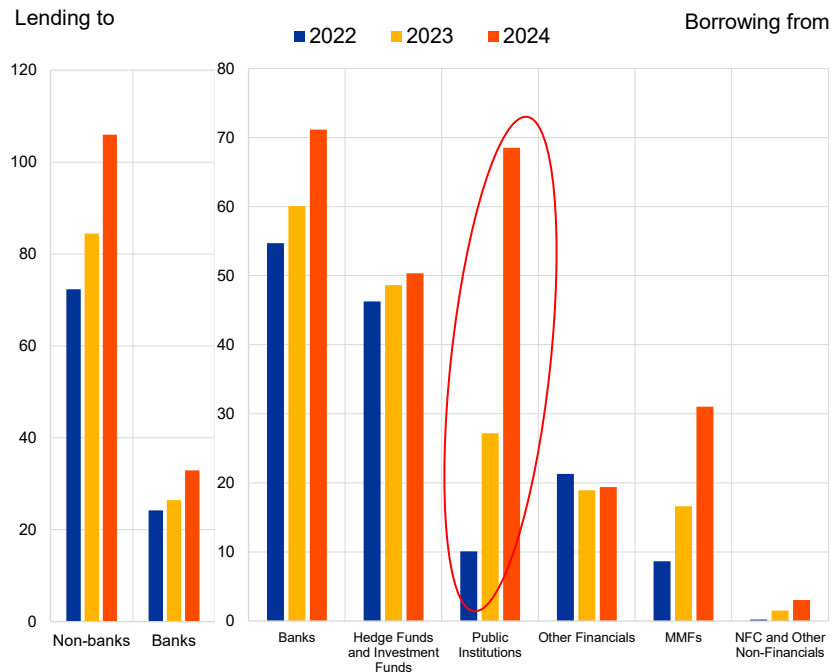
EA banks recourse to SROs
(EUR Bn)



Source: ECB, ECB calculations

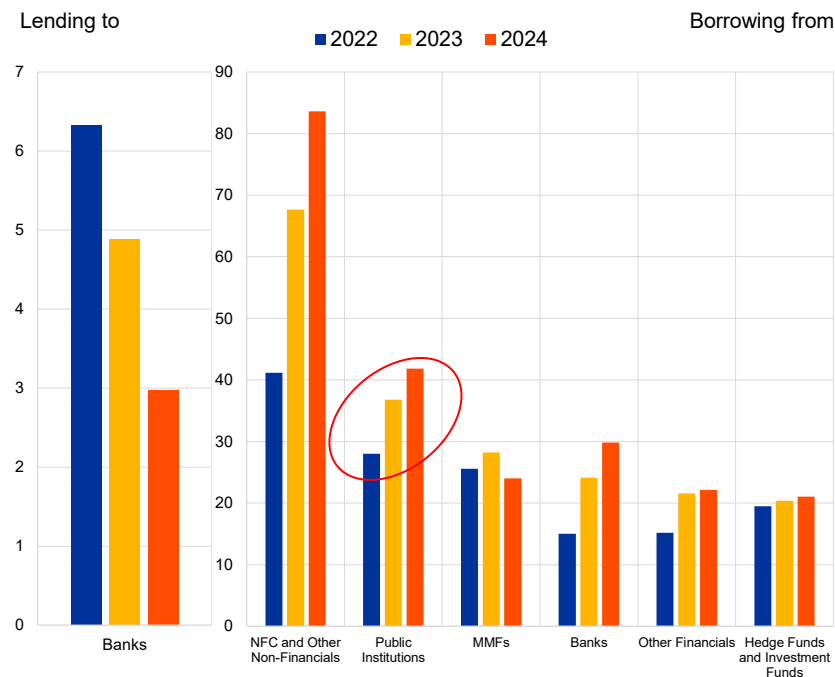
(2/3) increased trading with public entities affected by change in NMPD remuneration

Secured daily average flows per counterparty sector
(EUR Bn)



Source: MMSR

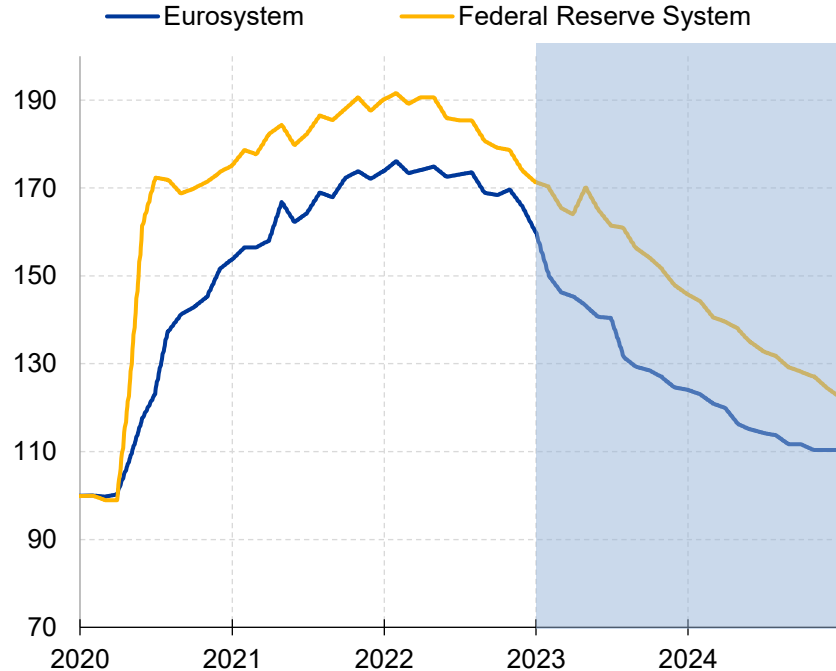
Unsecured daily average flows per counterparty sector
(EUR Bn)



Source: MMSR

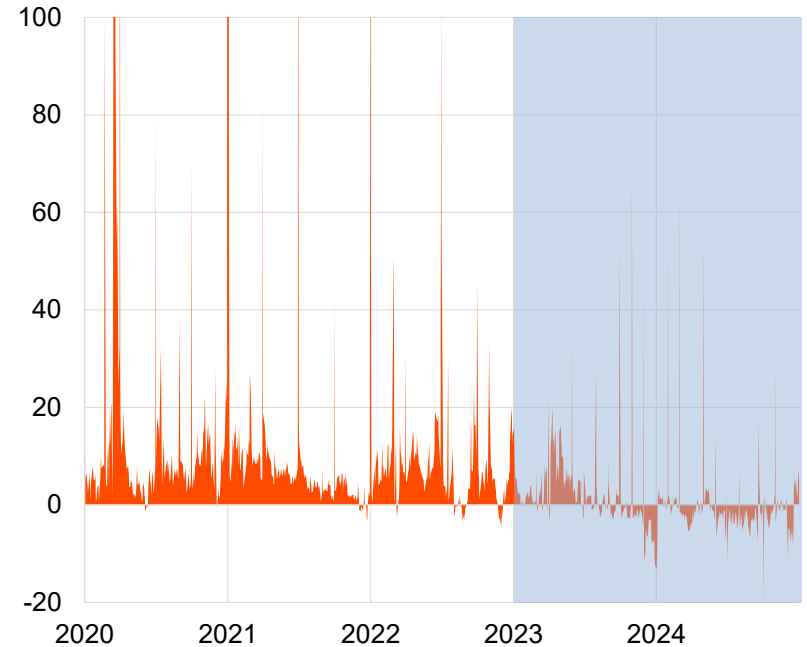
(3/3) Reduced FXs premium, affected by increased USD supply

Normalized Fed and ECB balance sheet evolution, % of GDP
(Percentage points)



Source: Bloomberg, ECB, ECB calculations

USD FX swap Covered Interest Parity
(Basis points)



Source: MMSR, Bloomberg

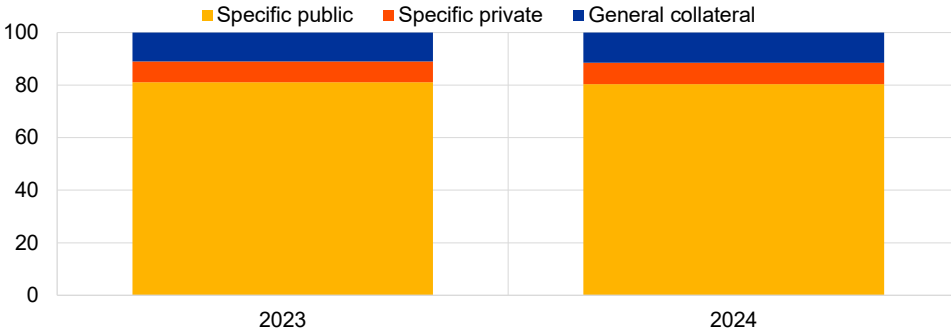
Part 2

Euro money market characterization

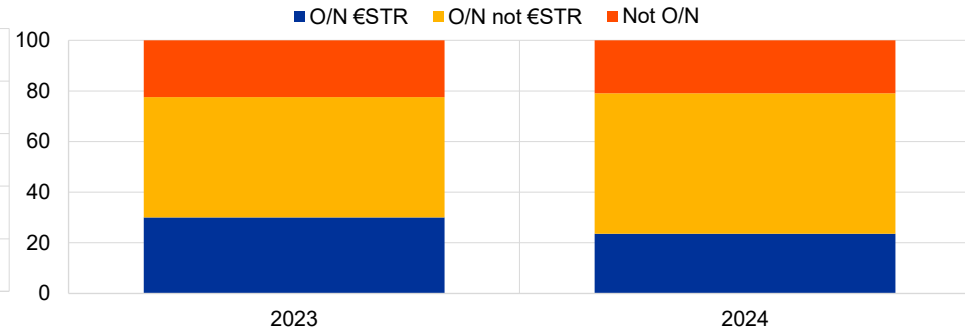
Structural features

Money Market trading composition (EUR bn)

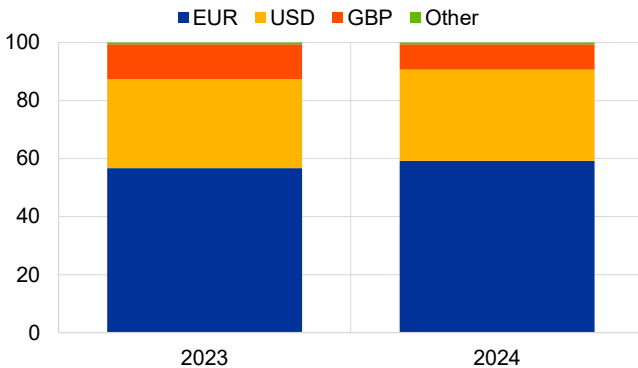
Secured



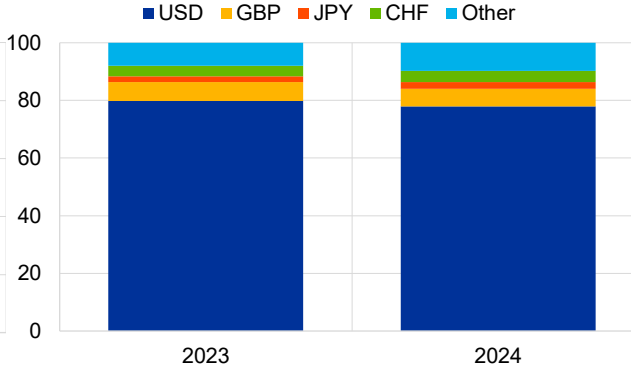
Unsecured



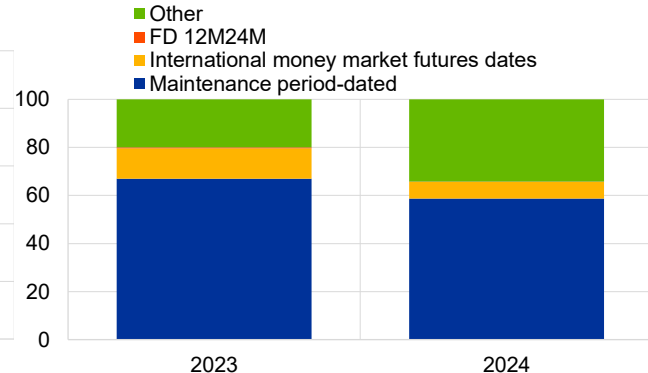
Short-term securities



FX Swap

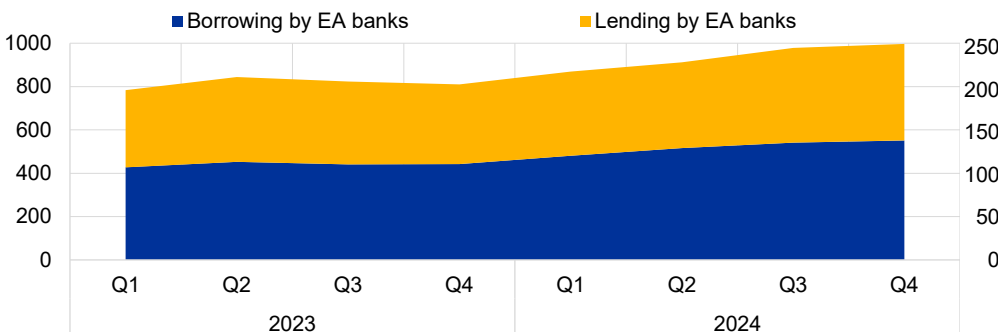


OIS

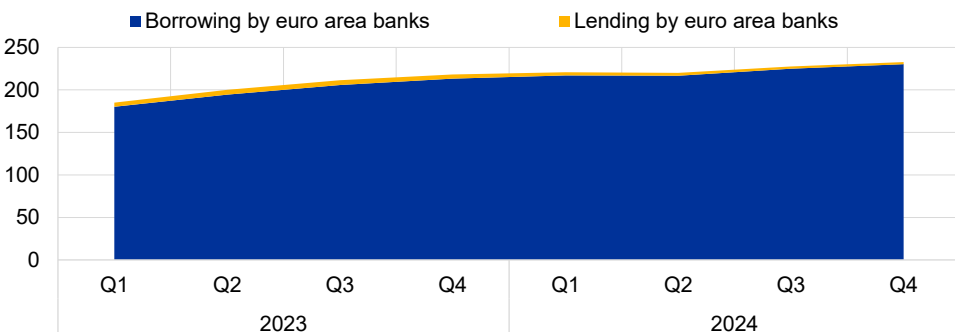


EA banks trading direction (EUR bn)

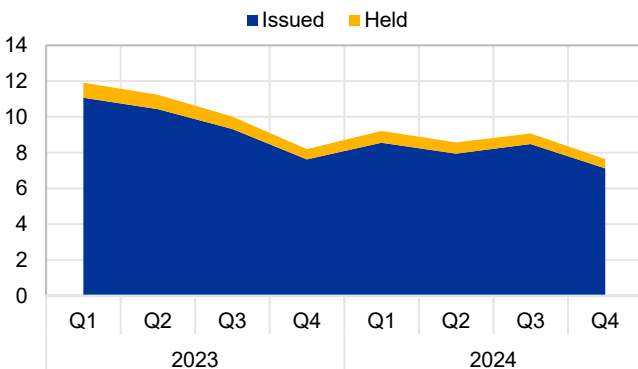
Secured



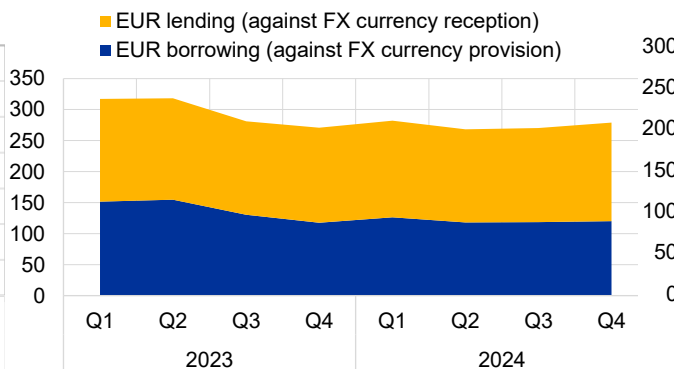
Unsecured



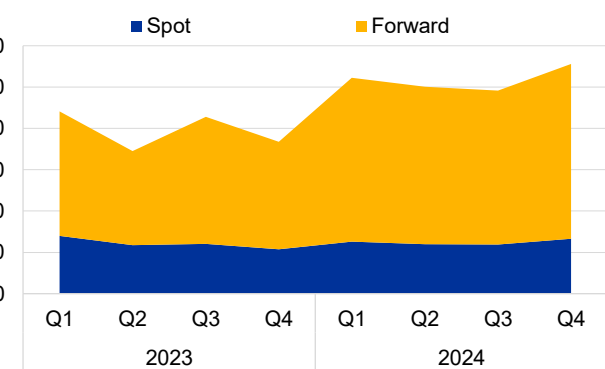
Short-term securities



FX Swap

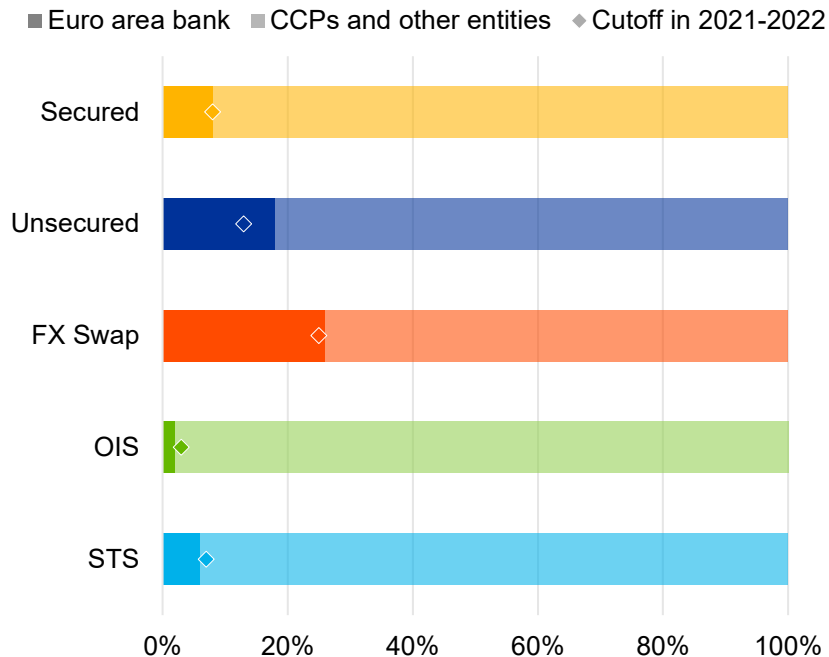


OIS



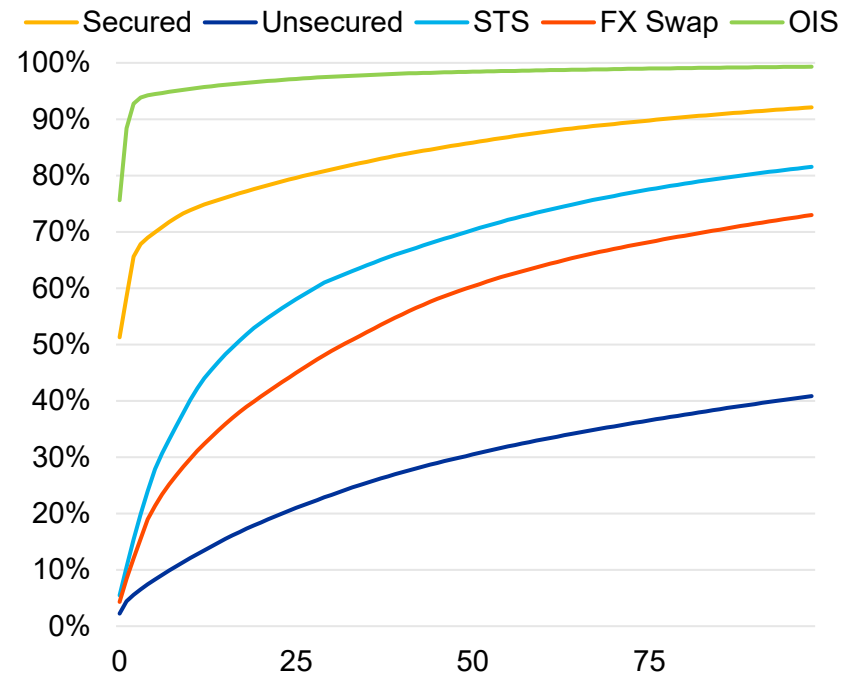
Counterparties: Dominance of trades with NBFIs

EA interbank trades vs. trades with other sectors
(Percentage points)



Source: MMSR, CSDB, SHS

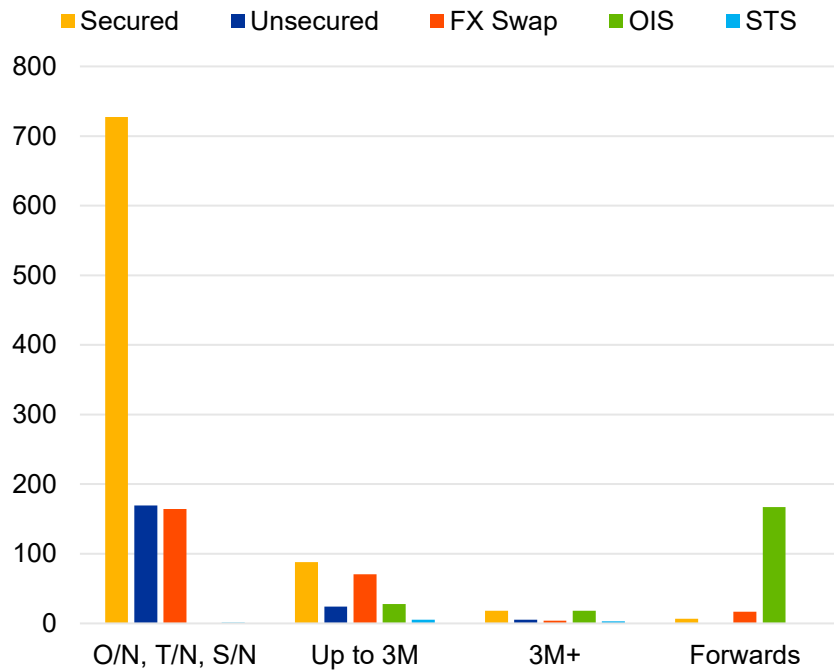
Segment concentration
(Percentage points)



Source: MMSR, CSDB, SHS

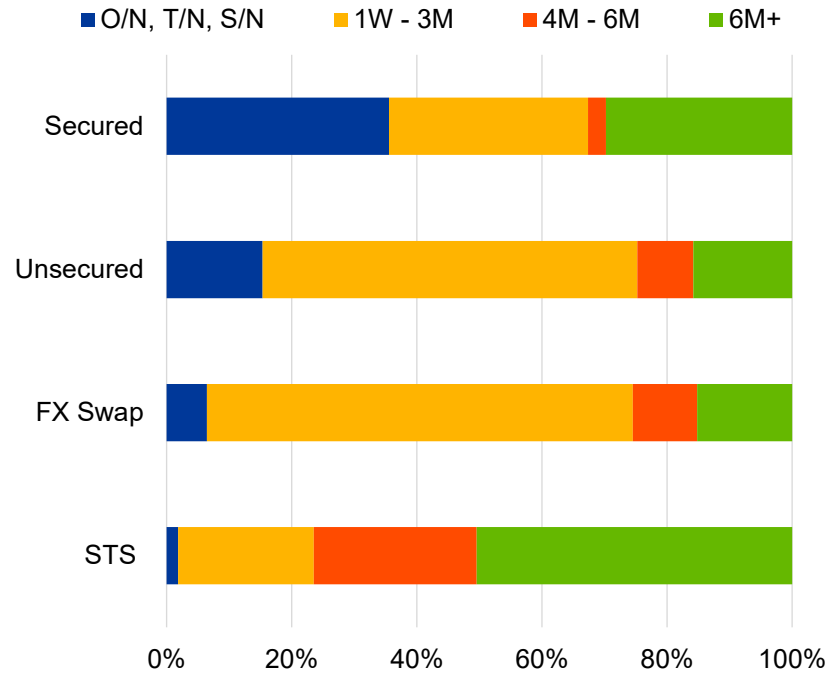
Maturities: Concentration in short-term tenors

Volume by maturity bucket
(EUR Bn)



Source: MMSR, CSDB, SHS

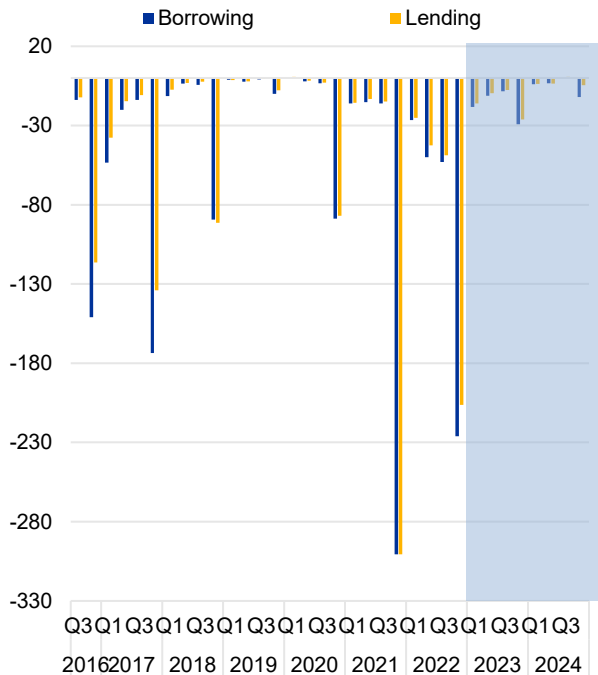
Outstanding volume by maturity bucket
(EUR Bn)



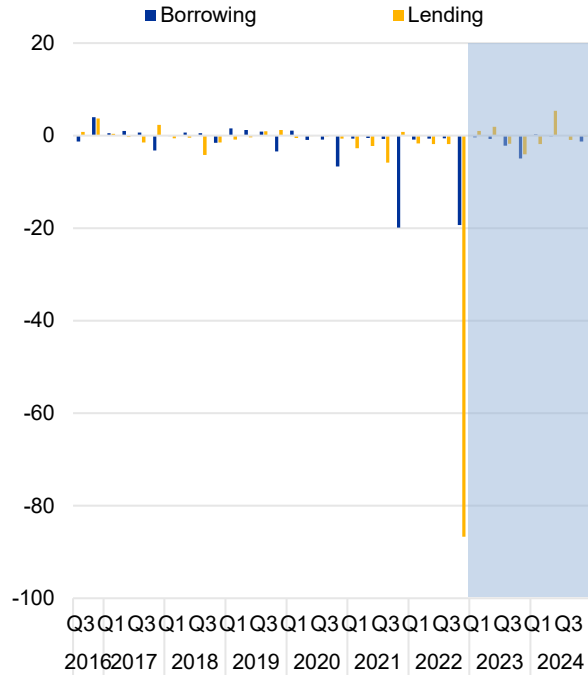
Source: MMSR, CSDB, SHS

Calendar effects on MM rates: More muted

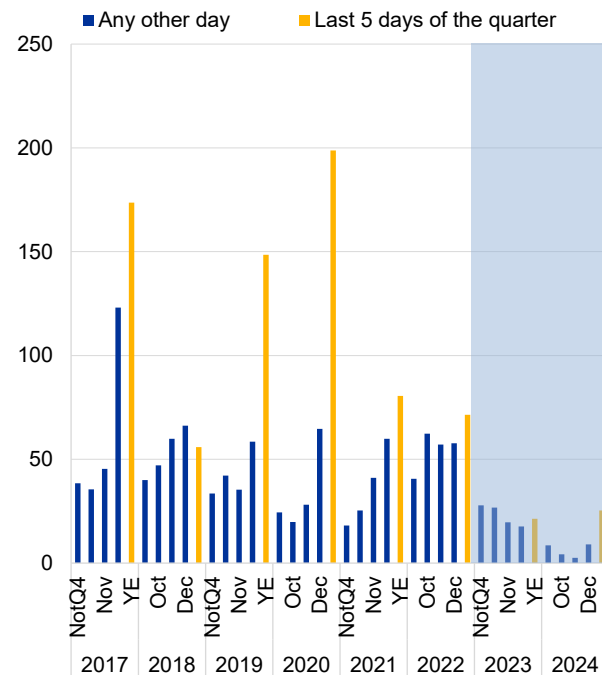
Secured rates
(Basis points)



Unsecured rates
(Basis points)



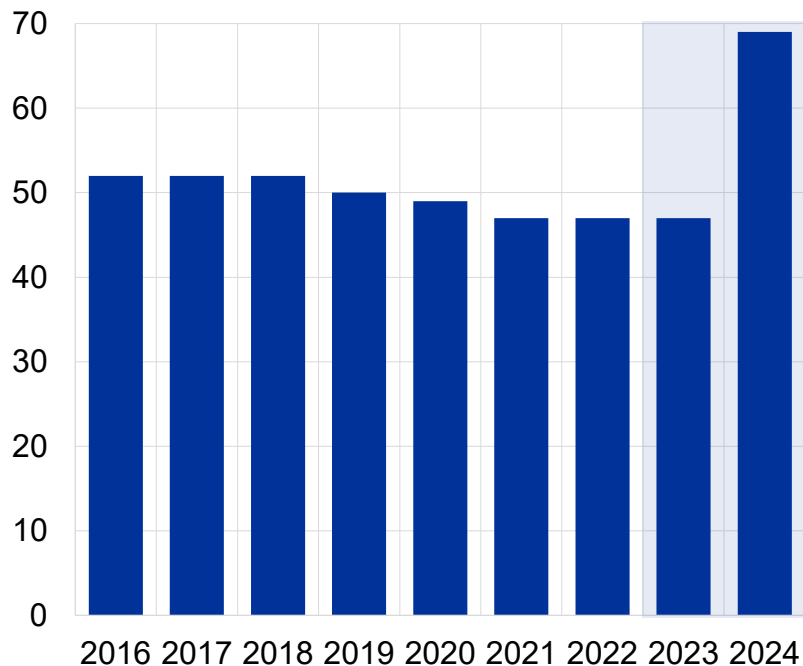
FX swap rates
(Basis point on USD FX premium)




Source: MMSR

Expansion of MMSR reporting obligation: +24 banks

Number of MMSR reporting agents over time



| Segment | Daily turnover increase from Wave 2 implementation | |
|-----------|--|-----|
| Secured | | 15% |
| Unsecured | | 13% |
| FX Swap | | 16% |
| OIS | | 9% |



Thank you all

for providing the underlying data

that made this possible!

Annex

Euro money market characterization

Structural features



EUROPEAN CENTRAL BANK

EUROSYSTEM

Size

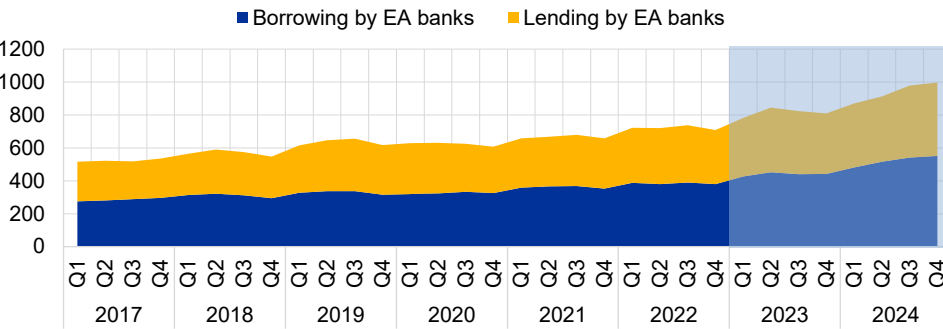
Aspects under scrutiny:

EA banks' trading direction, segment's growth & relevance,
de-composition by collateral, type of contract or currency

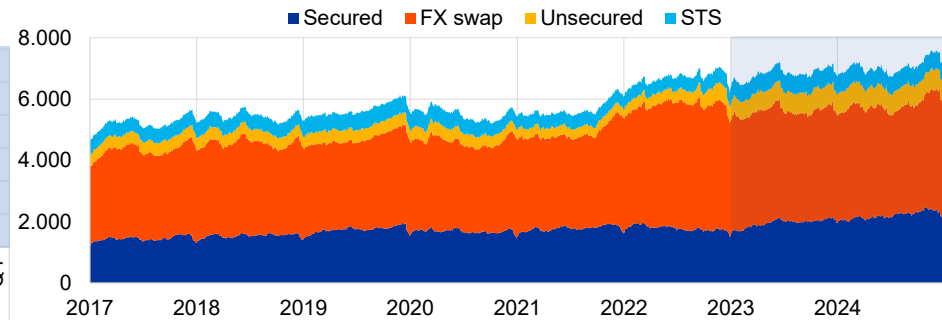


MMSR repo: size (EUR bn)

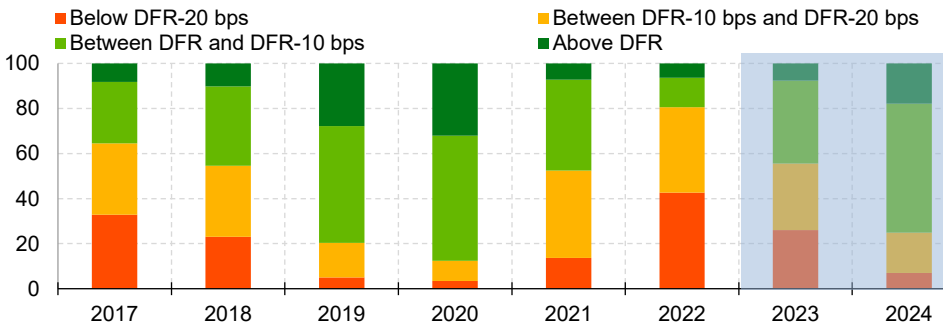
Size & Direction: Average daily volume at EUR 915 bn, +23% since 2022:



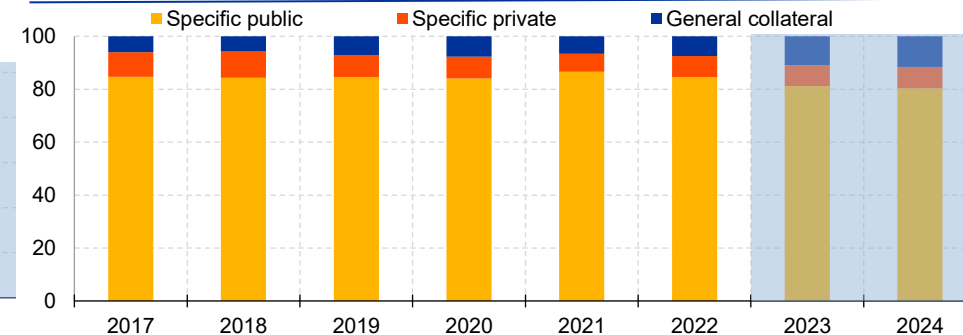
Relevance: Repos constitute ca. 34% of the money market inventor



Composition: specialness in decline with excess liquidity

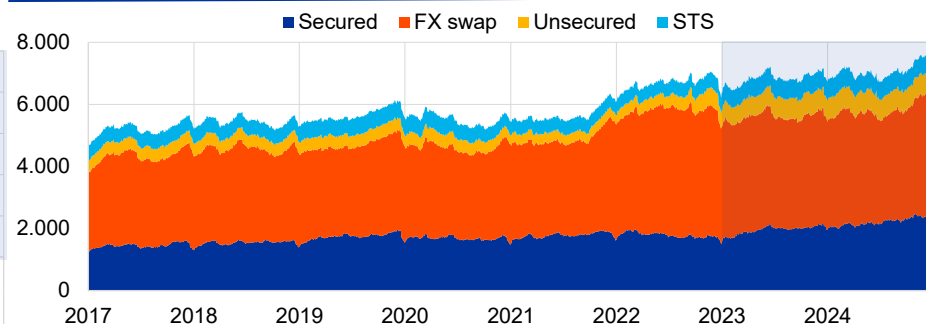
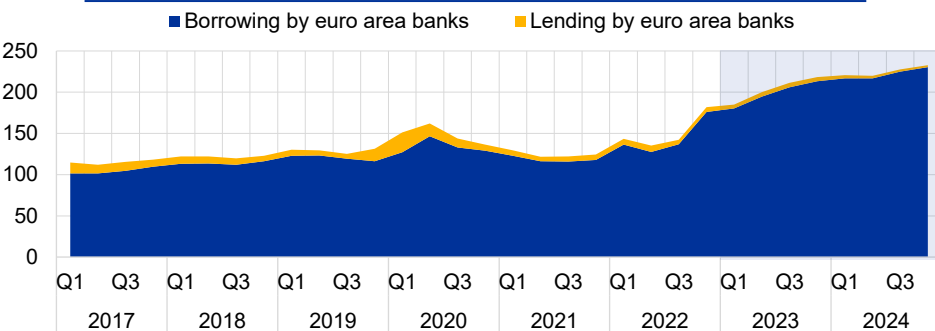


Composition: Cash-driven transactions (GC/Private) gaining traction

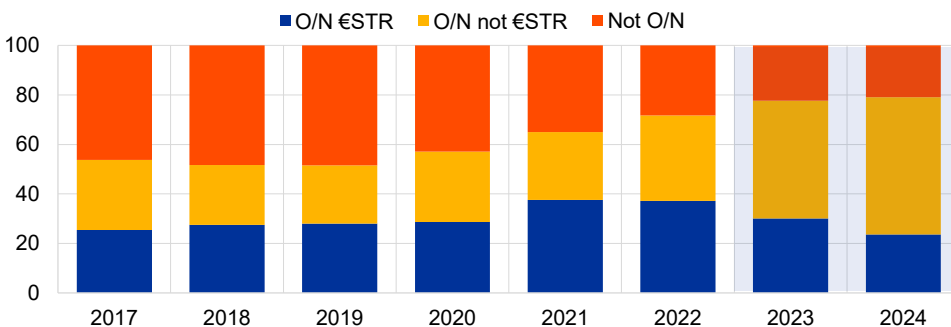


MMSR Unsecured: size (EUR bn)

Size & Direction: Average daily volume at EUR 220 bn, +17% since 202: **Relevance:** Unsecured constitutes ca. 8% of the money market inventor

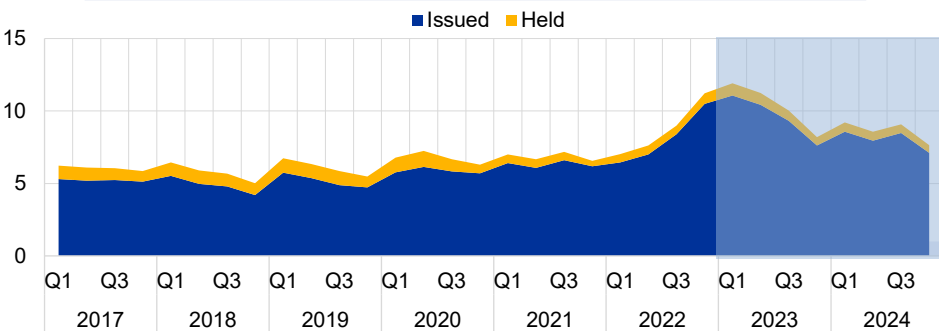


Composition: 25% of the total trades compute for the €STR calculation

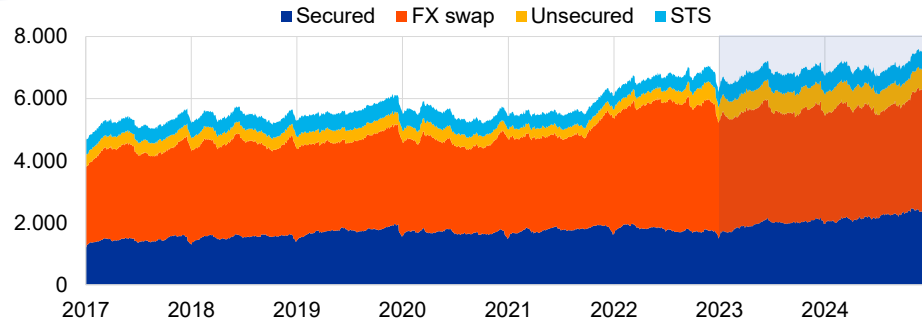


CSDB & SHS STS: size (EUR bn)

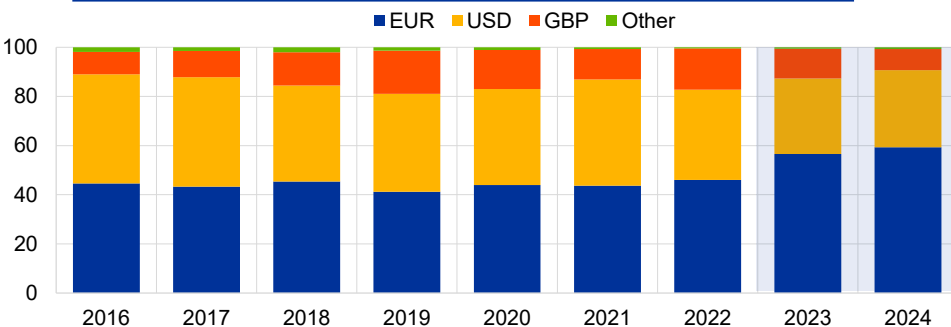
Size & direction: Average daily volume at EUR 8 bn, -33% since 2022



Relevance: commercial paper constitutes 5% MM inventor

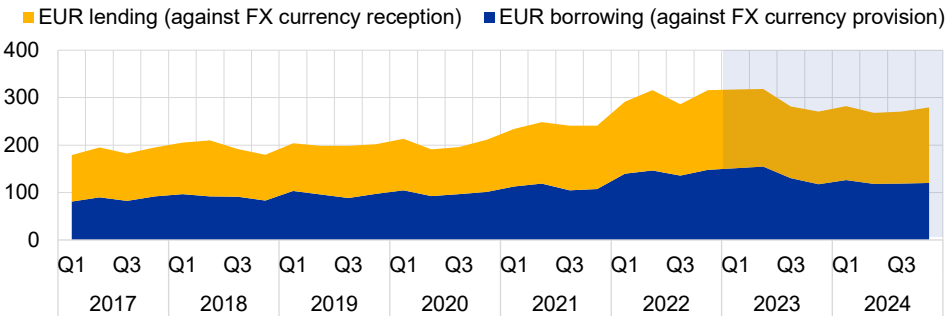


Composition: Issuance in EUR represents 55% , the rest in USD and GBP

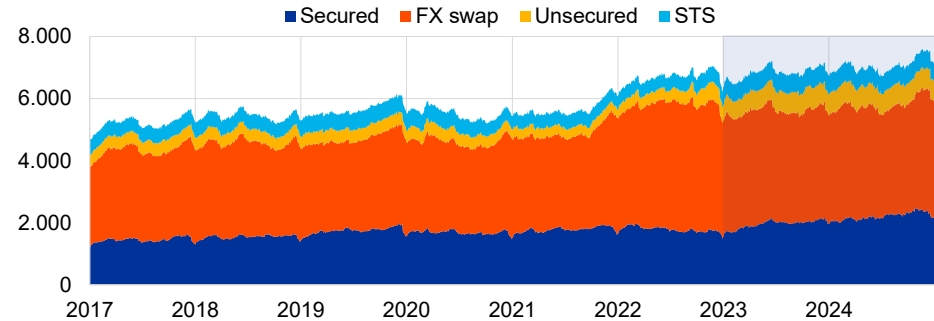


MMSR FX swap: size (EUR bn)

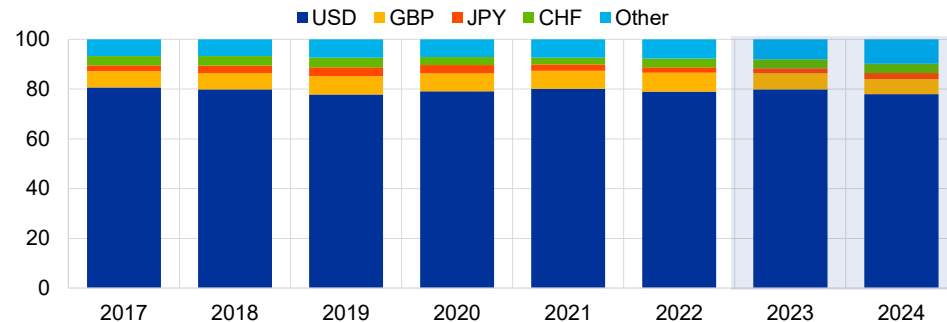
Size: Average daily volume at EUR 220 bn, -18% since 2022



Relevance: FX swaps constitute ca. 50% of the money market inventor

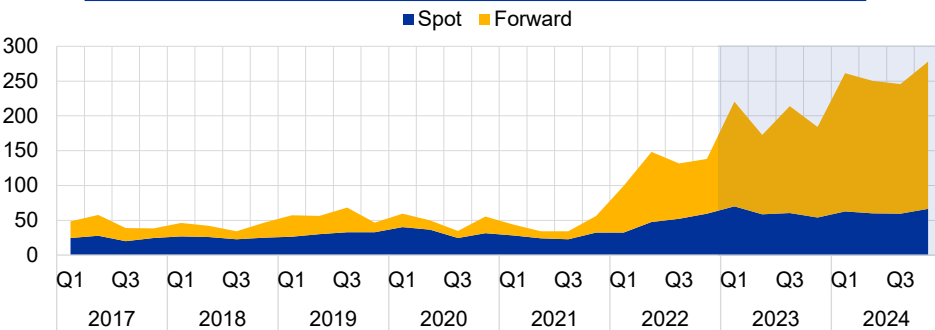


Composition: 80% of the EUR FX swap trades are done against USD

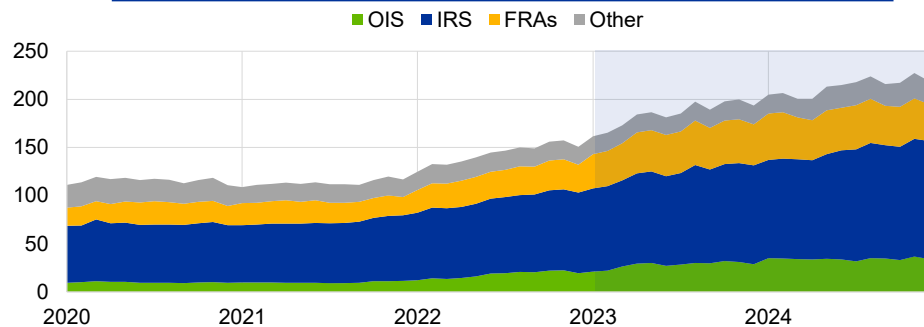


MMSR OIS: size (EUR bn)

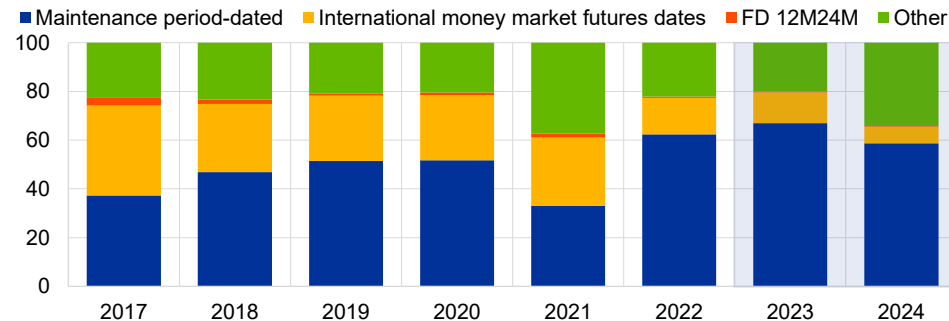
Size & Direction: Average daily volume at EUR 109 bn, +44% since 2022



Relevance: OIS constitute ca. 15% of derivatives inventor



Composition: Notional amounts broken down by forward classification





EUROPEAN CENTRAL BANK

EUROSYSTEM

Rates

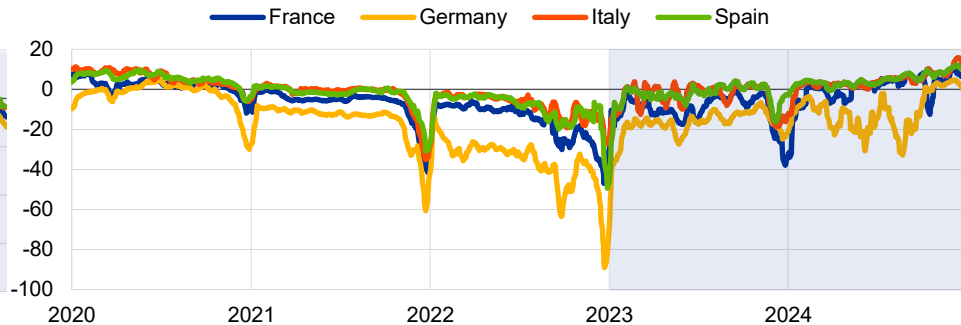
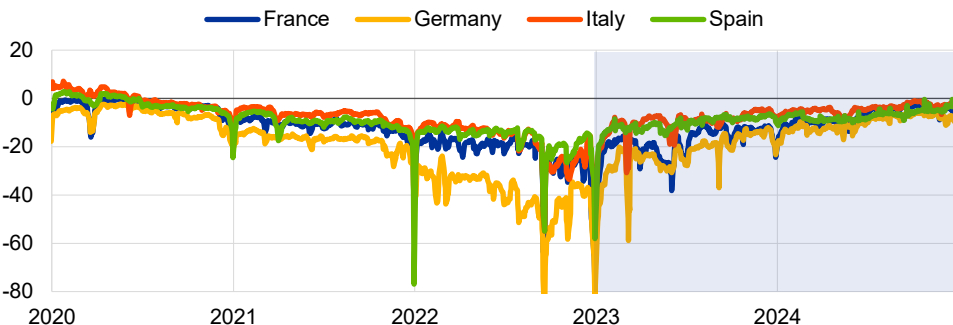
Aspects under scrutiny:

Evolution & deviation from DFR, sensitivity to maturity, trading direction or other elements, transmission of policy changes

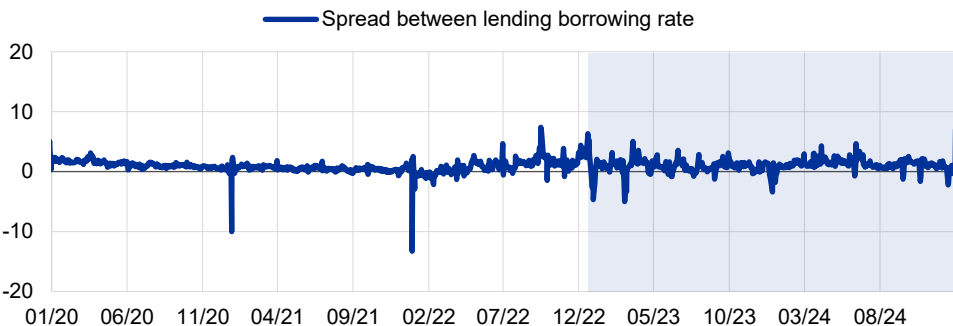


MMSR repo: rates (Bps)

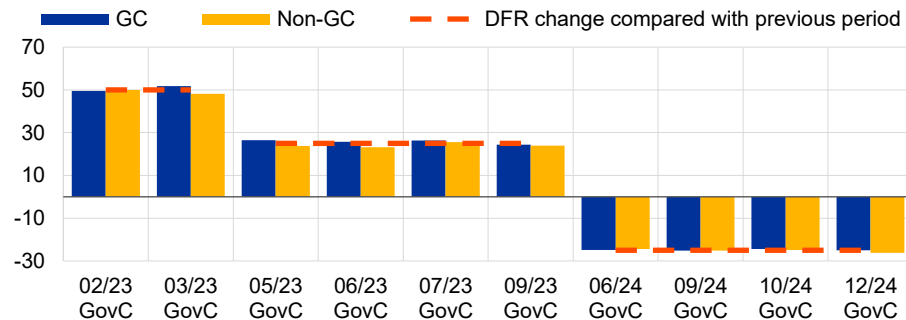
1D rate vs DFR: Price depends on collateral issuer & availability **Term repo vs OIS:** Dispersion remains visible for DE on 1M-3M tenors



Lending vs Borrowing difference: 2 bp on average for 1D trades

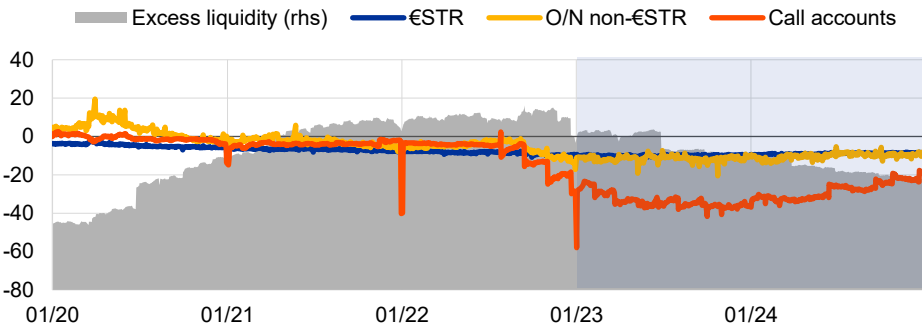


MP transmission: Complete pass-through

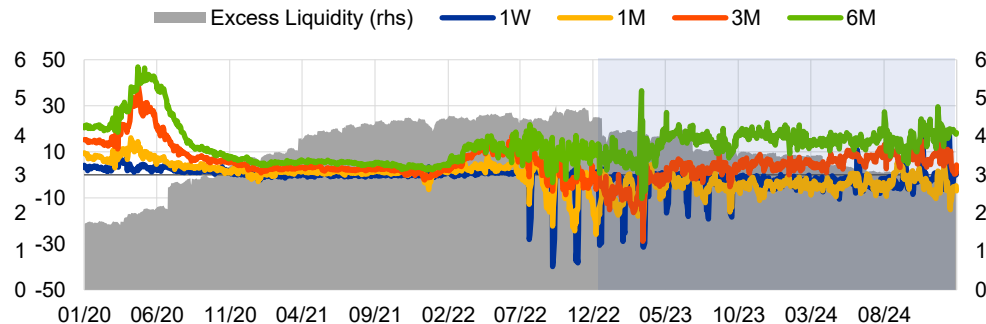


MMSR Unsecured: rates (Bps)

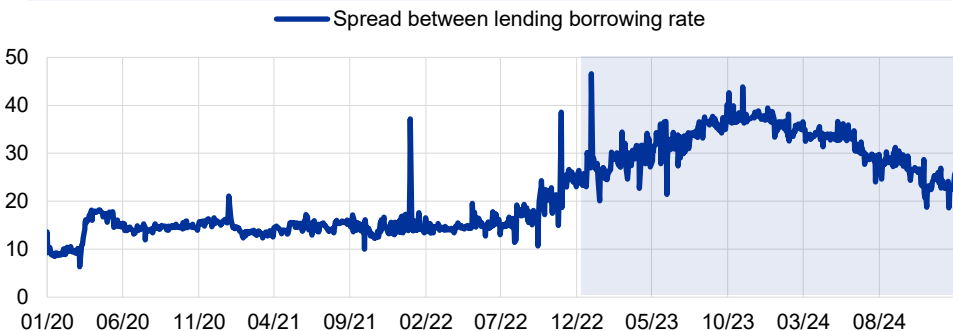
1D rate vs DFR: Price affected by Excess Reserves & Regulatory cost



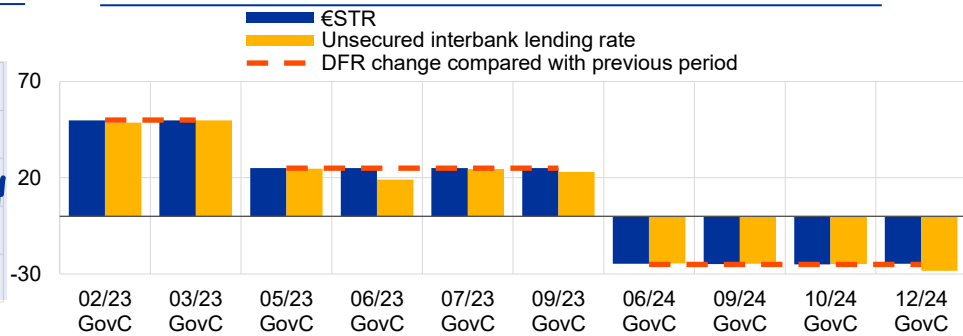
Term rate vs OIS: some Liquidity risk starts to emerge



1D Lending vs Borrowing spread: increased up to 40bp

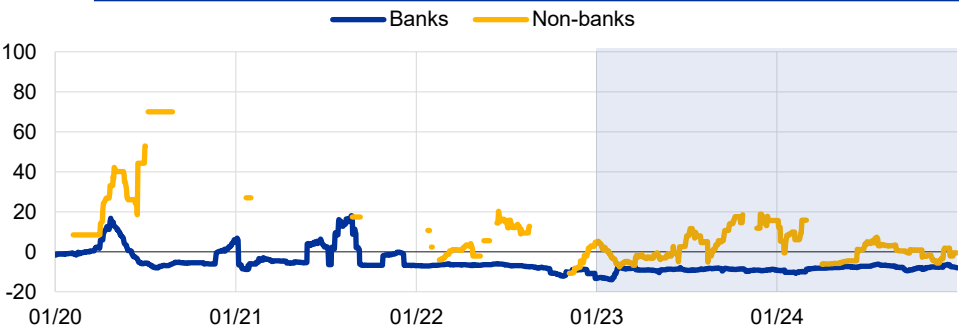


MP transmission: Complete pass-through

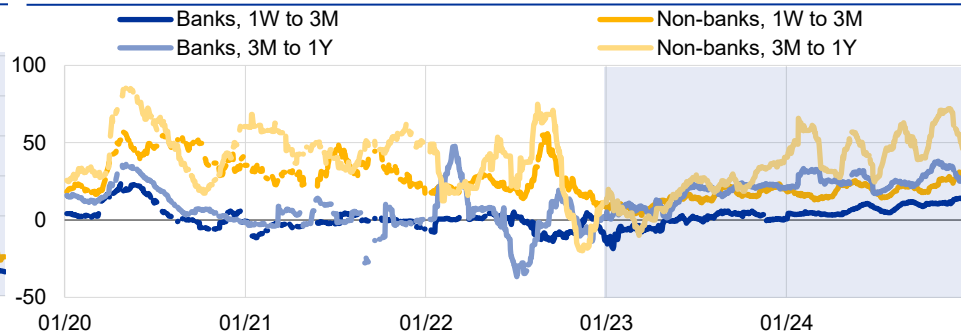


CSDB & STEP STS: rates (Bps)

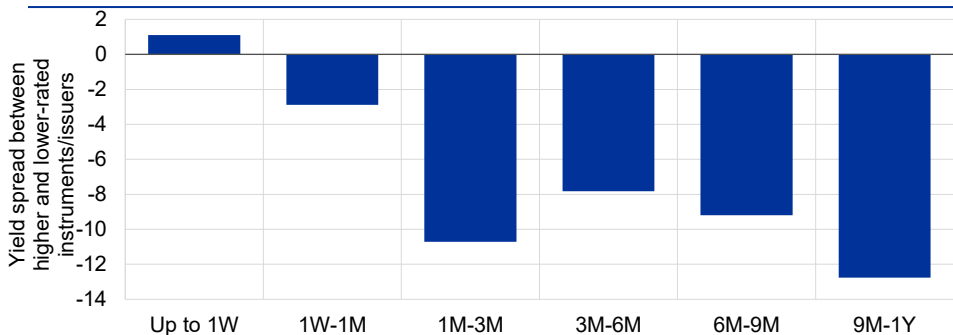
1W-DFR: Short-term price mainly depends on issuer sector



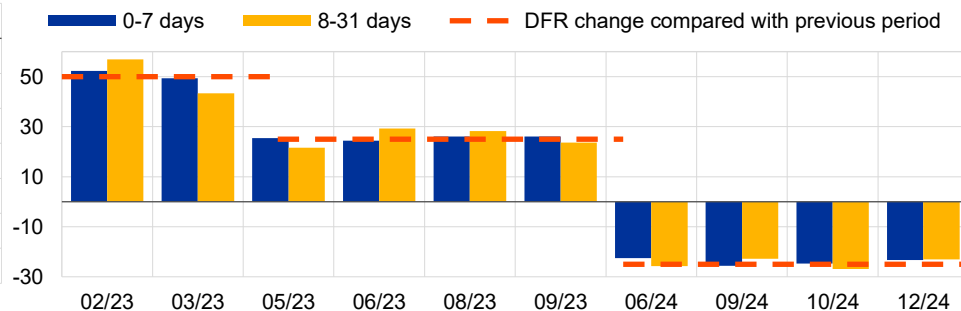
Term rate-OIS: >1W issuance price also lower for banks



Term Rate- OIS: Term price sensitive to issuer rating

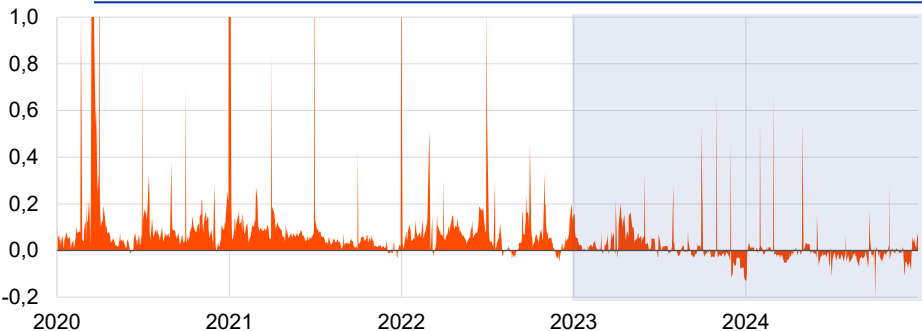


MP transmission: Pass-through

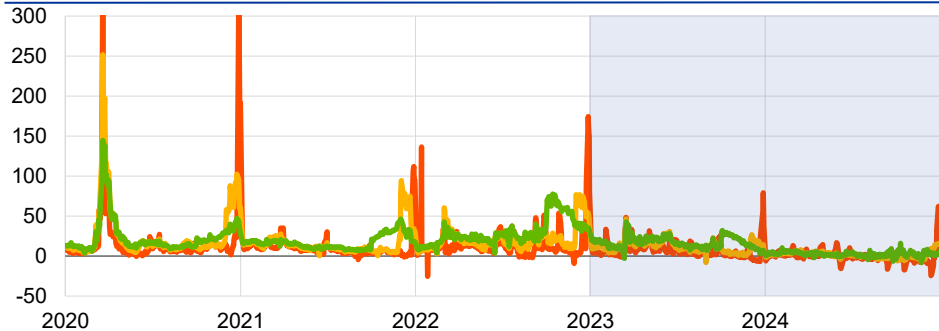


MMSR FX swap: rates

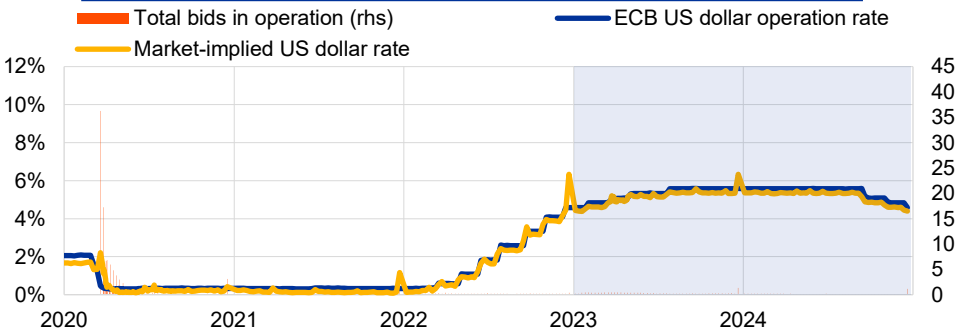
1D spread to SOFR: Offshore Price mostly above Onshore market price



Term FX rate vs OIS SOFR:

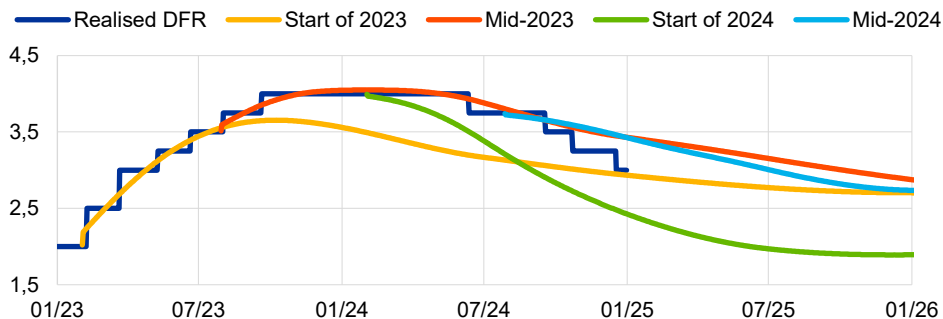


Small resources in the last 2Y, even during 2023 banking turmoil

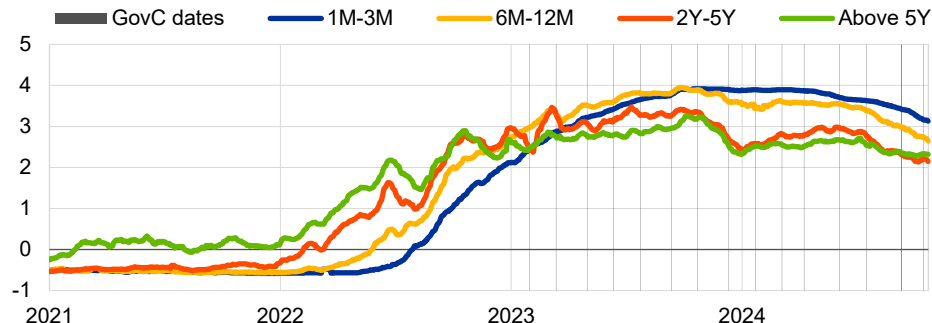


MMSR OIS: rates

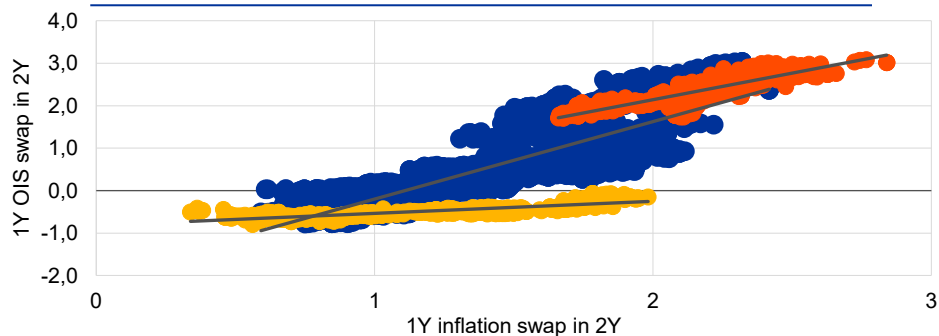
Prediction ability: hike magnitude under-estimated cuts start expected earlier



Impact of GC meetings on OIS spot rates



Impact of inflation swaps on rates





EUROPEAN CENTRAL BANK

EUROSYSTEM

Counterparties

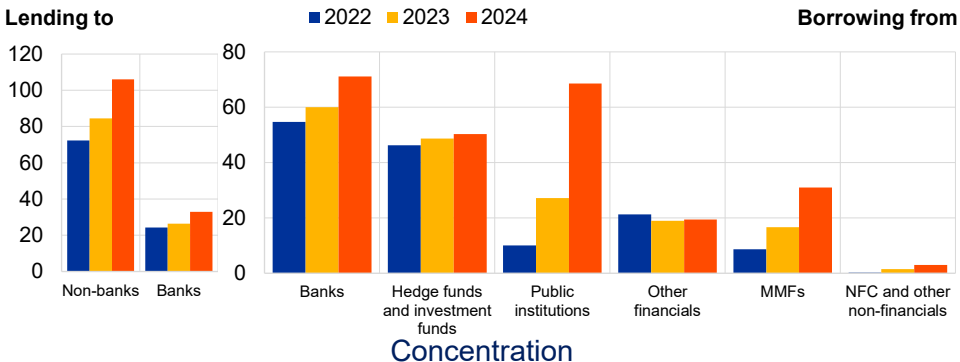
Aspects under scrutiny:

EA banks' interaction with other sectors, main players and their jurisdictions, and market concentration of the segment

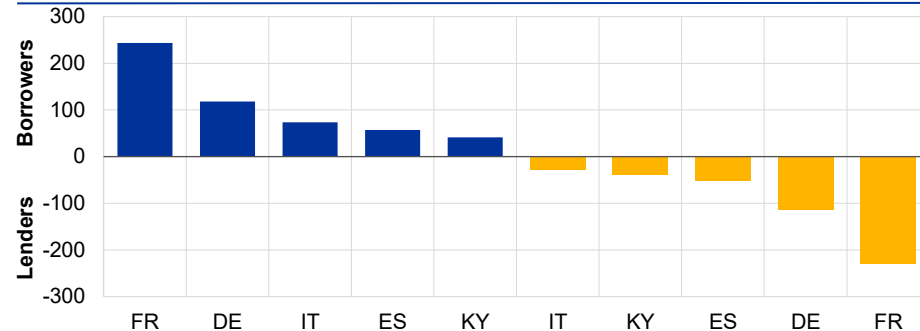


MMSR repo: counterparties

Counterparty sector: EA banks borrow bilaterally also from HF & IF

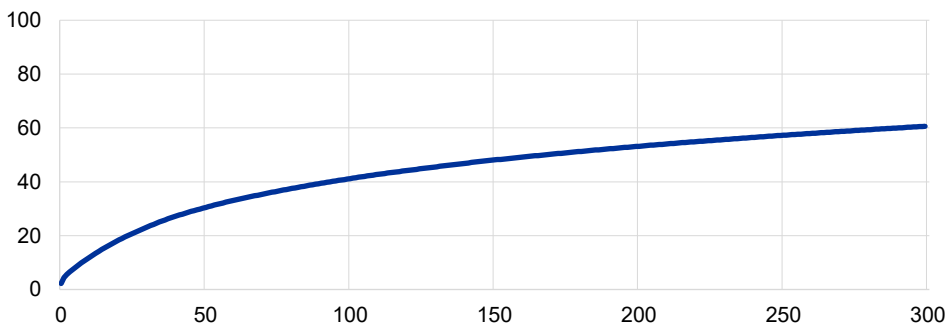
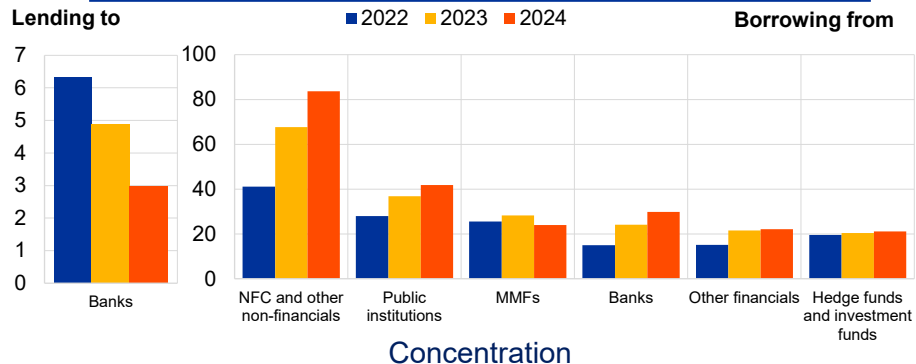


Top jurisdictions: French entities are the most active players

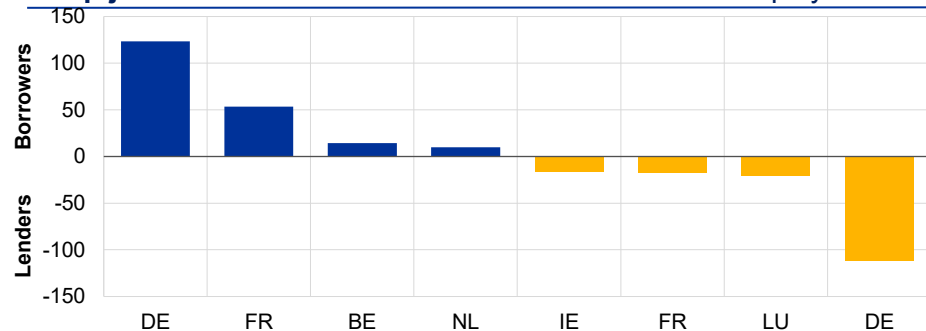


MMSR Unsecured: counterparties

Counterparty sector: EA banks mainly hold call accounts from NFC

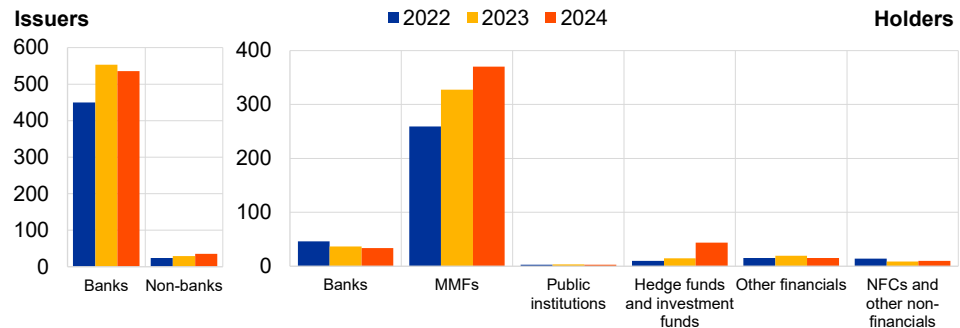


Top jurisdictions: German entities are the most active players

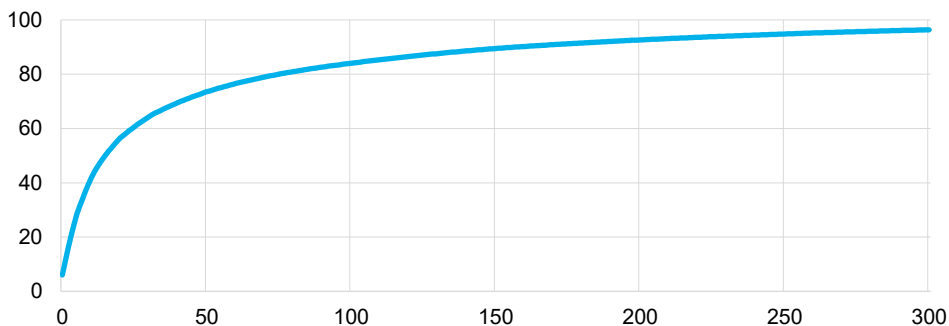


CSDB & SHS STS: counterparties

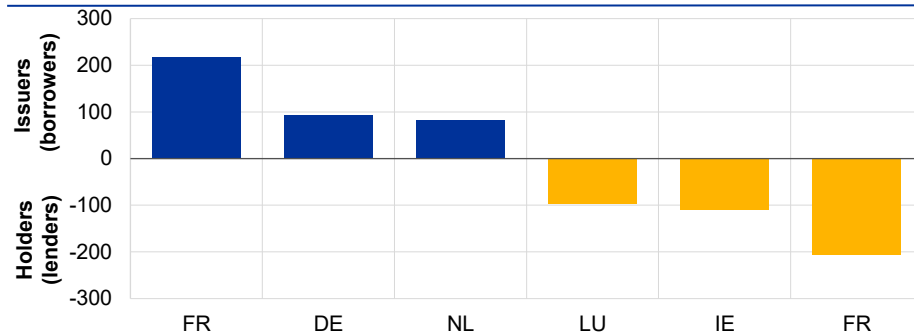
Counterparty sector: MMF are main holders of STS issued by EA banks



Concentration

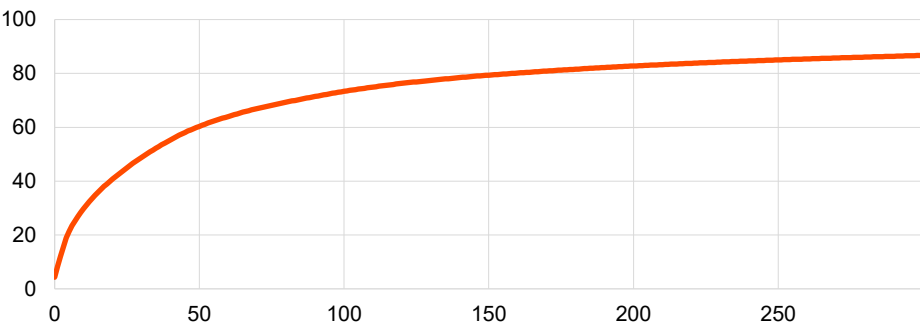
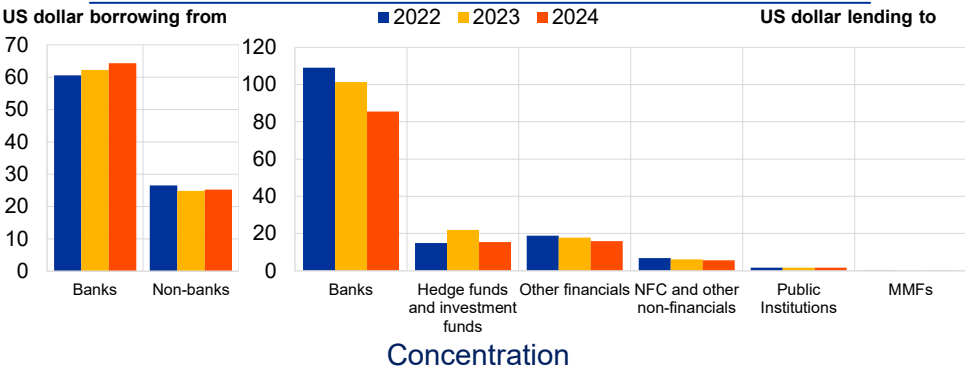


Top jurisdictions: French entities are the most active players

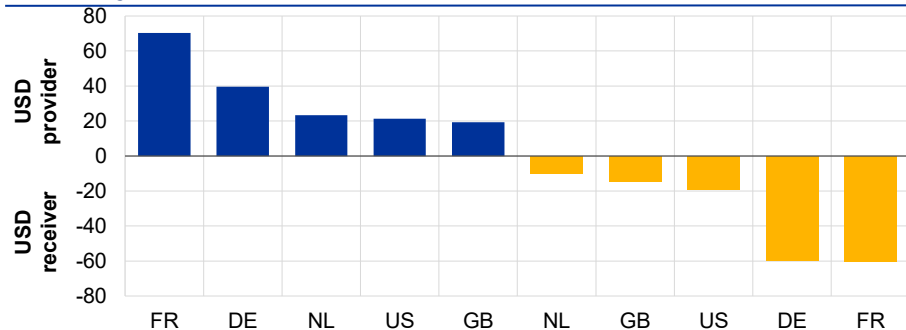


MMSR FX swap: counterparties

Counterparty sector: Most business carried out with EA & FX banks

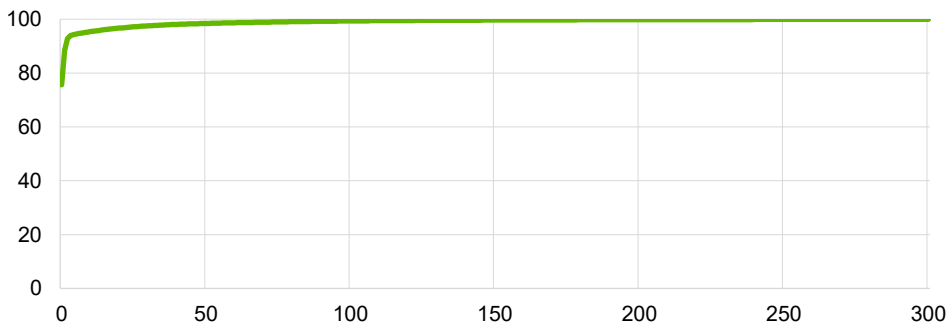
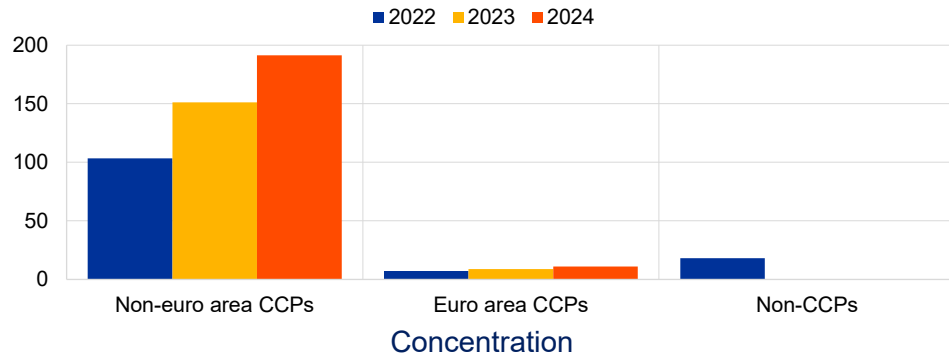


Top jurisdictions: German and French entities are most active

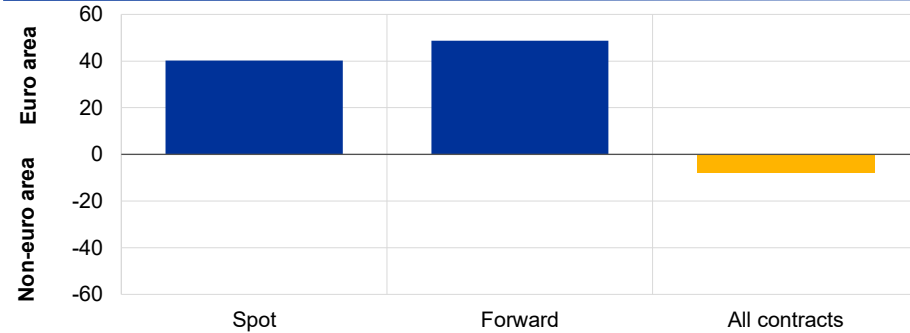


MMSR OIS: counterparties

Counterparty sector: EA cleared & bilateral are increasing, but marginal



Top jurisdictions: Most counterparties are from outside of the EA





EUROPEAN CENTRAL BANK

EUROSYSTEM

Maturities and Calendar effects

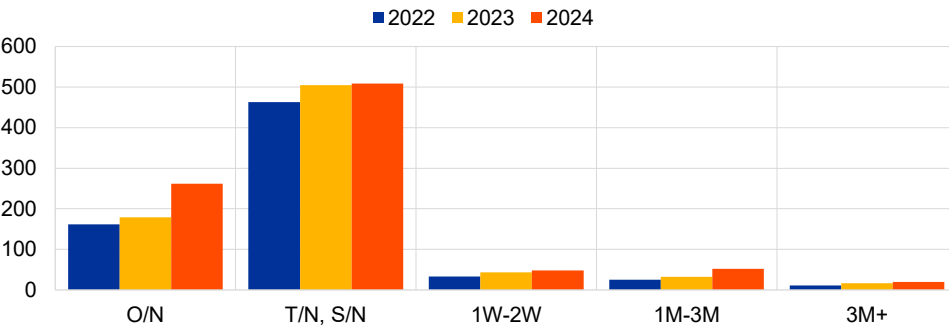
Aspects under scrutiny:

Flows and stock distribution by maturity buckets, calendar effects over volume and rates

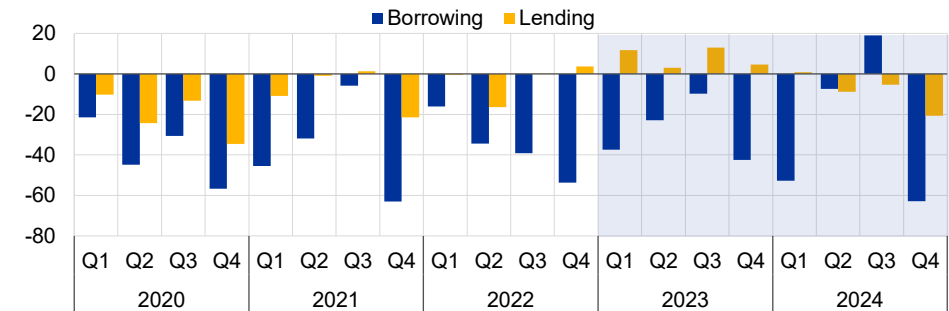


MMSR repo: maturities and calendar effects

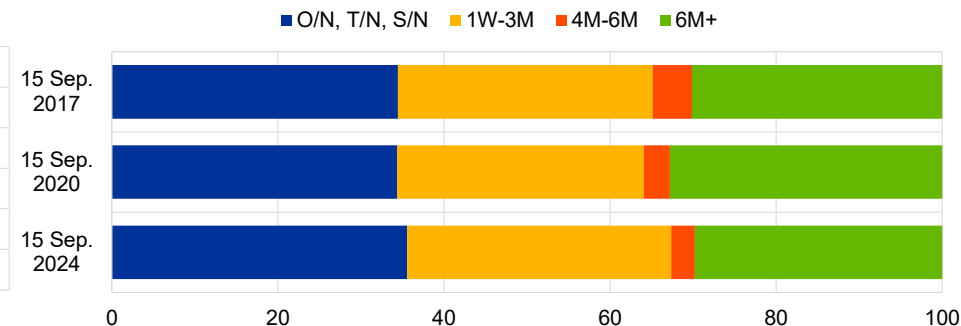
Volumes by Maturity: 86% of EA banks trades are one day



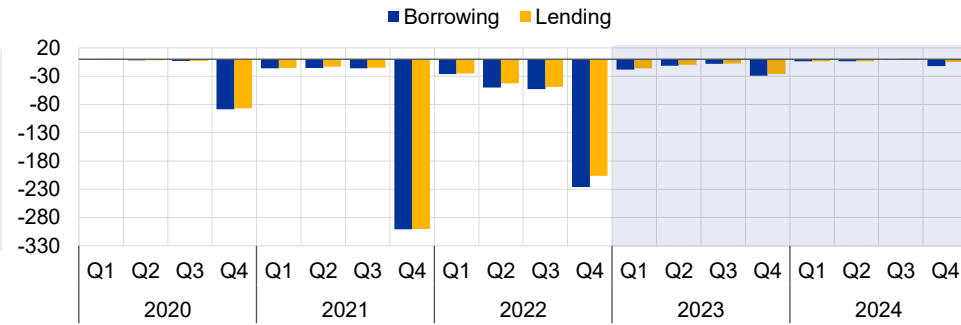
Quarter-end effects on volume: reluctance to borrow



Maturity over time: Term +6M activity grew and now 30% of the inventory

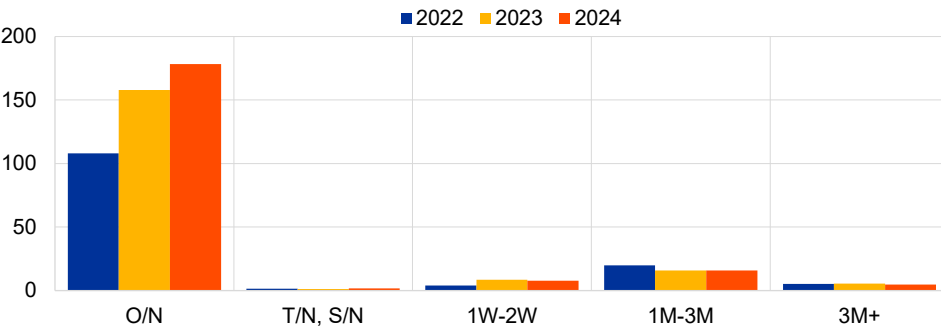


Quarter-end effects on rates: alleviated in 2023-2024, YE still visible

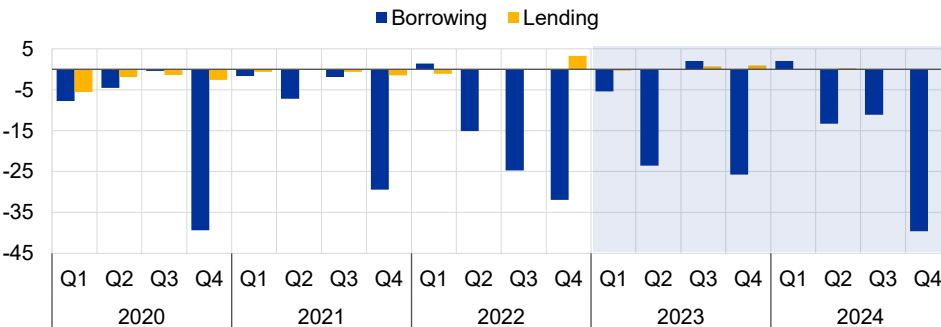


MMSR Unsecured: maturities and calendar effects

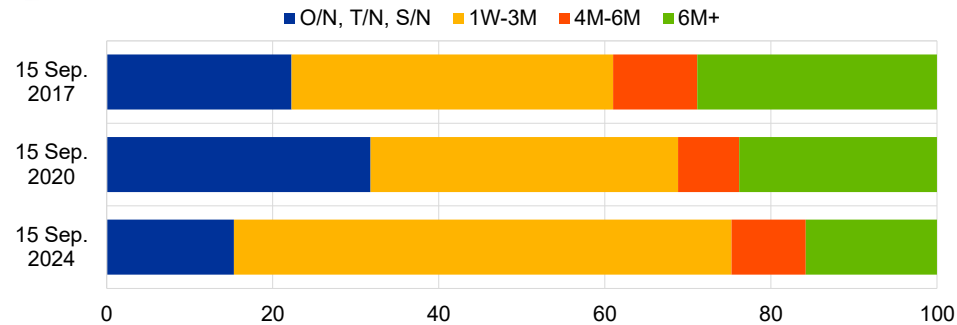
Volumes by Maturity: 85% of EA banks trades are overnight



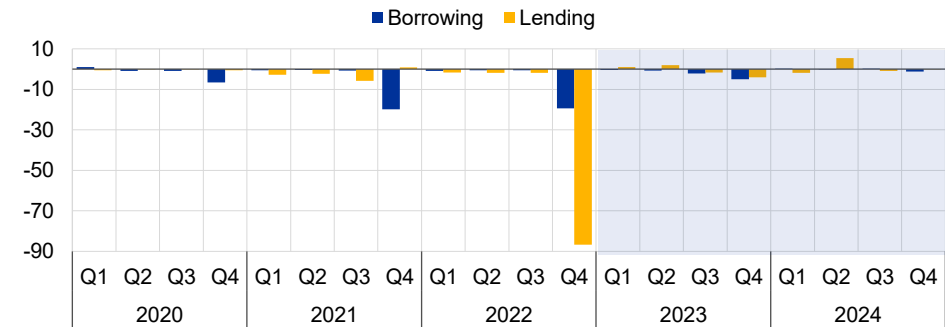
End of quarter effect on volume: reluctance to borrow



Maturity over time: 1D back at <20% level, after surpassing 30% level

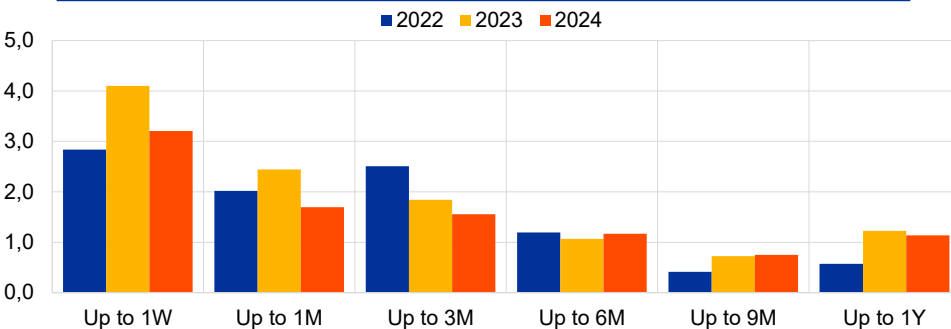


Quarter-end effects on rates: attenuated but still visible

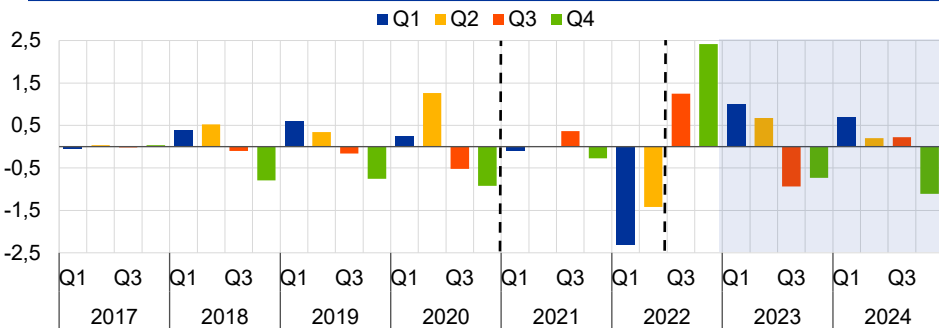


CSDB & SHS STS: maturities and calendar effects

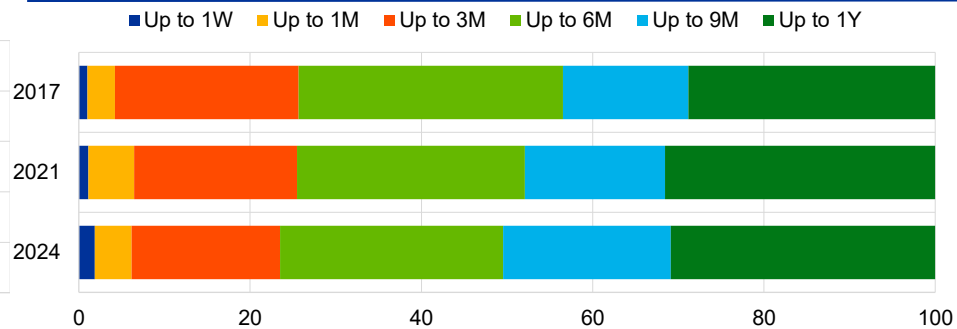
Volumes by Maturity: rather dispersed



Calendar effect on issuances

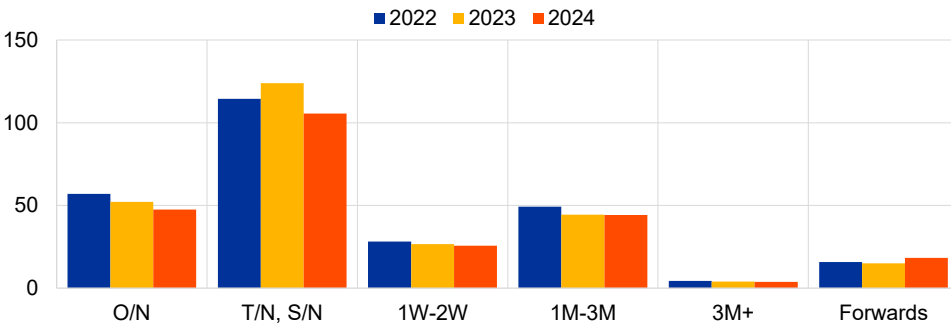


Maturity over time: Term (>3M) recovered the 70% quota



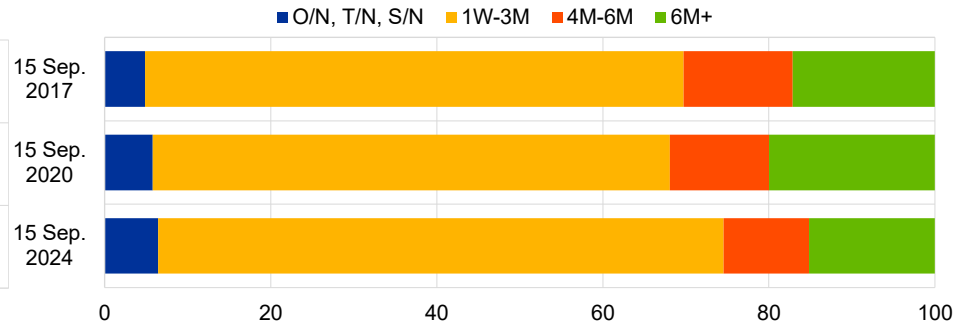
MMSR FX swap: maturities and calendar effects

Most activity is short term, but not necessarily 1D

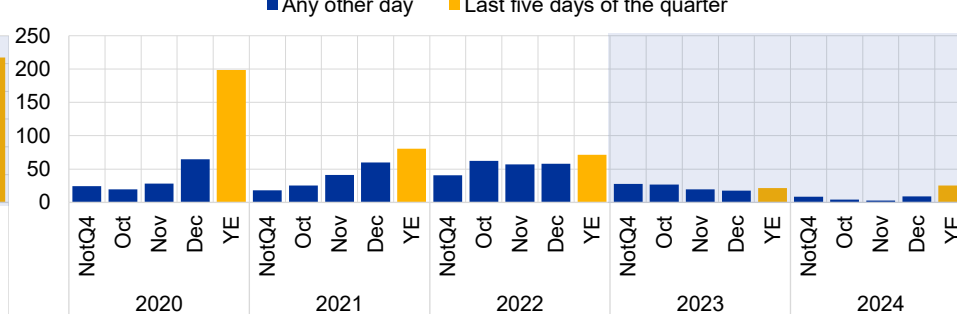
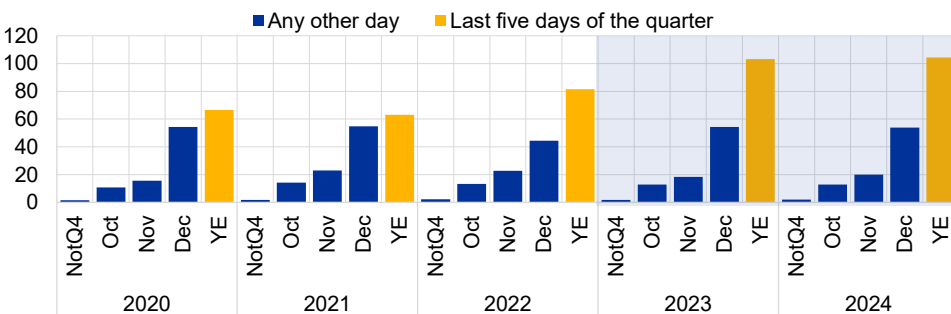


Year-end effect on FX swap trading volumes

1W-3M maturities constitute ca. 65% of the outstanding inventory

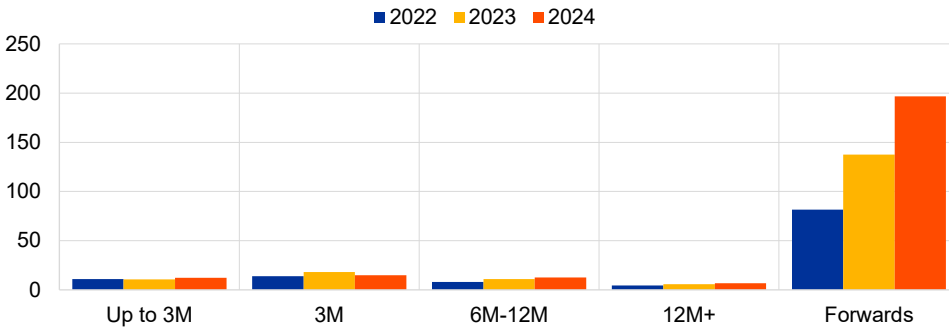


Year-end effect on FX swap premium

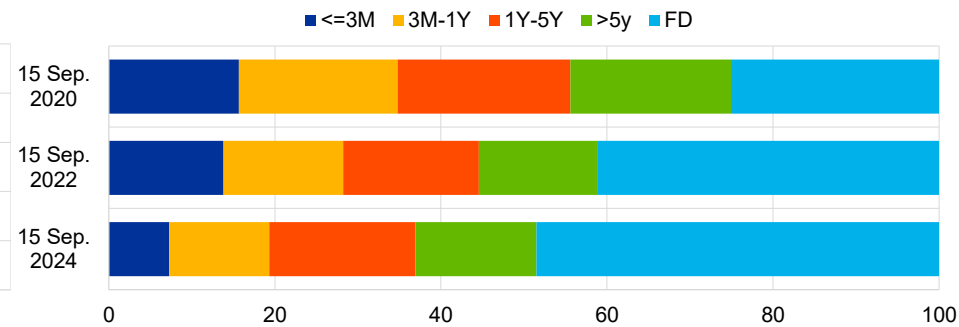


MMSR OIS: maturities and calendar effects

The activity is concentrated in maturities ranging from O/N to 12M



Forward trades show an increase over time



GovC and inflation flash estimate releases dates effect on OIS trading volume

