ESRB
European Systemic Risk Board
European System of Financial Supervision

The EU repo networks



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Introduction

- Interconnectedness as one of the ESRB's focus area
- Ongoing project on "Mapping of the EU financial system"
- As part of the project, we have prepared a dashboard on repo transactions, using data from the SFTR dataset. Findings are forthcoming as an ESRB Occasional Paper
- Repo markets have come to the attention of authorities in the last months: leveraged participants, link between banks and non-banks, role of hedge funds in Treasury markets, basis trades,...

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Data

- According to the SFTR, all securities financing transactions (including repos, securities lending, buy-sell back and margin lending) have to be reported to trade repositories, which, in turn, report them to ESMA and the ESRB.
- Reporting covers transactions where at least one of the parties is based in the EU, including those undertaken by branches.
- The dashboard contains monthly data (average across daily observations) since December 2020.
- Information is computed on a non-consolidated and consolidated basis (the latter, using RIAD group structure).

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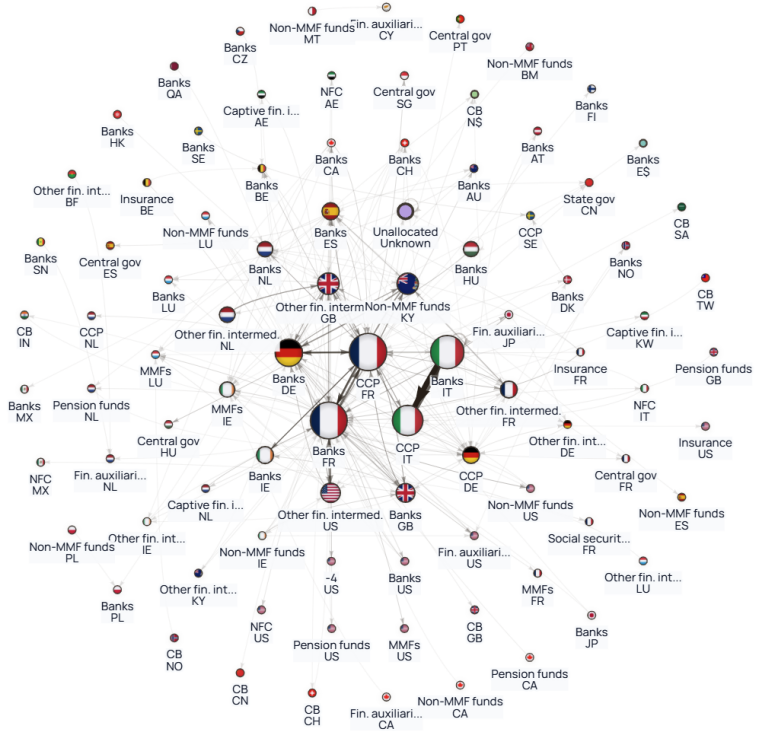
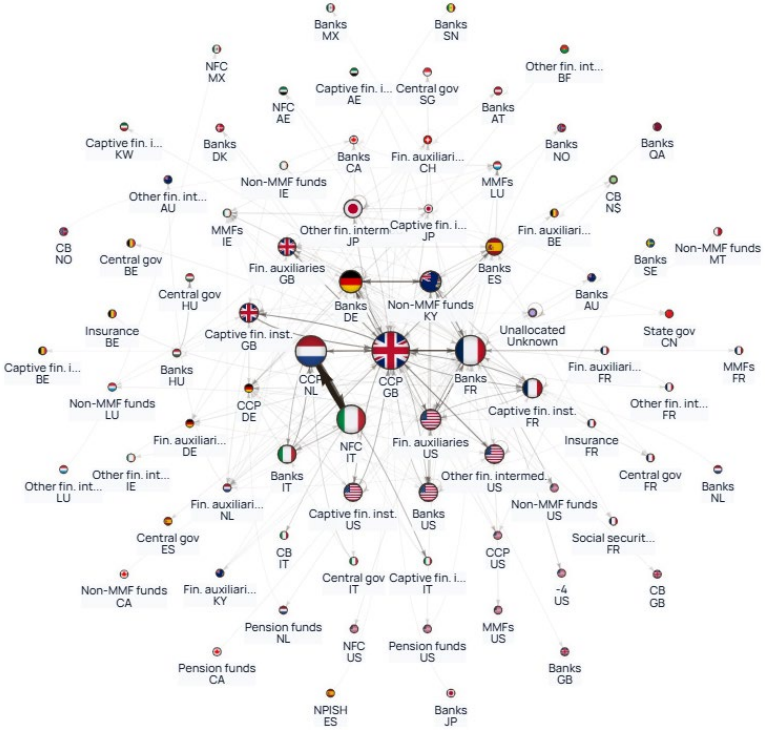
Network of all repos in the EU backed by government bonds

Unconsolidated network



Consolidated network



Source SFTR, July 2026, collateral flows all in EUR. Unconsolidated.

Collateral stock vs collateral utilised in repos

Securities used as collateral in the EU repo network
(billion EUR, May 2026)

Country	Collateral inflows (A)	%	Total debt securities issued by government (B)	% (A / B)
Italy	2,836.64	22.13%	2,673.63	106.10%
United States	1,975.73	15.41%	27,659.62	7.14%
France	1,616.44	12.61%	2,902.56	55.69%
Germany	1,241.28	9.68%	2,012.78	61.67%
Spain	734.20	5.73%	1,515.59	48.44%
United Kingdom	540.92	4.22%	2,698.31	20.04%
Japan	449.40	3.51%	5,627.84	7.98%
Other	3,426.12	26.72%		
Total	12,820.73	100%		

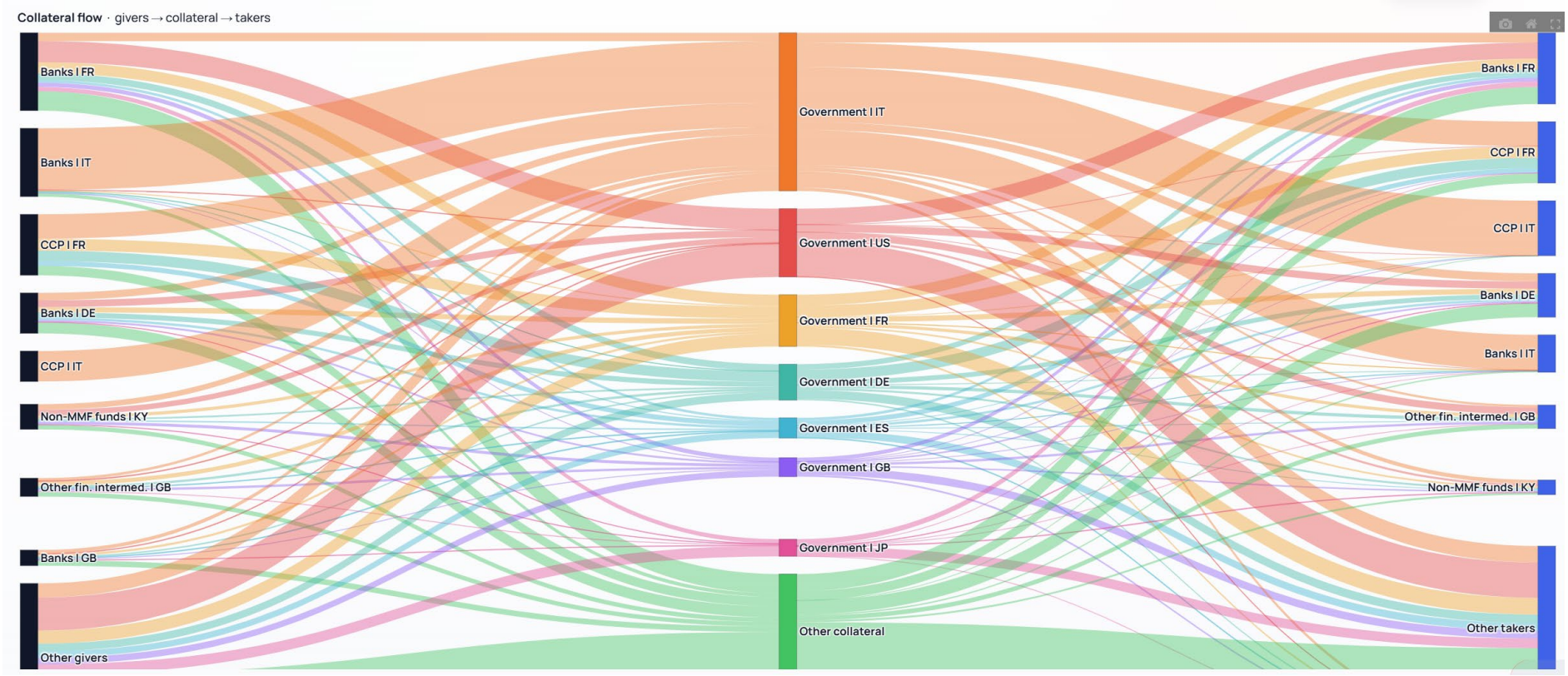
Sources: SFTR database, Eurostat, US Treasury, Office for National Statistics (United Kingdom), Cabinet Office (Japan), Haver Analytics and authors' calculations. Notes: amounts for the United States, United Kingdom and Japan have been expressed into euros, using the exchange rate as of June 2026, as reported in the ECB website. Data of Japan and the United Kingdom refer to the end of March 2026. Debt securities issued by the government of the United States excludes intragovernmental holdings and refers to May 2026.

Four euro-area issuers, Italy, France, Germany and Spain, provide **~50% of EU repo collateral** inflows.

Italy is the largest single source, with collateral usage exceeding the stock of outstanding government debt securities, pointing to high collateral velocity / re-use.

High **re-use** of the same sovereign collateral generally supports liquidity, though it can create some sensitivity if settlement fails, margin calls or eligibility changes affect collateral used across multiple repo chains.

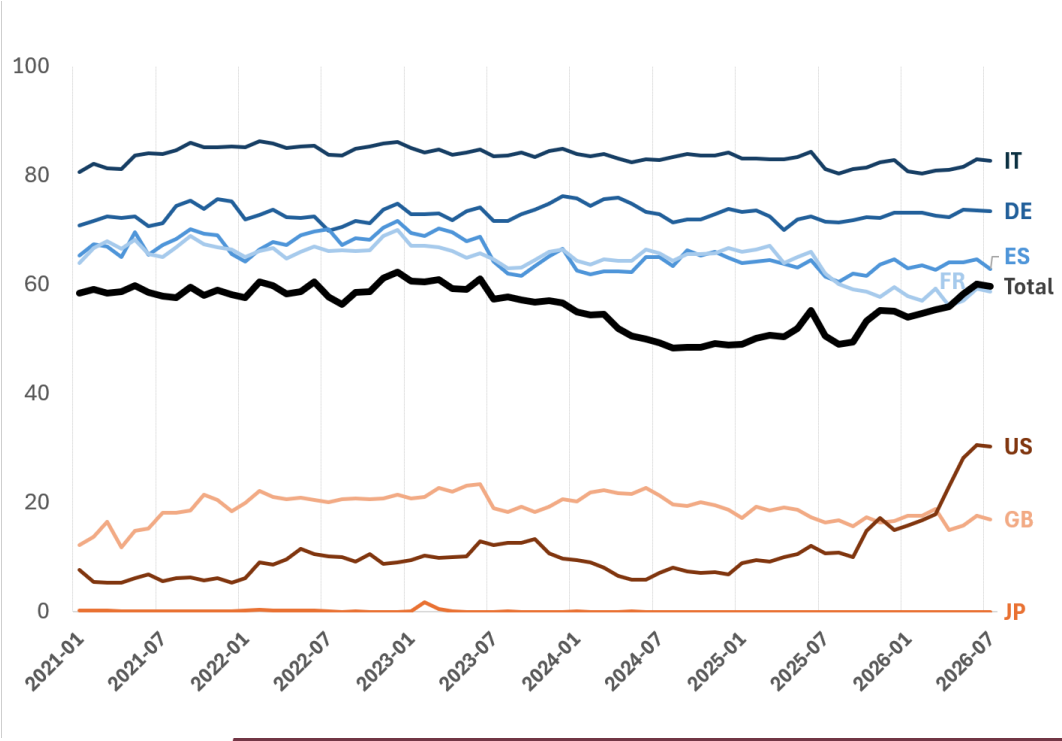
Collateral flows in the repo network



Source SFTR, July 2026, collateral flows all in EUR. Unconsolidated.

Share of cleared repo transactions

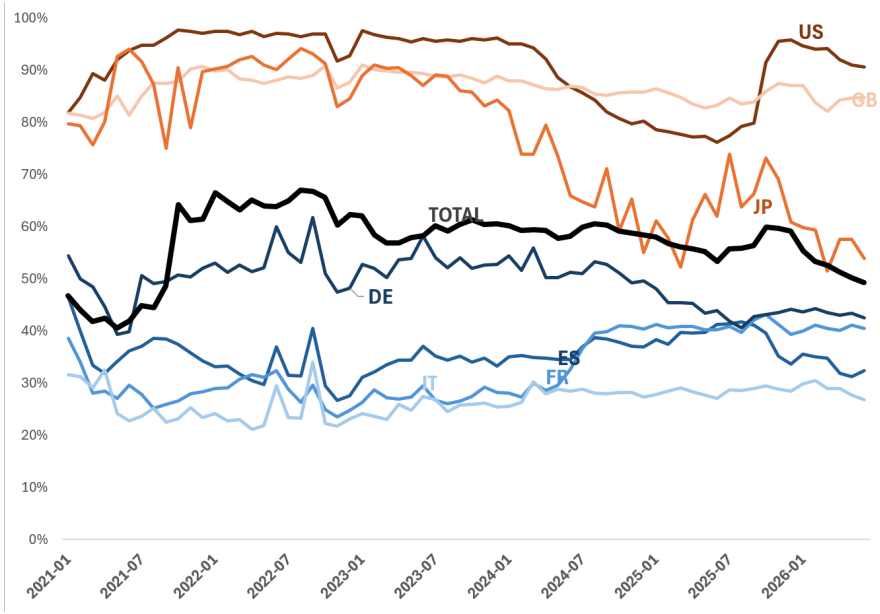
Share of centrally cleared repos (government bonds as collateral) by collateral issuer country
(percentage, monthly)



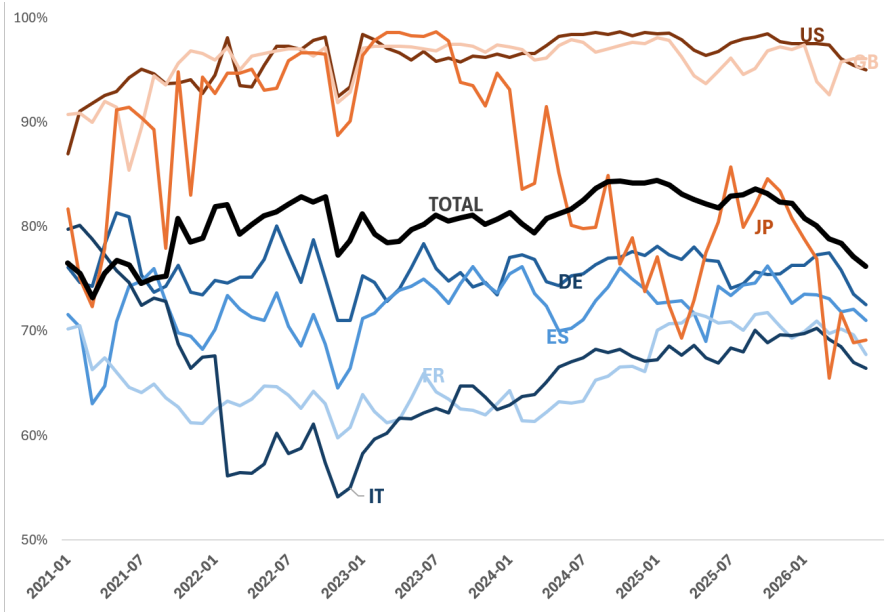
Source: SFTR, includes trades post novation.

Share of cross-border repo transactions by collateral type

Share of repos between EU and non-EU counterparties (government bonds as collateral) by collateral issuer country
(percentage, monthly)



Share of cross-border repos (between counterparties in different countries, government bonds as collateral) by collateral issuer country
(percentage, monthly)



Source: SFTR.

Repo network of DE collateral

Louvain communities of unconsolidated network

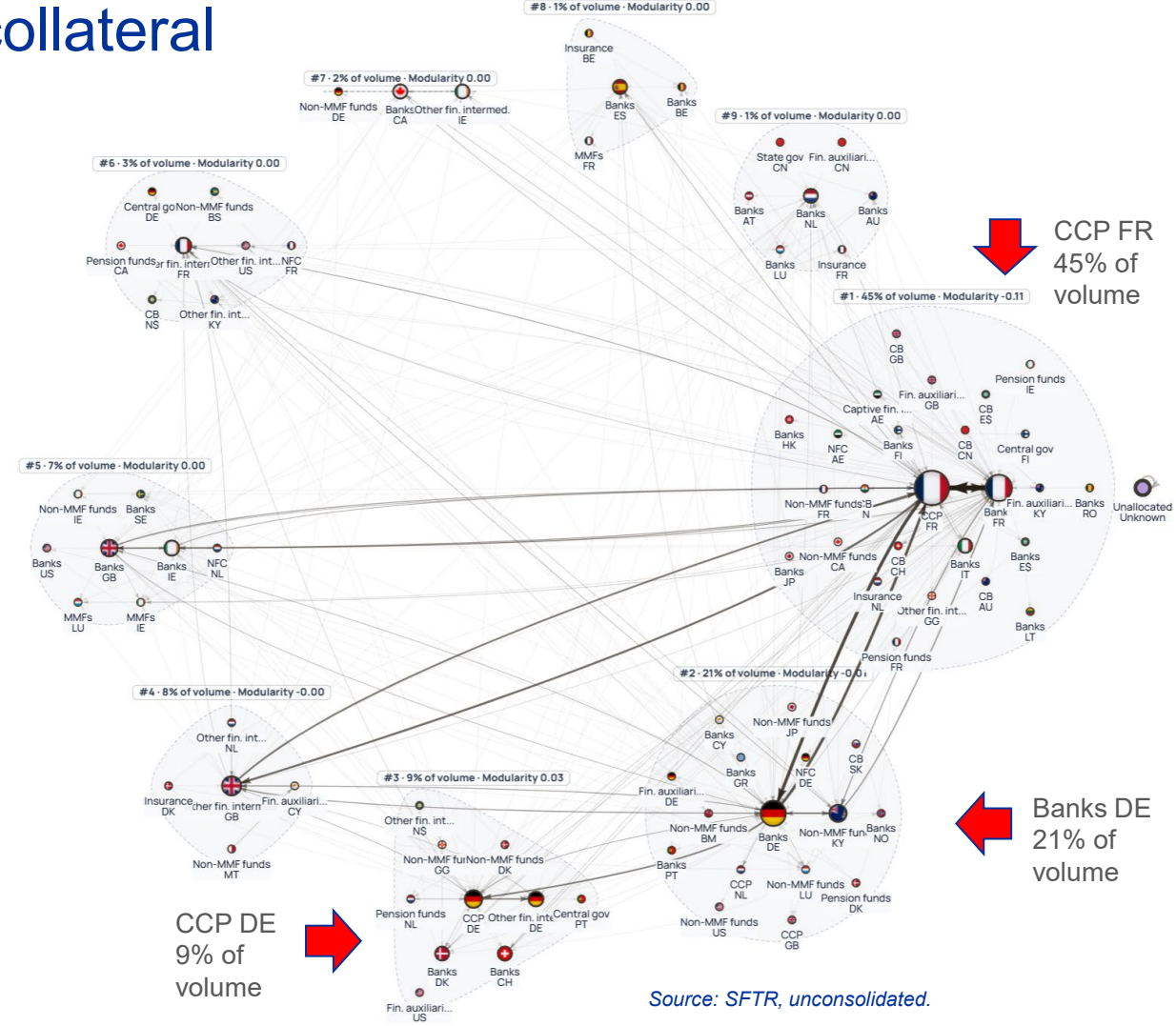
all **DE** gov. bond backed repos

(July 2026, collateral flows in EUR)

The **DE network** is mid-sized by both node count (**159 nodes**) and edge count (**626 edges**), with an **average clustering of 0.0007** and a **global efficiency of 0.4692**, close to the middle of the range. This points to a network sitting between the more centralised and more dispersed cases.

The largest community (**45% of volume**) is centred on the **French CCP and French banks**. German banks form another key community with **KY/US funds** and EU banks.

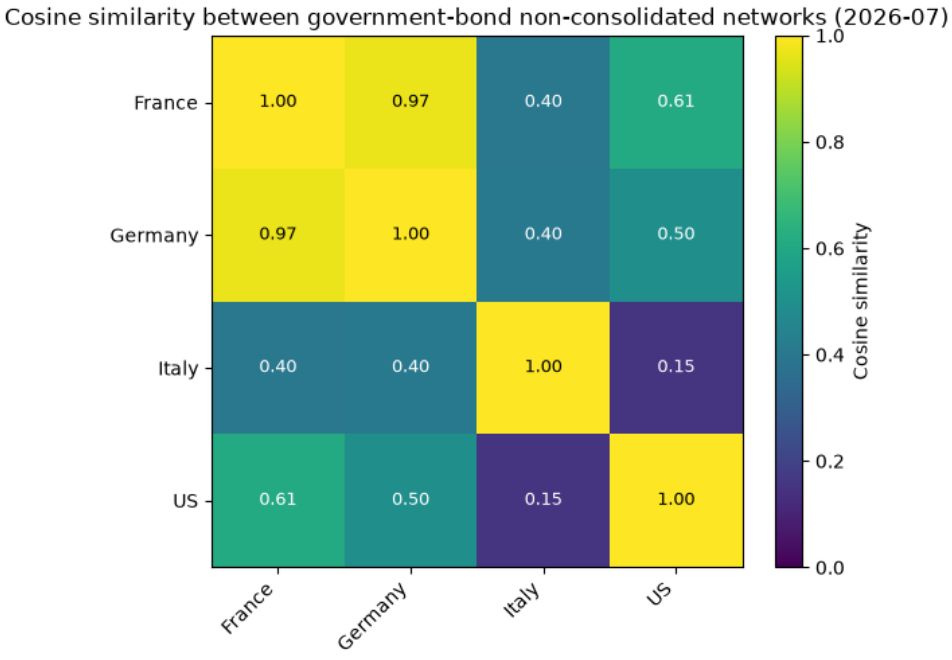
German banks mostly clear via the **French CCP**, while the **German CCP** is mainly used by **DE OFIs** and **CH/DK banks**. **GB banks/OFIs** also clear directly with the French CCP.

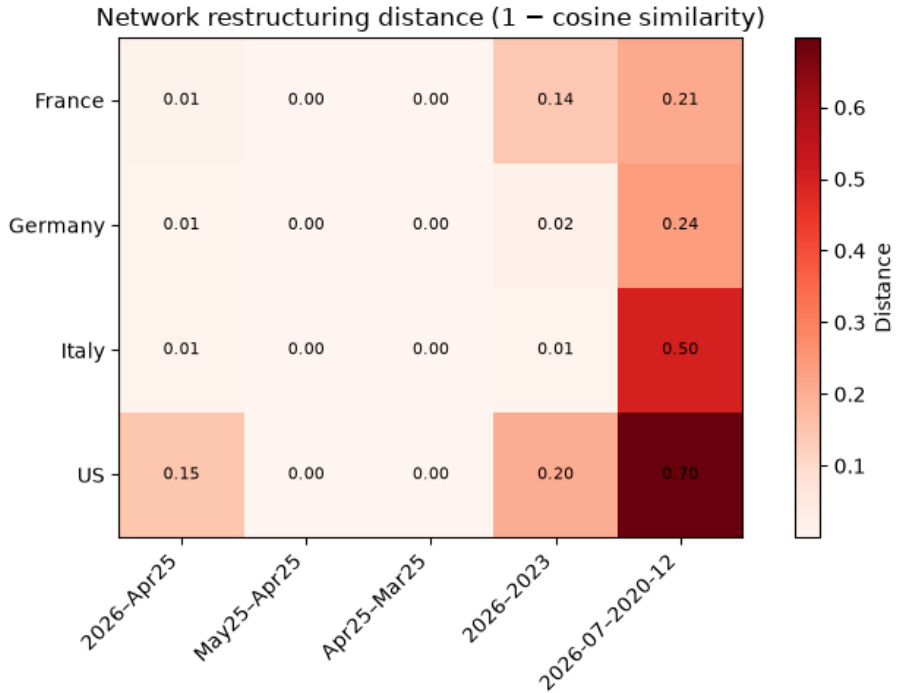


Source: SFTR, unconsolidated.

Network similarities across collateral type and time

(July 2026)





Source: SFTR, unconsolidated.

Simulating a 100bps collateral shock - methodology

Enrich collateral with cash flows
Match each collateral ISIN to CSDB reference data to retrieve its coupon schedule, maturity and currency.

Compute DV01 per security
Derive each security's price sensitivity to a 1bp yield move by discounting its cash flows (taken from CSDB data).

Apply the +100bps shock
Shift the relevant underlying rate curve by 100bps for every collateral issuer country / currency.

Translate loss into a cash need
Value loss ≈ DV01 × 100bps per position; aggregate by counterparty to size the resulting margin / cash call.

$$\Delta Collateral\ Value = \mathrm{DV01} \times 100\mathrm{bps}$$

- **System-wide cash demand**
- **Collateral concentration risk**
- **Most exposed counterparties**

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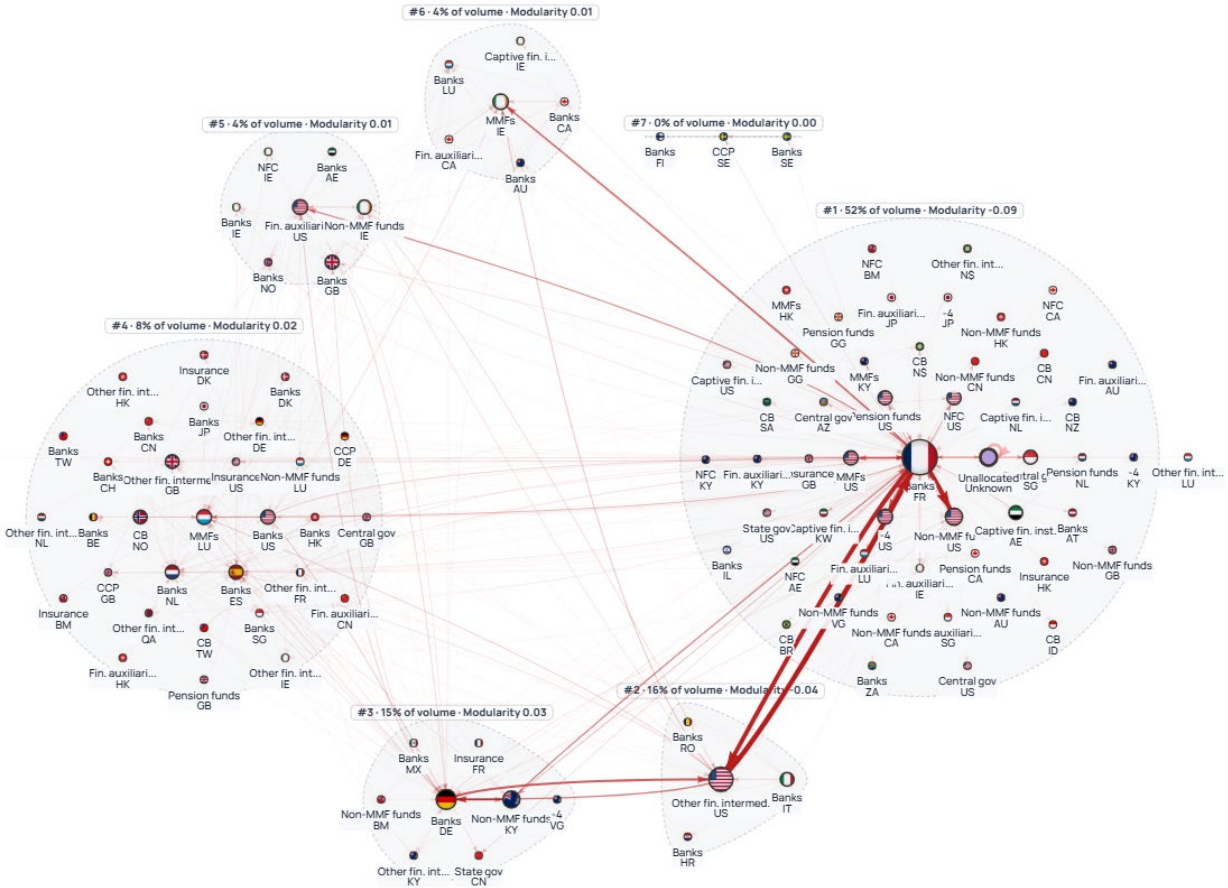
Stress simulation – 100 bps stress on US rates

Stress flow network – all US gov. bond backed repos
(July 2026, flows in EUR)



Source: SFTR, unconsolidated.

Key takeaways

Showcase a tool that can be used to map the EU financial system and analyse interconnectedness and do simple stress scenarios. Here a case study of the EU repo.

Repo network structures differ materially by collateral type.

- Italian, German and French government bond repo markets are more CCP-centred.
- The US Treasury repo network is larger, less dense and less clustered, with lower clearing and stronger reliance on bank intermediation.

Network analysis highlights different potential channels of shock transmission.

- **IT network**: concentrated around Italian banks and Italian CCPs, potential shock transmission mainly through few central domestic actors.
- **FR and DE networks**: shaped by French banks/CCP and German bank intermediation, including links with KY/LU funds and non-EU participants.
- **US Treasury network**: larger and more dispersed, with lower CCP centrality and longer intermediation chains through French and German banks.

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