Just in Time

Counterparty Credit Risk Exploratory Scenario Exercise

Concentration of Exposures Across Counterparties and Sensitivity to Adverse Market Conditions

September 2025

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Executive Summary

The ECB conducted an exploratory scenario exercise to assess counterparty credit risk (CCR) among 15 Euro-area banks selected based on quantitative criteria derived from 2023 EBA stress test. Participants were mainly banks with high CCR exposure towards **non-bank financial institutions (NBFIs)**.

The exercise focused on vulnerabilities linked to exposures to NBFIs and evaluated banks' stress-testing capabilities under multiple adverse scenarios.

Three scenarios were used: the EBA's 2025 EU-wide adverse market risk scenario, an interest rate decline scenario (alternative scenario 1), and a EUR depreciation scenario due to geopolitical tensions (alternative scenario 2). Unlike the EBA stress test, the exercise had **no direct capital impact**. However, the qualitative outcomes of the exercise will be considered in the context of the Supervisory Review and Evaluation Process.

The exercise covered eight categories of counterparties, analyzing: 1) **Exposure Composition**: Total gross CCR exposure and net CCR exposure; 2) Risk **Concentration**; 3) **Stress Test** Impact; 4) **Wrong-Way Risk & Liquidity**; 5) **Interconnectedness** between counterparties, computed with a fragility index.

Overall, the exercise shows that multiple scenarios are needed to enhance CCR governance, stress-testing, and systemic risk awareness.

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At a Glance

Keywords: NBFI, CCR, exploratory scenario

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Introduction

The Counterparty Credit Risk Exposure Linked to Non-financial Institutions (NBFIs)

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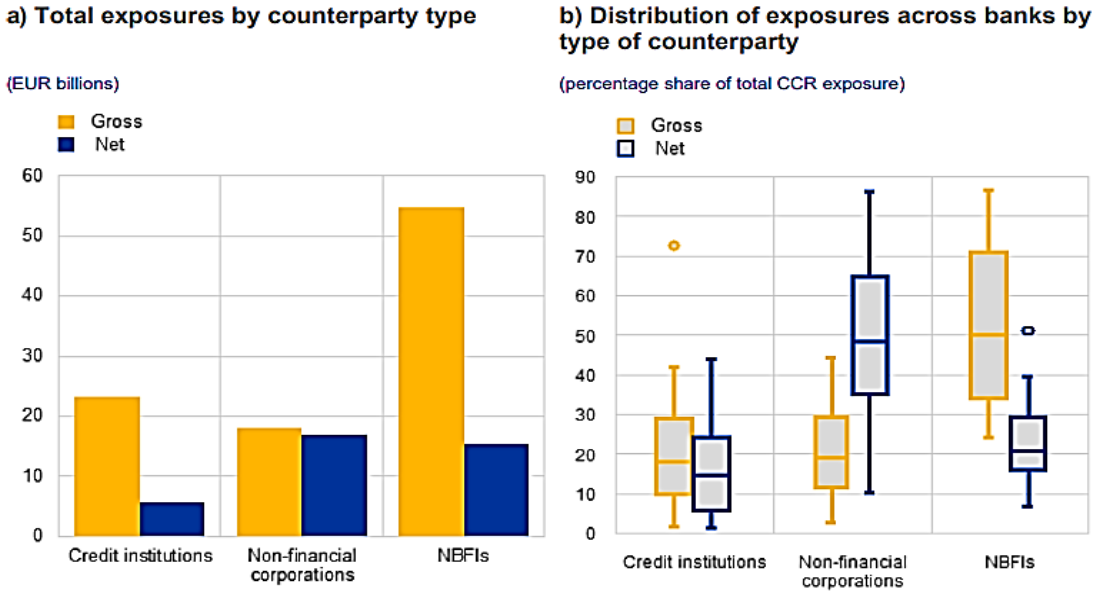
Introduction

The Counterparty Credit Risk Exposure Linked to Non-financial Institutions (NBFIs)

Recent events, e.g., the default of Archegos in March 2021, have shown that when CCR is associated with **NBFIs**, it poses a significant threat to banks: NBFI sector is still growing, increasing banks' exposure to **less regulated** segments of the financial system.
To investigate NBFI-related vulnerabilities ECB conducted an **exploratory scenario analysis on CCR** (CCR-ES), with hypothetical adverse scenarios built around the EBA's 2025 EU-wide stress test adverse scenario (hereinafter "EBA scenario").
Only banks with material CCR exposures were invited to participate in the exercise. The **15 participating banks** were selected based on quantitative criteria derived from 2023 EBA stress test: global systemically important banks (GSIBs), banks for which more than 50% of their CCR exposure was towards NBFI sector, or banks with a Common Equity Tier 1 depletion of more than 100 basis points following a hypothetical scenario involving the default of their four most vulnerable counterparties.



The **total gross exposure** for the sample of banks standed at **€96 billion**. The total net exposure standed at €38 billion, with the level of collateralization ranging from 9% to 95% across the sample. Monitoring the gross exposure is essential for a comprehensive view of underlying risk: **collateralization** plays a key role in mitigating CCR but in a crisis the value of the collateral can deteriorate, potentially reducing its protective effect, leaving banks more exposed than the net figures suggest.
Gross exposures were mainly **concentrated in NBFIs,** €55 billion (57%), with credit institutions generating €23 billion and non-financial corporations €18 billion. Whitin the NBFI segment, most exposures were to insurance companies and pension funds. Exposures to non-financial corporations remained elevated after accounting collateral, confirming that there is lower collateral coverage for derivative transactions with the corporate sector. On the other hand, net exposures to both NBFIs and credit institutions dropped significantly, indicating a high degree of collateralization.

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CCR-ES Scenarios

Methodology

Probability of Default

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CCR-ES Scenarios

The exploratory exercise considered three scenarios. Two additional scenarios were considered alongside the EBA 2025 EU-wide stress test, where a baseline set of shocks was built in line with the EBA exercise and additional elements were introduced, with the purpose to account for the potential materialization of CCR through a sensitivity analysis.

Alternative scenario 1

This considered a **decline of interest rates**. Heightened uncertainty about trade policy leads to a further decline in global demand. This amplifies the disinflationary elements of this scenario, driving down swap rates across different economic regions. The shocks are comparable to the movements in market rates observed between the fourth quarter of 2008 and the first quarter of 2009.

Alternative scenario 2

This considered a **deprecation of euro exchange rates**. Increasing geopolitical tensions and the subsequent increase in defense needs can have inflationary effects. As EU's tariff retaliation delayed (compared with the other economic areas) the scenario results in a deprecation of euro against three major currencies (US dollar, pound sterling and Japanese yen). The initial shocks to the three currencies are calibrated based on the tenth percentile of the historical distribution of the yearly change in the exchange rates.

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Methodology

The exercise relied on a targeted data collection of the banks' stressed exposures to the most vulnerable counterparties at sectoral level. Banks participating in the exercise were asked to apply a **similar methodology as in the 2025 EU-wide stress test**, but with a **higher granularity** of exposures, and to report a richer set of characteristics on the ten largest counterparties in terms of stressed CCR exposures. Unlike in the EBA stress test methodology, banks reported exposures at **individual counterparty level** rather than at counterparty group level so that they could more accurately identify NBFI counterparties.

The methodology identified **eight categories of counterparties**: money market funds (MMF), non-MMF investment funds, real estate funds, private equity and private credit funds, hedge funds, insurance and pension funds, other financial institutions, and family offices. For these counterparties, banks calculated **stressed CCR** exposures, considering **collateral revaluation**. Banks reported the **CVA** and CCR-related projected losses, including the jump-to-default (JTD) measure, and provided information on the impact of Specific Wrong Way Risk (SWWR).

Banks were also asked to **provide** detailed **information** on the **characteristics of these eight categories of counterparties**. In addition, for completeness, banks were also asked to provide information on credit institutions and non-financial corporations. Banks should provide **default probabilities** and **leverage** metrics, to assess the quality of the CCR portfolios. However, because of the exploratory nature of the exercise, banks were encouraged to report information in line with their internal processes and models.

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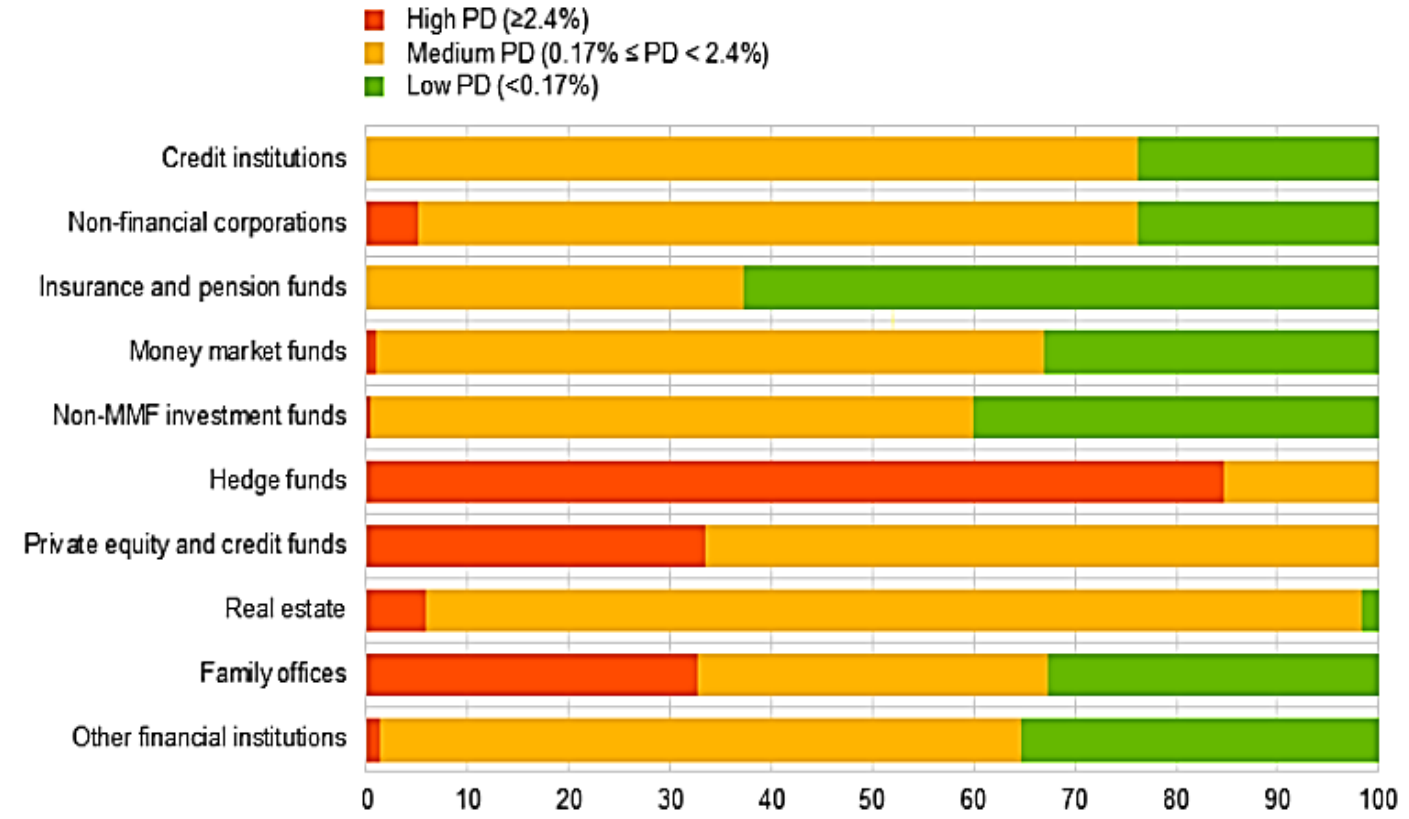
Probability of Default

The exercise considered the default probabilities of the counterparties, the concentration of CCR exposure and the sensitivity of CCR to various risk factors.
The **probability of default** (PD) is the critical measure of credit quality that indicates the likelihood that a counterparty will fail to meet its obligations. This is especially relevant for **NBFIs** given their **varied** and sometimes **opaque risk profiles**.
In the chart the distribution of high, medium and low-PD gross exposures shows that **hedge funds are the riskiest counterparties**.

Regarding parameters, **PD** e **LGD** were generally **consistent** with the 2025 **EBA stress test** template. For LGD, only few banks provided additional details, such as calculating LGD using the Basel value in the absence of SWWR, and using a weighted average of Basel LGD and a stressed SWWR LGD when SWWR is present.

Relative gross stressed exposure (EBA scenario) to high, medium and low-PD counterparties

(relative stressed exposure, percentages)



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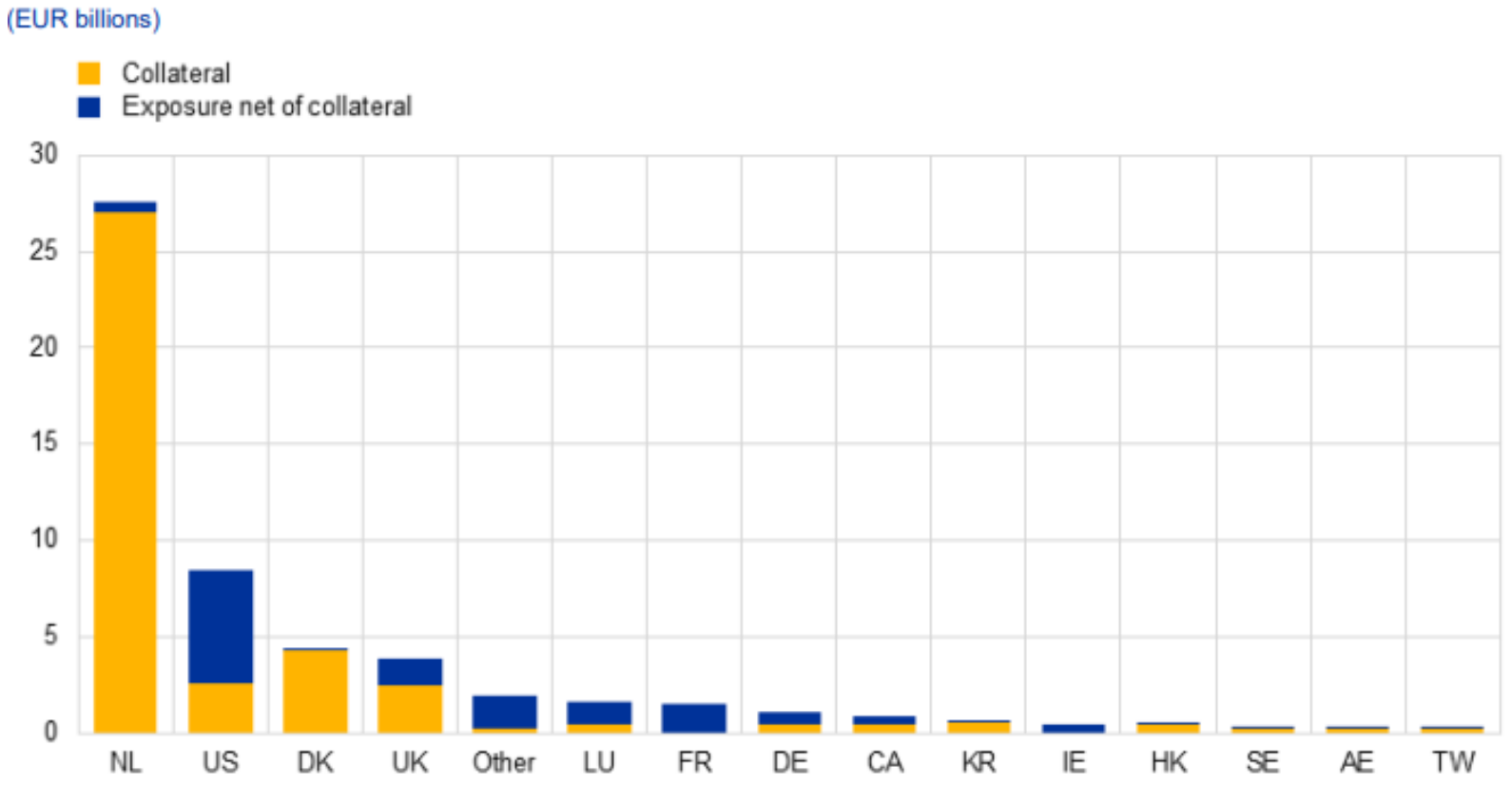
Country Dimension

As shown in the chart, the counterparties reported in the data collection were domiciled in a diverse range of countries.
In particular, **most** of the aggregated **gross exposure** is towards **NBFI** counterparties located in the **Netherlands** (NL). These are mainly insurance and pension funds and non-MMF investment funds.

On the other hand, when considering **net-of-collateral exposure**, NBFI counterparties based in the **United States** are preponderant, with MMFs accounting for almost half of the exposure.



Source: Banks' submissions in the CCR-ES exercise.
Note: The category "Other" comprises counterparties residing in Bermuda, the Channel Islands, the Cayman Islands, the British Virgin Islands and Cyprus.

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Main Results

EBA Stress Test and Alternative Stress Scenarios

Leverage

Liquidity

Interconnectedness

Conclusions

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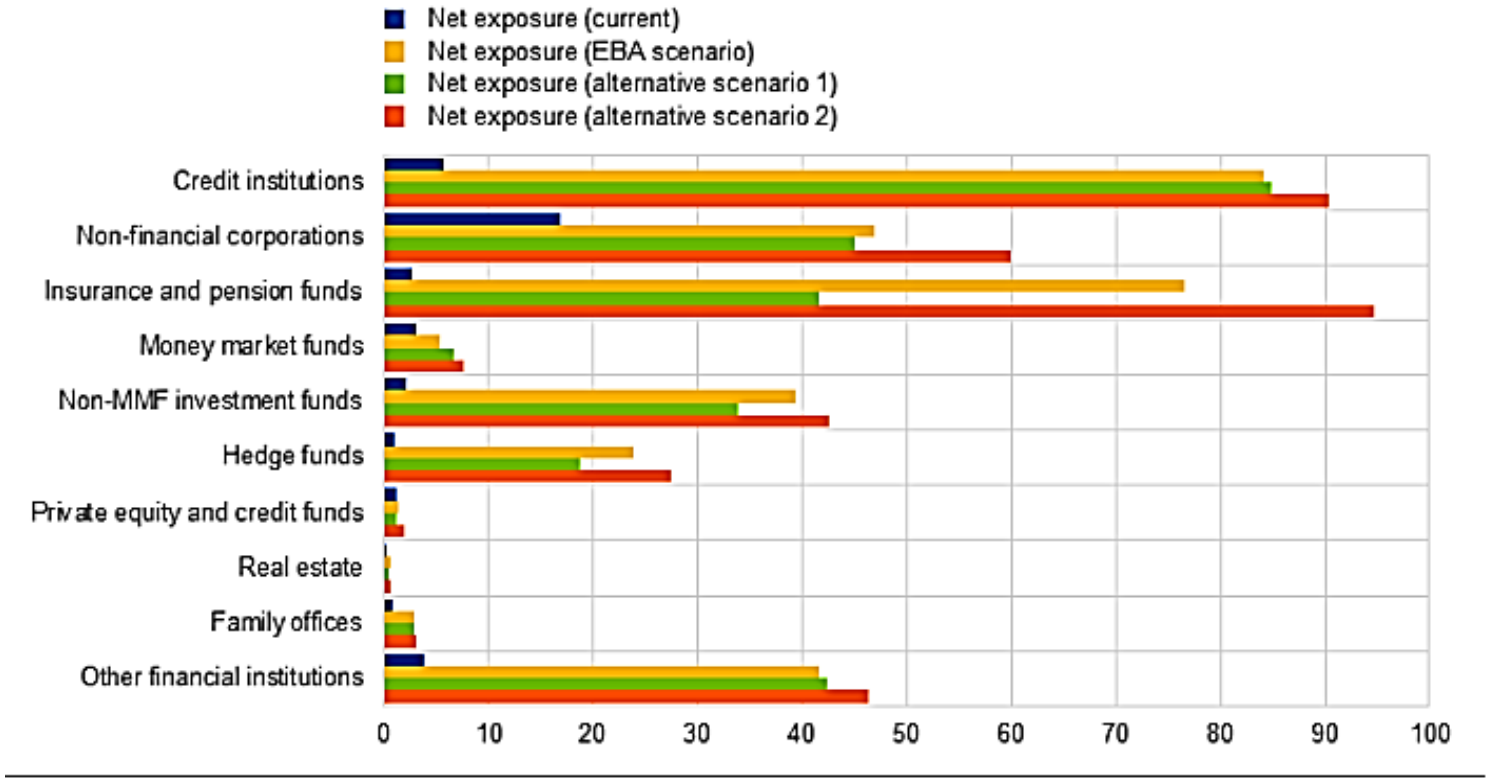
EBA Stress Test and Alternative Stress Scenarios

Banks reported their CCR exposures and revaluated collateral based on the shocks in the EBA market risk scenario and separately for the two alternative scenarios. Multiple scenarios can expose vulnerabilities that would otherwise not appear under a single scenario approach:

- Alternative **scenario 1** leads to a smaller increase in exposure than under the EBA scenario for some types of counterparty. This can be explained by the direction of the positions taken against the interest rate.
- Alternative **scenario 2** results in the most pronounced impact for all counterparties types. The depreciation of EUR increases banks' CCR exposures by raising the replacement cost of foreign currencies derivatives.

Net exposure under EBA scenario, alternative stress scenario 1 and alternative stress scenario 2

(EUR billions)



Source: Banks' submissions in the CCR-ES exercise.

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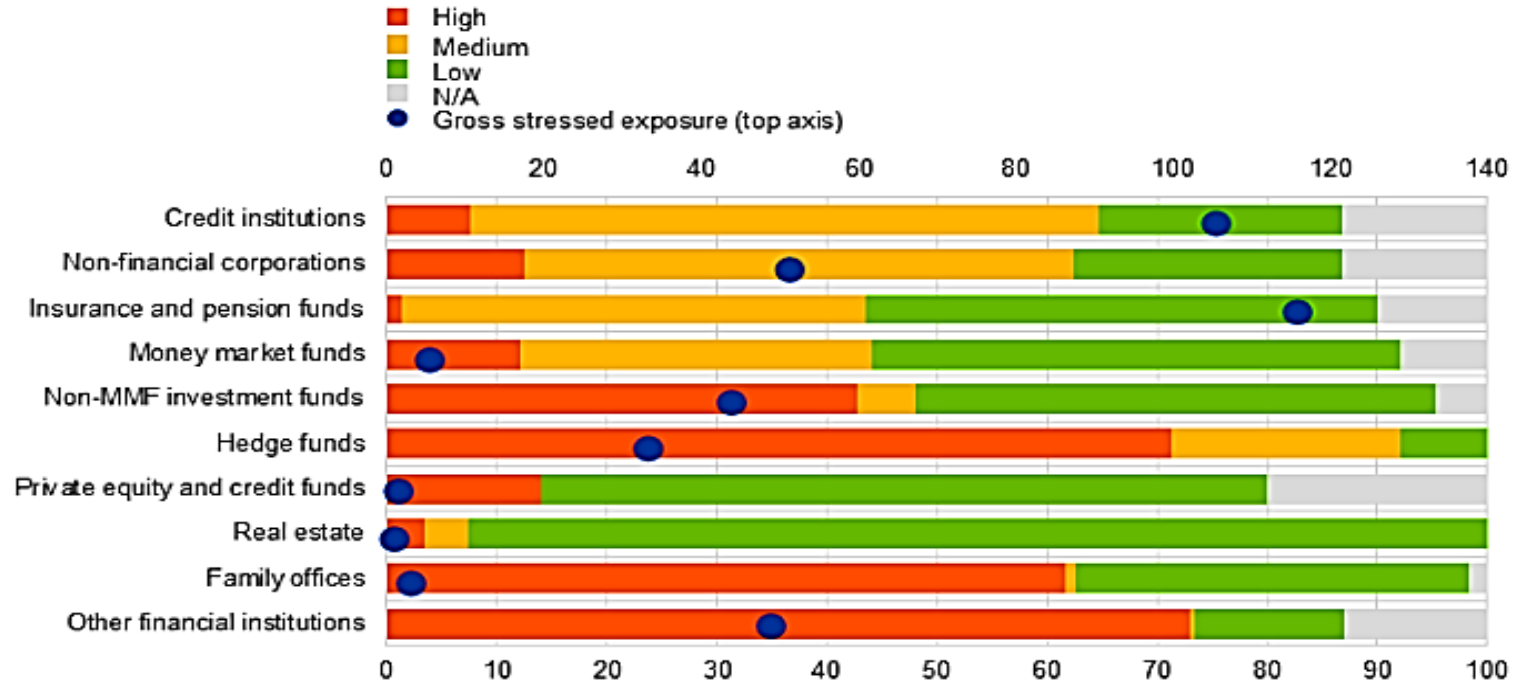
Leverage

Banks were asked to indicate the **leverage level** of **each** of their **counterparties**. Leverage has been classified into high, medium and low buckets. To define these buckets, ESMA estimates of the average leverage across types of investment fund were used to classify counterparties as medium (below-average) or high (above-average) leverage. As shown in the chart, the **highest number of leveraged counterparties are hedge funds**, other financial institutions and family offices.

Relative gross stressed exposure (EBA scenario) to high, medium, and low leverage counterparties

(lower axis: structure of exposures in percentages, upper axis: gross stressed exposure in EUR billions)



Source: Banks' submissions in the CCR-ES exercise.
Note: N/A indicates that (i) banks did not report leverage metrics owing to a lack of information or (ii) there is no relevant metric for the specific type of exposure.

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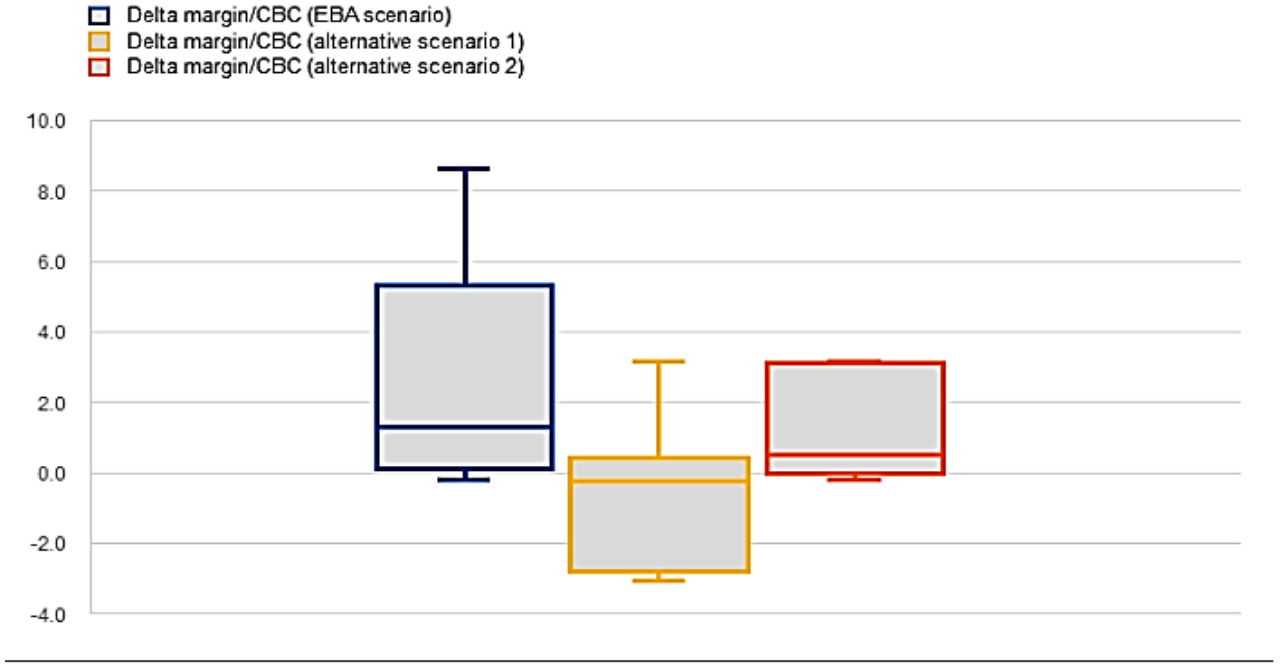
Liquidity

When the **net exposure increases under stress**, it can be assumed that it translates into **margin calls**. The increase in net exposure can be used to ascertain a banks' capacity to **absorb liquidity shocks**. As shown in the chart, for some banks the additional margin implied by the three scenarios can account for a significant fraction of their liquidity portfolios.

The outcome differs depending on the scenario used to calculate the margins. Alternative **scenario 1** may even lead to a **decline** of posted margin compared with margins related to current CCR exposures. In terms of the ratio to the liquidity portfolios, alternative **scenario 2 has a milder impact than the EBA scenario**. Although the estimated additional margins related to the shocks in the EBA scenario are, on average, a rather small fraction of banks' liquidity portfolios, for some banks it may be a significant drain on liquidity. Again, the outcomes highlight the need to consider multiple scenarios for a robust assessment of CCR.

Distribution across banks for the three adverse scenarios

(percentages)



Source: Banks' submissions in the CCR-ES exercise.
Note: The chart shows the ratio between the increase in exposure under the EBA stress scenario and the counterbalancing capacity for the banks participating in the exercise.

Note: Counterbalancing Capacity (CBC) is a measure of a bank's ability to quickly access and mobilize additional sources of liquidity – beyond its normal cash flows – to meet unexpected funding needs or liquidity shortfalls.

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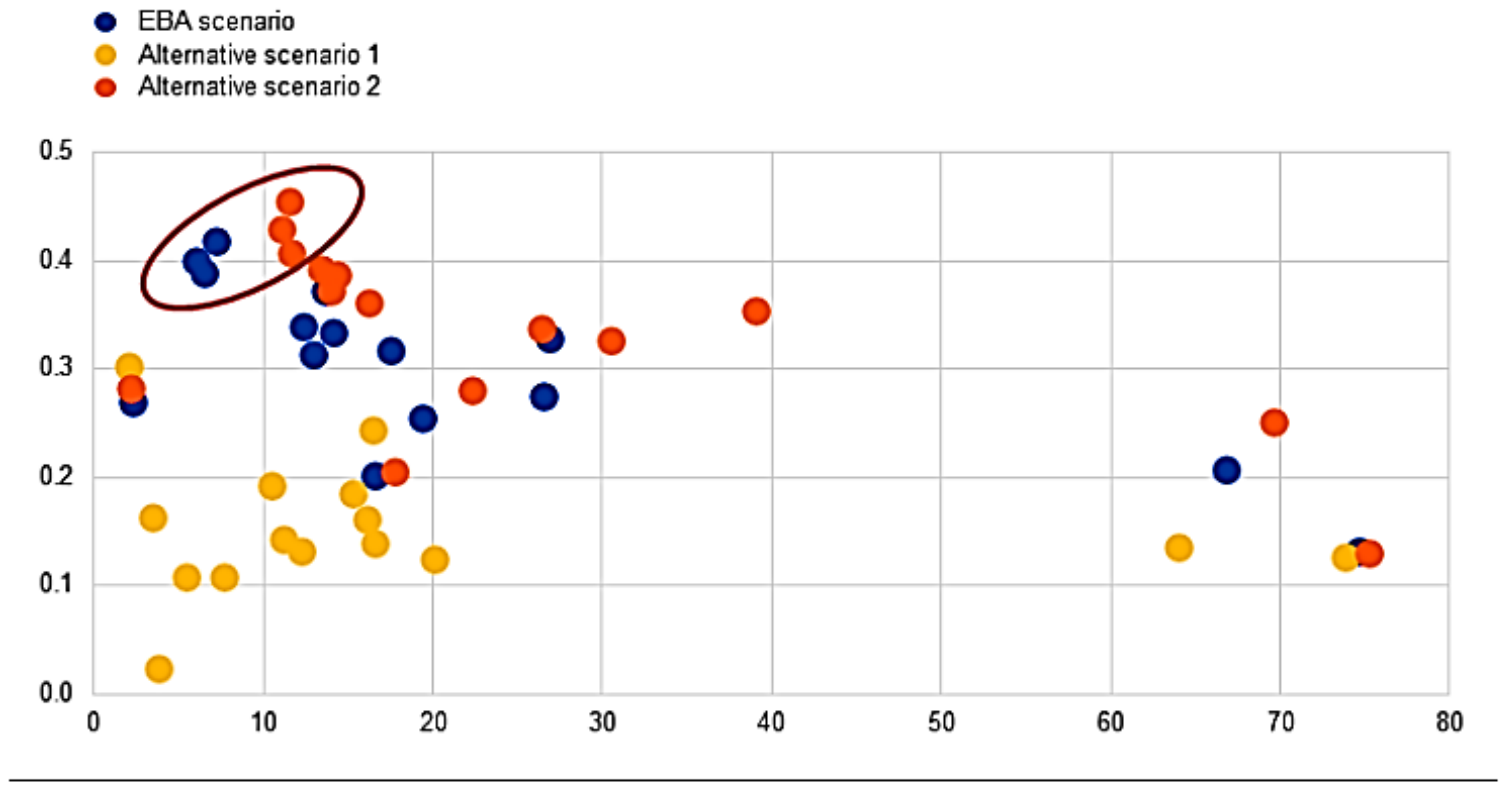
Interconnectedness

Banks can be adversely **affected by** their direct counterparties as well as **counterparties of** their **counterparties**. To measure the potential vulnerability of individual banks to counterparties that are more significant in the system, a **fragility indicator** was calculated: it measured how many other banks are exposed to the counterparties of that bank, with a greater weighting to those counterparties to which banks at system level have a higher gross exposure.

Banks with the **most sizeable CCR** exposures may **not necessarily** be the **most vulnerable** to these **indirect impacts**. The chart shows that assessing the individual size of the stressed CCR exposure may not be an accurate indicator for the global impact within the sector.

Distribution across banks for the three adverse scenarios

(x-axis: net stressed expose under the EBA scenario, EUR billions; y-axis: fragility index)



Source: Banks' submissions in the CCR-ES exercise.

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Conclusions

Credit institutions and NBFIs are generally the most collateralized, with riskier counterparties (such as hedge funds) often required to post substantial initial margins to ensure overcollateralization. By contrast, **non-financial corporations are rarely collateralized**. A few banks gave specific reasons for this, such as **issues** with **liquidity** or **operational management** flows or the fact that corporates primarily engage in hedging activities and tend to have lower collateral requirements. Moreover, some banks noted that collateralization also depends on factors such as regulatory requirements, the type of instrument and whether transactions are **cleared or over the counter**.

Specific wrong-way risk occurs when the exposure to a counterparty increases alongside the probability of that counterparty defaulting. Interestingly, the collected data show that SWWR contributes only marginally to CCR, accounting for less than 4% of gross CCR exposures on average. Reported **SWWR exposures are marginal across the sample**, averaging around 4% of gross exposures. However, approaches to identifying SWWR vary across institutions. Computation method also differ, with some banks applying conservative assumptions (e.g., 100% of notional or full jump-to-default with 100% LGD) and others adjusting the approach based on instrument type.

Moreover, for risk management practices, most banks indicated that they do not apply specific risk limits or stress-testing frameworks tailored to NBFIs. **NBFIs are typically treated as a standard category of counterparty**, although a few institutions reported more differentiated approaches, including targeted stress testing and dedicated risk limits for hedge fund exposures.

Detailed bank-specific **outcomes** of the analysis, including benchmarking across participating institutions, will be **used** in the **subsequent supervisory dialogue** to **discuss** the observations and potentially seek clarification on matters that were not sufficiently covered in the explanatory notes accompanying the quantitative submissions.
In summary, the exercise shed some light on the **concentration of exposures** across various types of counterparties and on the sensitivity of these exposures to diverse adverse market conditions. Specifically, some additional **FX shocks** to the main currency pairs may have a **significant impact** on the stressed CCR exposure. In terms of risk concentration, the **highest share of sub-investment-grade** counterparties can be found among **hedge funds and private equity**.

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