EUROPEAN CENTRAL BANK

BANKING SUPERVISION

2023 Stress Test of Euro Area Banks

SUERF | Bocconi webinar
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Horizontal Line Supervision

ECB/SSM performed two supervisory stress test exercises for significant institutions in 2023

Objectives

- Assess the **resilience of financial institutions** to adverse market developments.
- **Contribute to the overall Supervisory Review and Evaluation Process (SREP)** to ensure institutions' capital and liquidity adequacy, as well as sound risk coverage and internal processes.
- **The exercises support also other supervisory initiatives,** e.g. risk data aggregation, leveraged finance, and deep dives on sectoral credit risk exposures, commercial real estate, counterparty credit risk

EU-wide EBA stress test

- **57** SSM Significant Institutions
- **Publication** of bank-specific, **granular results**
- EU-wide exercise under **EBA coordination**, in cooperation with ESRB, ECB and NCAs
- **2 macroeconomic scenarios:** baseline (provided by EU national central banks) and adverse (provided by ESRB)
- Launch of the exercise: **January 2023**

SSM stress test

- **41** other SSM Significant Institutions
- **Publication** of bank-specific, **high-level results**
- Under **ECB/SSM coordination**
- **Same macroeconomic scenarios**
- Launch and methodology **broadly aligned with EBA EU-wide stress test**

EBA/SSM EU-wide stress tests

Quality assurance approach

- To ensure that banks' final results are **credible and sufficiently prudent**, the ECB conducts a thorough and stringent quality assurance

- A fully-automatised comprehensive **IT platform (STAR)** supports the quality assurance work and facilitates banks' data submissions

- We approach banks' submissions from various perspectives:

  ➢ Basic **data quality** assessments

  ➢ **Methodological compliance**

  ➢ Challenging the economic meaningfulness using **three different challenger views**: Top-down models, peer benchmark models and bank-specific knowledge (JSTs)

  ➢ Individual bank assessments are complemented by **holistic analysis** looking across banks / risks to facilitate prioritisation of identified issues with banks' submissions

Top-down models

JST knowledge

Peer benchmarks and holistic perspectives

Quality assurance assessments
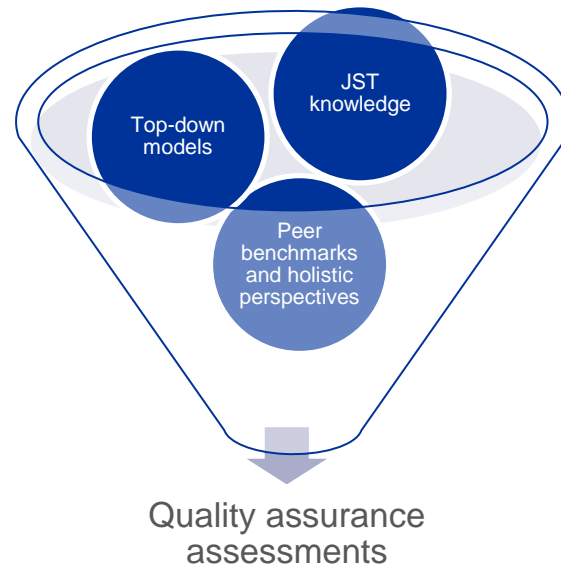
Key takeaways from the 2023 stress test

✓ **The recent years' improvements in asset quality and profitability have overall made SSM significant institutions more resilient to shocks**

…though stress test results still call for vigilant monitoring of risks and capital headroom

✓ **System-level CET1 ratio[1] drops to 10.4% in 2025 under the adverse scenario, corresponding to a depletion of 480 basis points (in fully loaded terms, FL)**

✓ **CET1 ratio depletion driven by credit risk and market risk combined with a contraction in banks' income generation capacity under the inflationary and rising interest rate scenario**

✓ **53 banks would breach the MDA trigger under the adverse scenario and 9 banks would fall below their TSCR[2] or leverage ratio (LR) requirements. Not a 'pass-fail exercise!**

[1] *Fully-loaded (FL) definition, 3 year cumulative impact under the 2023 stress test adverse scenario. 2. TSCR: Total SREP Capital Requirement*
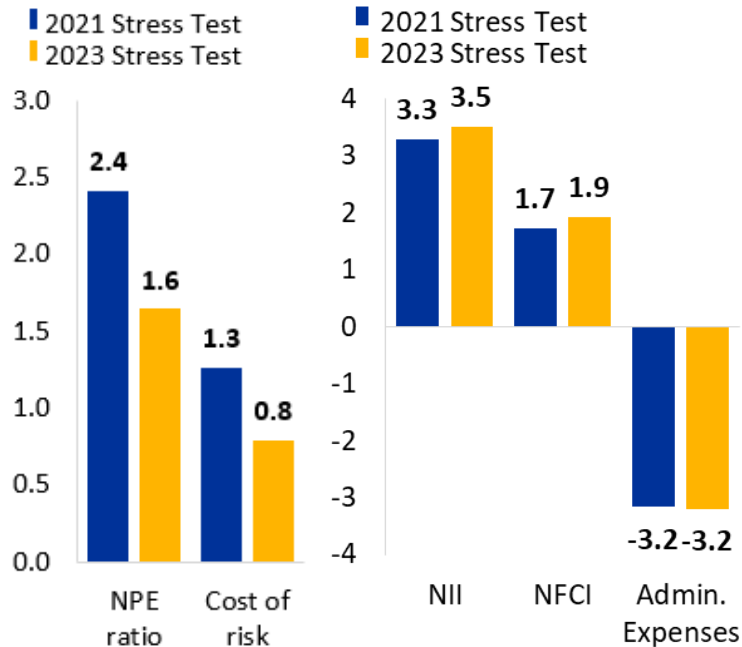
Balance sheet improvements
Banks' resilience bolstered by improvements in asset quality and income generation capacity

- **Starting point positions markedly improved compared to the previous stress test**:
  - • **Better quality of the loan portfolios**, as banks' non-performing exposures (NPE) ratios continued their downward trend, driven especially by securitisations and asset disposal strategies
  - • **Improvement in the system's income generation capacity** supported by the recent interest rate increases
- The improvement in the starting points helps to offset the high severity of the adverse scenario

Comparison of starting point key indicators
(percentages, percentages of starting point REA)

Legend: 2021 Stress Test, 2023 Stress Test

Left chart (NPE ratio, Cost of risk):
- NPE ratio: 2.4 (2021), 1.6 (2023)
- Cost of risk: 1.3 (2021), 0.8 (2023)

Right chart (NII, NFCI, Admin. Expenses):
- NII: 3.3 (2021), 3.5 (2023)
- NFCI: 1.7 (2021), 1.9 (2023)
- Admin. Expenses: -3.2 (2021), -3.2 (2023)

Source: 2023 Stress Test, ECB calculations.
Note: The comparison across the stress test exercises uses the full sample in each exercise.

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Capital headroom
At system level adverse capital levels are at a comfortable level and have been increasing over time

- Despite a **significant CET1 depletion under the adverse scenario,** euro area banks are **overall resilient**
- A number of banks (53) breach the **MDA threshold** while 9 banks face difficulties in meeting total SREP capital requirements (**TSCR**) and/or **leverage ratio** requirements. Not a pass-fail exercise!
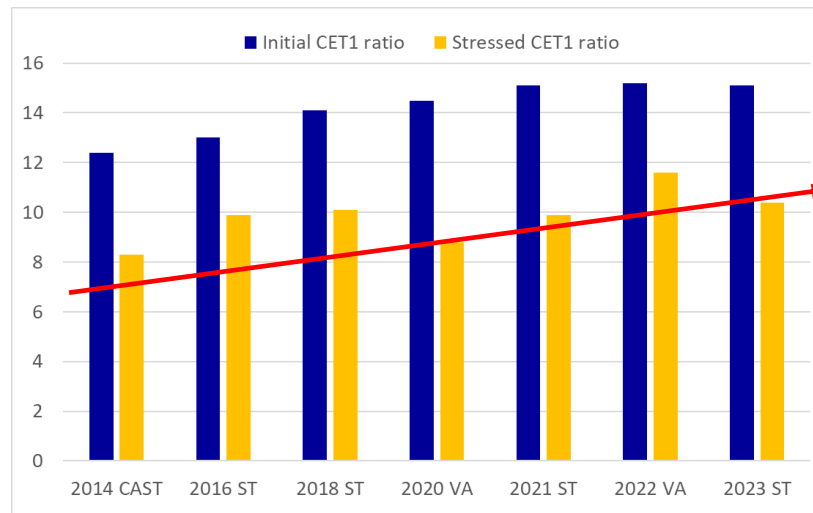
Projected adverse CET1 ratio depletion
(percentage points)
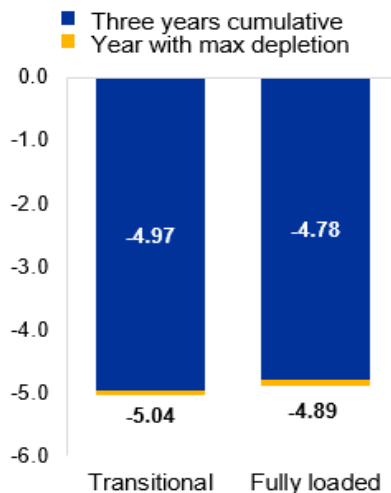
Projected adverse evolution of CET1 ratio across ECB exercises (FL)[1]
(percentages)

Source: 2023 Stress Test, ECB calculations.
[1]Aggregate results for SSM Significant Institutions. Some sample changes over time but coverage in terms of total banking sector assets broadly unchanged.
*"VA" refers to ECB's Vulnerability Analyses.*

# Cost efficiency and risk-return relationship

Cost efficiency helps shield capital from losses under the adverse, while higher returns are associated with higher risks

- Banks' performance under the adverse scenario exhibits a **strong correlation** with the Cost-to-Income ratio, as **higher cost efficiency / profitability shield capital from losses under the adverse scenario**

- …while a **higher Cost of Risk (CoR) tends to be associated with higher effective interest rates (EIR)** earned on the same portfolio

Cost-to-Income[1] starting Point vs ΔCET1 ratio
(percent, adverse scenario)
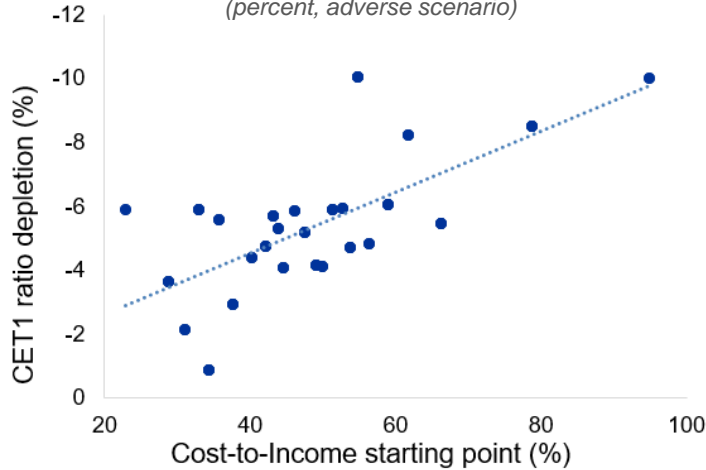
Effective interest rate vs. cost of risk
(adverse scenario)

$$y = 1.48x + 0.032$$
$$R^2 = 0.4233$$
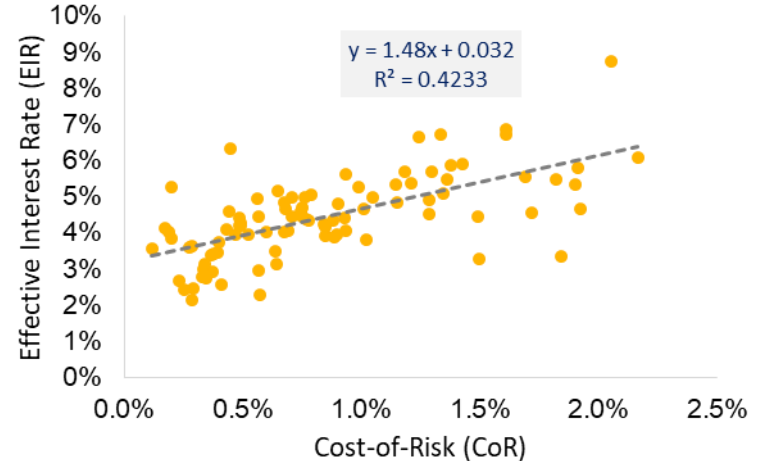
Sources: 2023 Stress Test, ECB calculations.
Notes: Observations in left-hand side chart refer to the average across each cluster of individual banks, whereby the clustering performed based on the statistical distribution of the cost-to-income starting point. Cost to Income is defined as Administrative Expenses / (NII + NTI + NFCI + Dividend income). Cost of risk is defined as cumulated sum of impairments over assets, annualized. The diagonal lines represent regression lines.
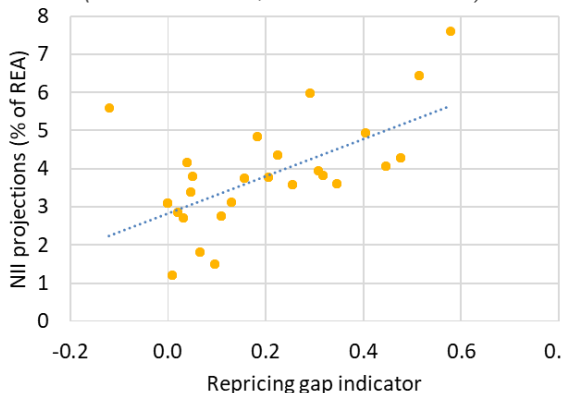
Net interest income
Asset-liability structure a key driver of banks' ability to generate net interest income under the rising interest rates scenario

- **Banks that have a larger share of assets repricing within the stress test horizon** benefit more from rising interest rate

- …with banks relying more on **wholesale funding** experiencing a stronger increase in funding costs

- …while banks with predominantly **floating interest rate exposures** are able to pass-on rate increases at a faster pace
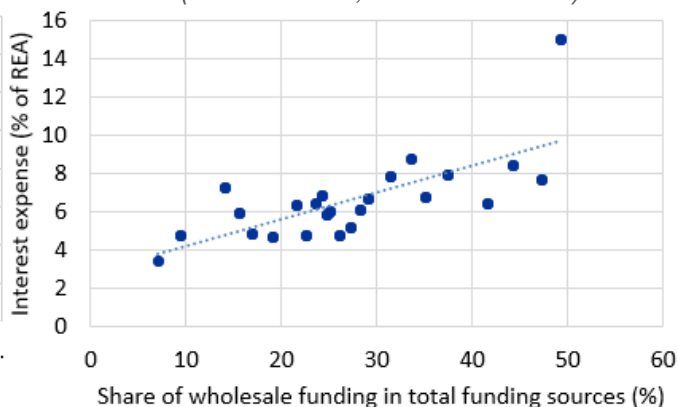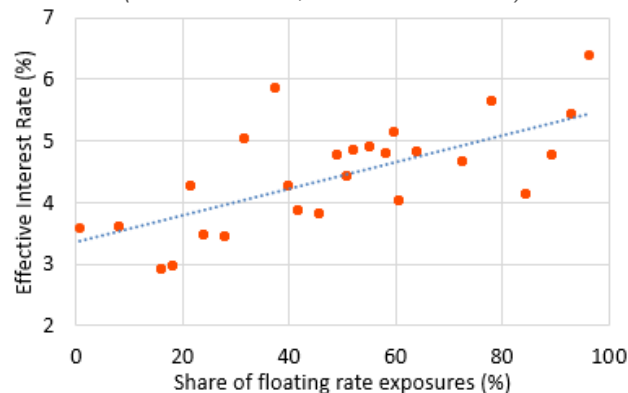
Repricing gap[1] effect on NII projections	Interest expenses and share of wholesale funding[2]	Effective Interest Rate and share of floating rate exposures
(bank clusters[3], adverse scenario)	*(bank clusters[3], adverse scenario)*	*(bank clusters[3], adverse scenario)*

Source: 2023 Stress Test, ECB calculations.
1. The repricing gap indicator shows the weighted average repricing timing of assets compared with liabilities (a higher positive value of the indicator indicates that the time between the repricing of assets and liabilities is lower, thereby supporting NII production); NII projections are annualized figures. 2.Wholesale funding covers all funding sources in excess of the households and non-financial corporations' deposits; derivatives are excluded; interest expense figures are annualized. 3. Observations refer to the average across each cluster of individual banks; the clustering was performed based on the statistical distribution of the variable on the x-axis.
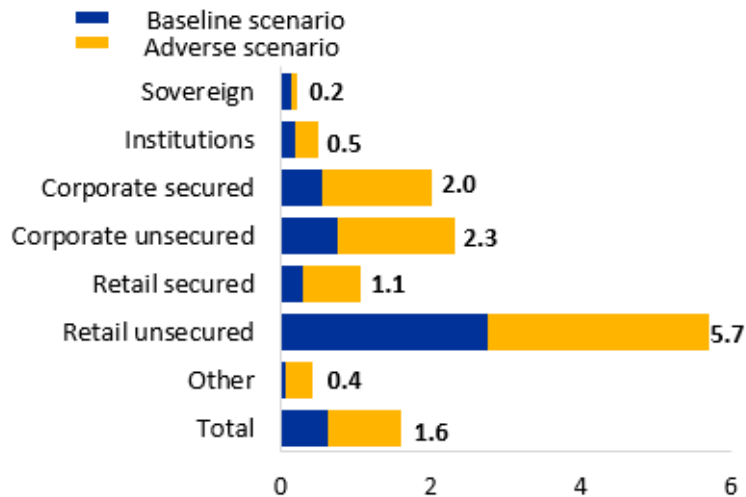
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Credit risk
…higher returns are accompanied by higher loan losses, especially in certain segments

- **Retail unsecured exposures** and **corporate exposures (incl. commercial real estate and leveraged finance)** are most vulnerable to an economic downturn coupled with rising interest rates

- At the **sectoral level**, adverse loan losses are particularly pronounced in *sectors I – Accommodation and food service activities, F – Construction, C – Manufacturing and G – Wholesale and retail trade.*
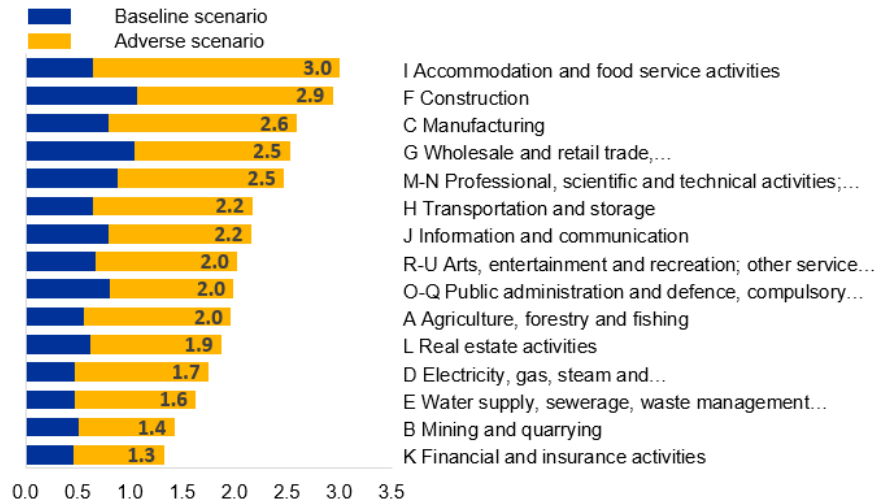
Impairment rates breakdown by portfolios
(percent, adverse scenario)

Legend:
- Baseline scenario
- Adverse scenario

Portfolio	Value
Sovereign	0.2
Institutions	0.5
Corporate secured	2.0
Corporate unsecured	2.3
Retail secured	1.1
Retail unsecured	5.7
Other	0.4
Total	1.6

Impairment rates breakdown by activity sectors
(percent, adverse scenario)

Legend:
- Baseline scenario
- Adverse scenario

Sector	Value
I Accommodation and food service activities	3.0
F Construction	2.9
C Manufacturing	2.6
G Wholesale and retail trade,…	2.5
M-N Professional, scientific and technical activities;…	2.5
H Transportation and storage	2.2
J Information and communication	2.2
R-U Arts, entertainment and recreation; other service…	2.0
O-Q Public administration and defence, compulsory…	2.0
A Agriculture, forestry and fishing	2.0
L Real estate activities	1.9
D Electricity, gas, steam and…	1.7
E Water supply, sewerage, waste management…	1.6
B Mining and quarrying	1.4
K Financial and insurance activities	1.3

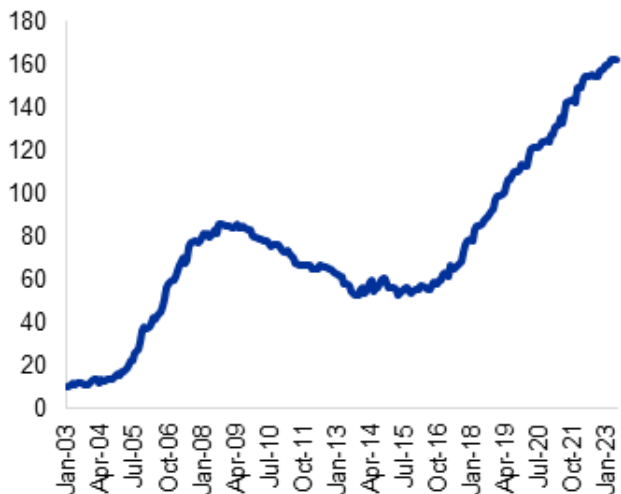*Source: 2023 Stress Test, ECB calculations.*

Leveraged finance deep dive
Stress test findings confirm that leveraged finance exposures are more risky in a downturn

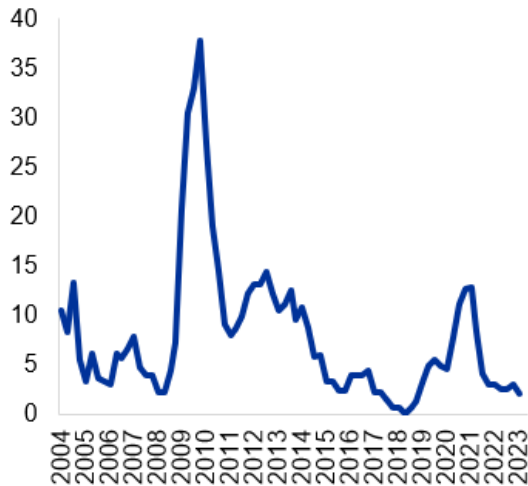**Evolution of leveraged finance lending in Europe**
(EUR billions)

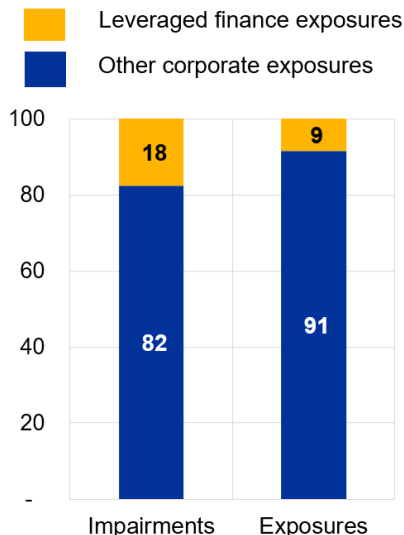*Source: ECB calculations based on Leveraged Commentary and Data.*

Historical evolution of default and restructuring rate for leveraged exposures in the euro area
(percent)

Credit risk exposures and projected impairments
(percent, adverse scenario)

- Leveraged finance exposures
- Other corporate exposures

Source: 2023 Stress Test, ECB calculations.

Integration into SREP
Stress Test results will support the SREP process, both for P2R and P2G calibration

Stress Test is used as an input into the Supervisory Review and Evaluation Process (SREP):

▪ **P2R: Qualitative outcome** of the Stress Test is **included in the determination of the P2R**, especially in the element of internal governance and risk management

▪ **P2G: Quantitative impact** of the adverse Stress Test is **a starting point for determining the level of P2G** and newly introduced **leverage ratio P2G.**

▪ Both P2G and P2G-LR methodologies follow the same **two-step 'bucketing' approach.**

▪ Leverage ratio P2G is **imposed only for some institutions**, for example where the projected leverage ratio falls below the overall leverage ratio requirement

**P2G and leverage ratio P2G buckets and associated ranges**
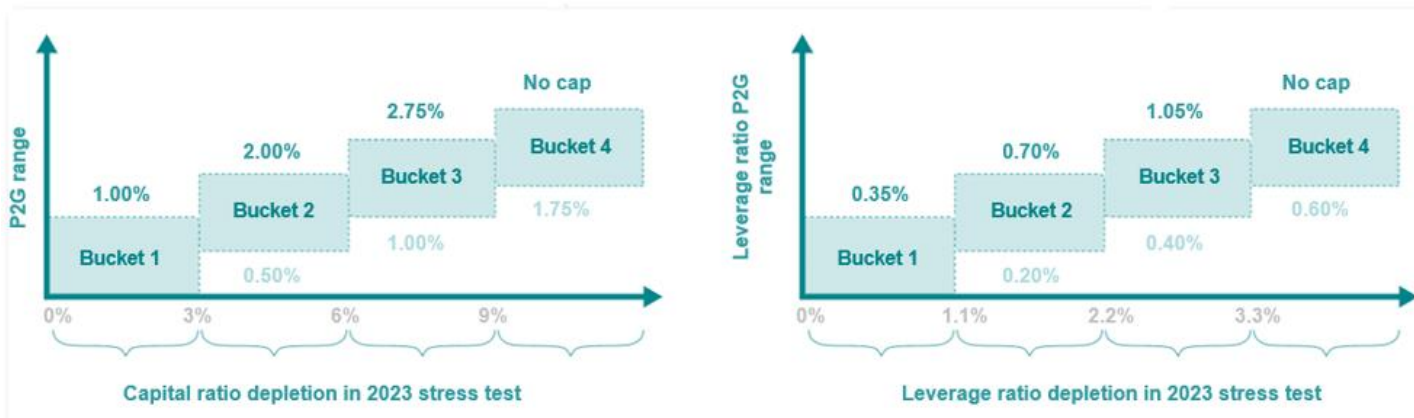
Thank you!

Scenario
Aggravation of geopolitical tensions leading to stagflation and higher rates

▪ Supply and demand factors keep inflation high over the horizon, resulting in higher market rates and a severe cumulative GDP loss accompanied by strong declines in asset prices and real estate prices
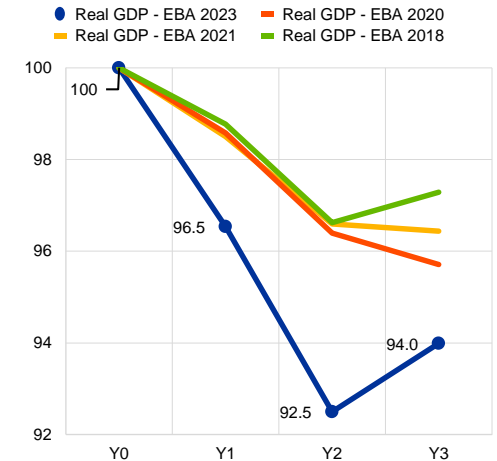

EU HICP inflation
(percentages)
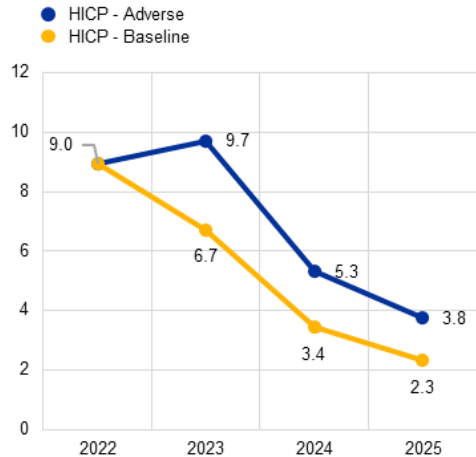
1Y and 10Y EUR swap rates
(percentages)
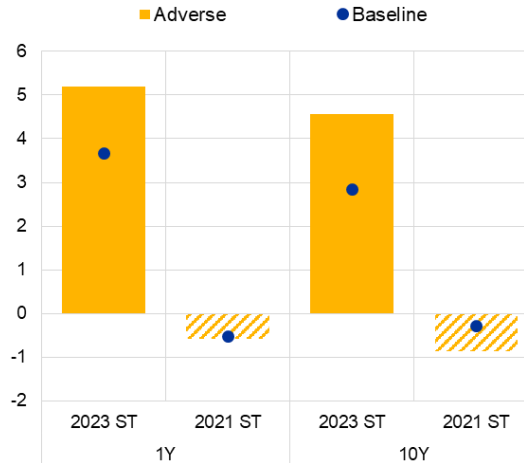
EU Real GDP
(Index: Year 0 = 100)

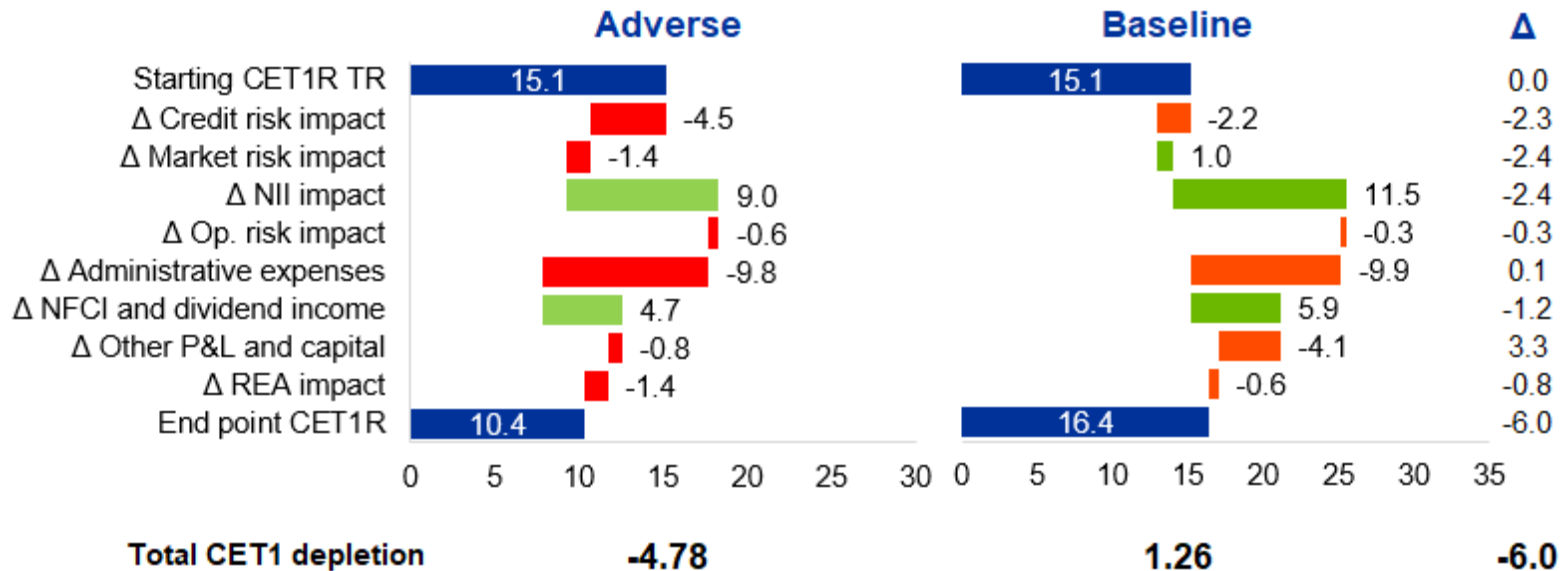*Source:2018 EBA ST, 2020 EBA ST, 2021 EBA ST, 2023 EBA ST, ECB and ECB calculations.*
Note: Right panel: Figures for the "EBA 2020" series refer to the scenario prepared for the 2020 EU-wide Stress Test which was postponed.

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Capital depletion

Credit and market risk losses and contraction of income generation capacity drive depletion in the adverse relative to the baseline scenario

Depletion waterfall (baseline and adverse scenarios, FL)
*(percent, percentage points)*

	Adverse	Baseline	Δ
Starting CET1R TR	15.1	15.1	0.0
Δ Credit risk impact	-4.5	-2.2	-2.3
Δ Market risk impact	-1.4	1.0	-2.4
Δ NII impact	9.0	11.5	-2.4
Δ Op. risk impact	-0.6	-0.3	-0.3
Δ Administrative expenses	-9.8	-9.9	0.1
Δ NFCI and dividend income	4.7	5.9	-1.2
Δ Other P&L and capital	-0.8	-4.1	3.3
Δ REA impact	-1.4	-0.6	-0.8
End point CET1R	10.4	16.4	-6.0
Total CET1 depletion	**-4.78**	**1.26**	**-6.0**

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Unrealised losses in amortised cost portfolio
Ad hoc data collection confirms that euro area banks' net unrealised losses from bonds held to maturity are overall moderate

Change in Unrealised gains and losses in the amortised cost (AC) portfolios

(EUR billions)

■ AC_Gross Unrealised G/L (left-hand scale)
■ AC_Net Unrealised G/L (left-hand scale)
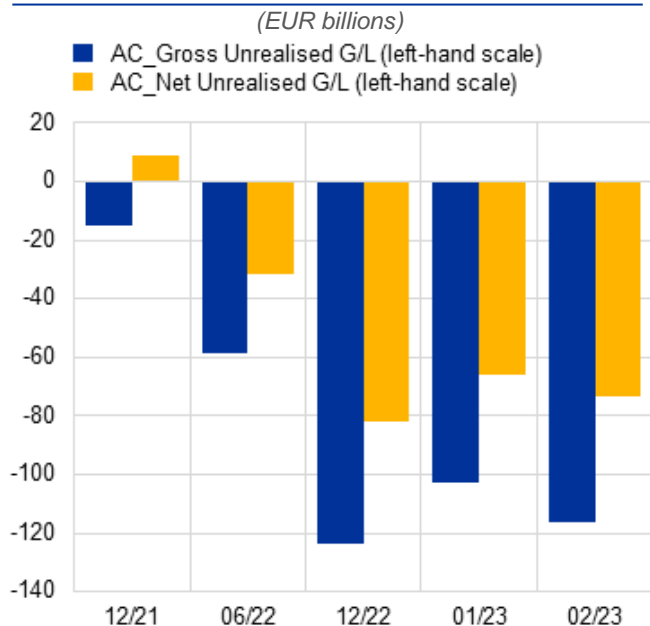
**The ad hoc data collection on banks' amortised cost bond portfolios is not methodologically compatible with the stress test.
Results of the two exercises are not additive.**

Additional losses on amortised cost portfolios under the adverse scenario

(EUR billions)

■ Sovereign credit spread
■ Other credit spread
■ Interest rate

Source: 2023 Stress Test, ECB calculations.