Results of the 2024 LSI stress test

Press conference on 7 October 2024

Agenda

I. Background

II. Survey on current and future earnings and risk situation

III. 2024 LSI stress test
   a. Credit risk stress test
   b. Market risk stress test
   c. Net interest income stress test

Background to the 2024 LSI stress test

Background

- **Sixth exercise** since 2013 (last survey: 2022) – stress test focuses on: **1,200 "less significant institutions" (LSIs) in Germany**
- In a **supplementary survey**, the Bundesbank and BaFin also asked the credit institutions about their **current and future earnings and risk situation**
- Almost **complete coverage of small and medium-sized institutions**; significant institutions that are under direct European Central Bank (ECB) supervision are excluded from the LSI stress test.
- Exercise covers **91% of credit institutions** and **40% of total assets**
- **Capital depletion in the stress test** is used to **determine the future Pillar 2 guidance** (P2G)

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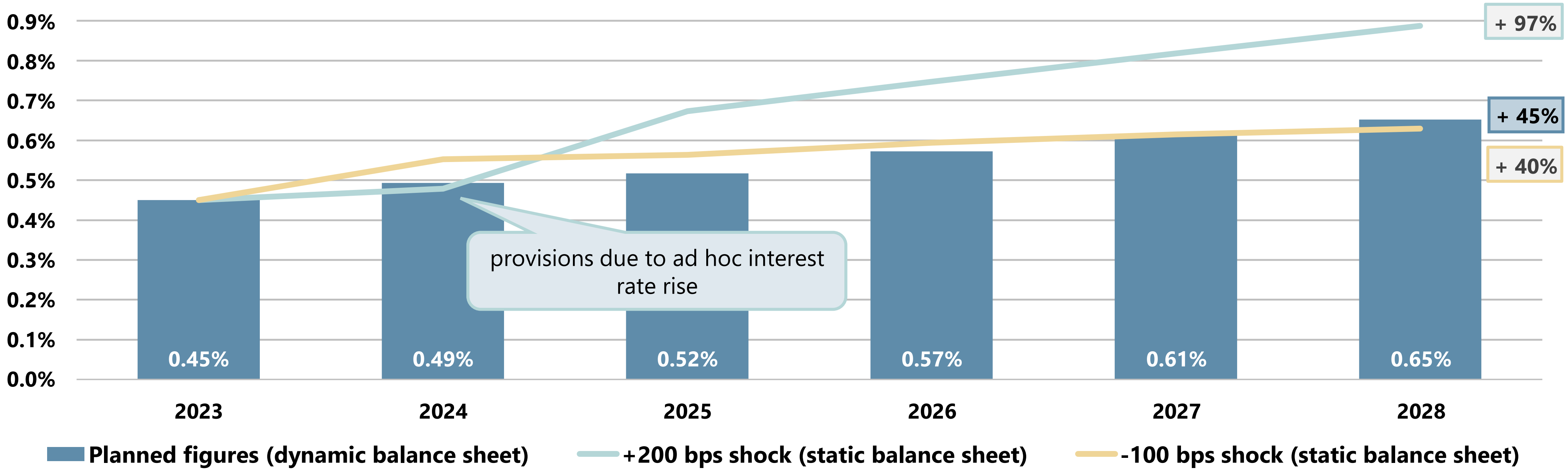
Overview of survey results

	Institutions' five-year planned figures	Assessment
Profitability	▪ Institutions expect increase in return on assets from 0.45% to 0.65% ▪ Profitability has recovered due to the interest rate reversal in 2022	Institutions expect increase in return on assets
Risk-taking	▪ Risk-weighted assets (RWAs) growing faster than total assets ▪ This development was already observed in previous years	Constant trend towards greater risk-taking could lead to future strain
Solvency	▪ Capital ratios are historically good overall ▪ Planned Common Equity Tier 1 (CET1) ratio to rise from 18.2% currently to 19.4% in 2028 ▪ Almost one in five institutions plan for decline in CET1 ratio	CET1 ratios at high level; institutions plan for further rise

Interest rate reversal causes institutions’ return on assets to rise – planned figures forecast further rise

Return on assets

Pre-tax profit to total assets

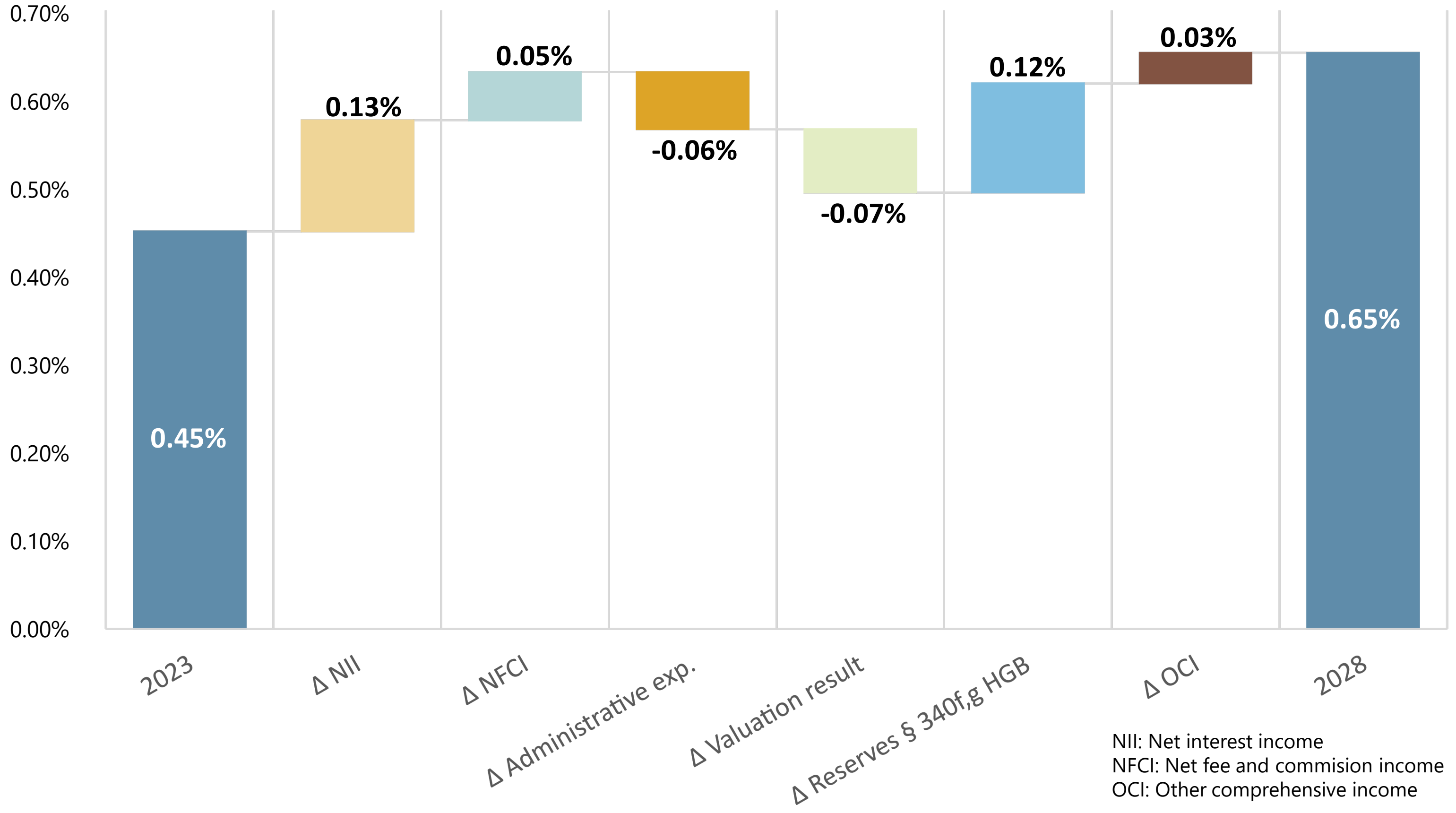


Notes: “static balance sheet” implies that run-off legacy business is replaced by equivalent new business at the prevailing scenario conditions. “Dynamic balance sheet” implies that no prudential restrictions are imposed with regard to the balance sheet structure. bps: basis points

Planned increase in return on assets is optimistic

Planned return on assets 2028 vs. 2023

Profitability (%) / earnings contributions as percentage points (pp) of total assets

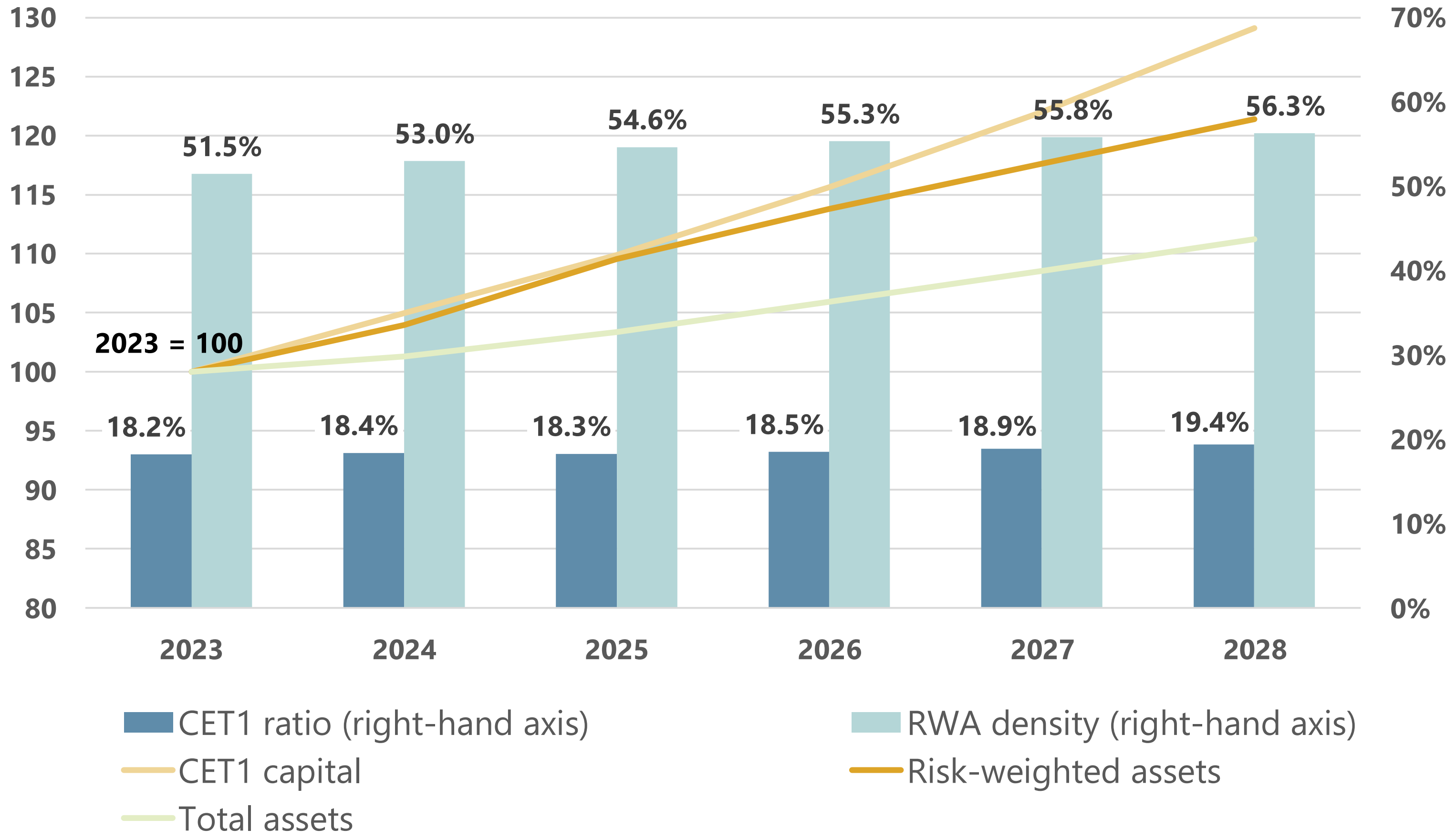


NII: Net interest income
NFCI: Net fee and commision income
OCI: Other comprehensive income

- Institutions largely planning for **steady or slightly increased interest rates** in the medium- to long-term
- **Planned figures** therefore show a **considerable increase in profitability** (+45 %) on aggregate
- Due to the interest rate reversal in 2022, **net interest income** again has a **positive effect** on profitability
- **Reserves are still being built up**, but the build-up of reserves declines during the five-year forecast period (by approx. 20%), while aggregated total assets rises (by approx. 11%)

Note: Valuation results reported without reserves under section 340f of the German Commercial Code (HGB) Δ (Delta): Difference

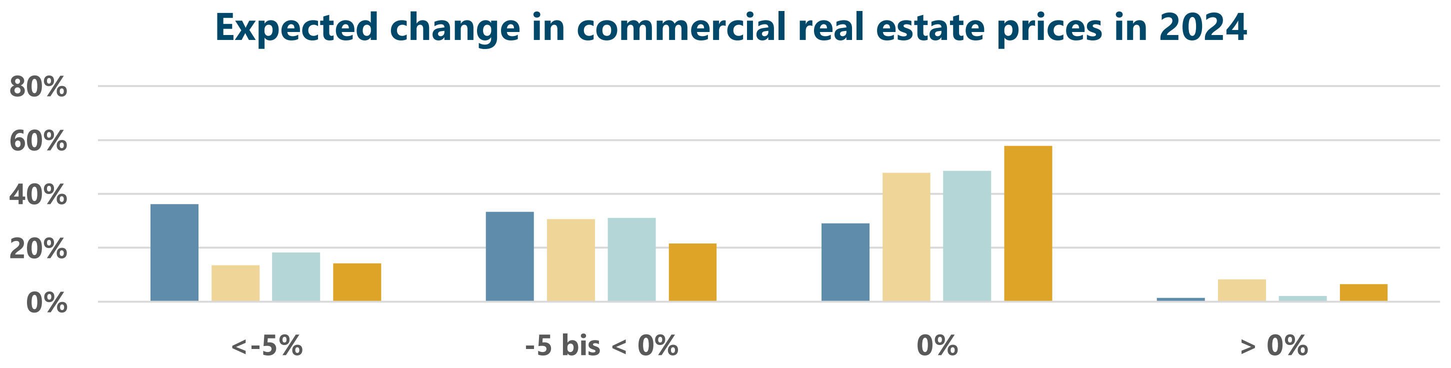
Despite slight increase in risk-taking, Common Equity Tier 1 (CET1) ratio rising on aggregate

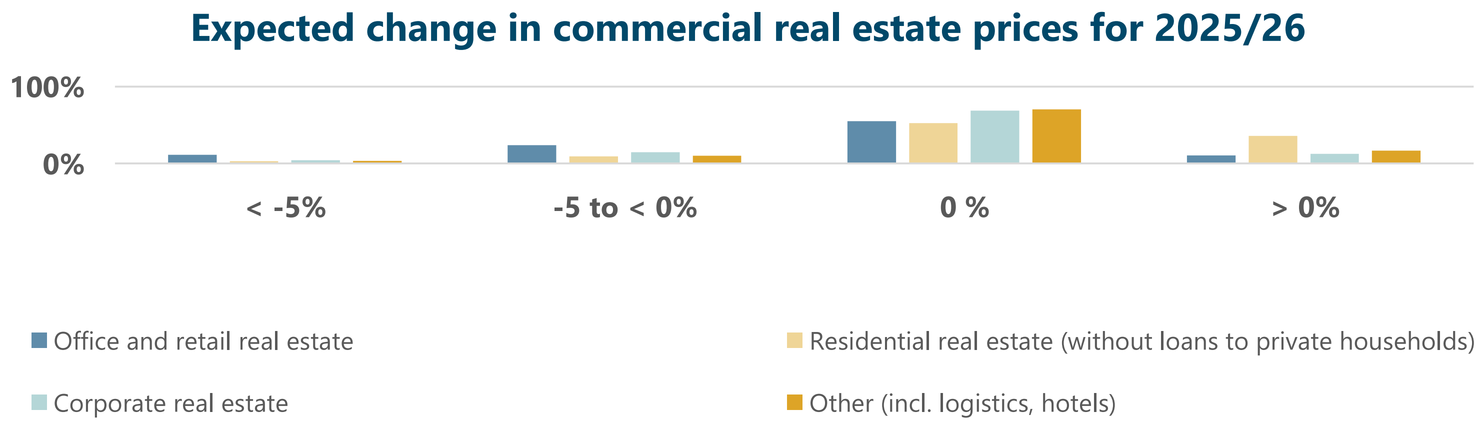


- **CET1 capital is increasing more quickly than the risk-weighted assets (RWAs)**
- On aggregate, the institutions are therefore planning for an **increase in the CET1 ratio** (2022: planned for decrease from 17.7% to 16.9%)
- **RWAs are rising disproportionately fast in comparison with total assets**; this results in a higher RWA density, indicating an increase in risk-taking

No increase expected in commercial real estate prices

Most institutions do not expect market prices to increase

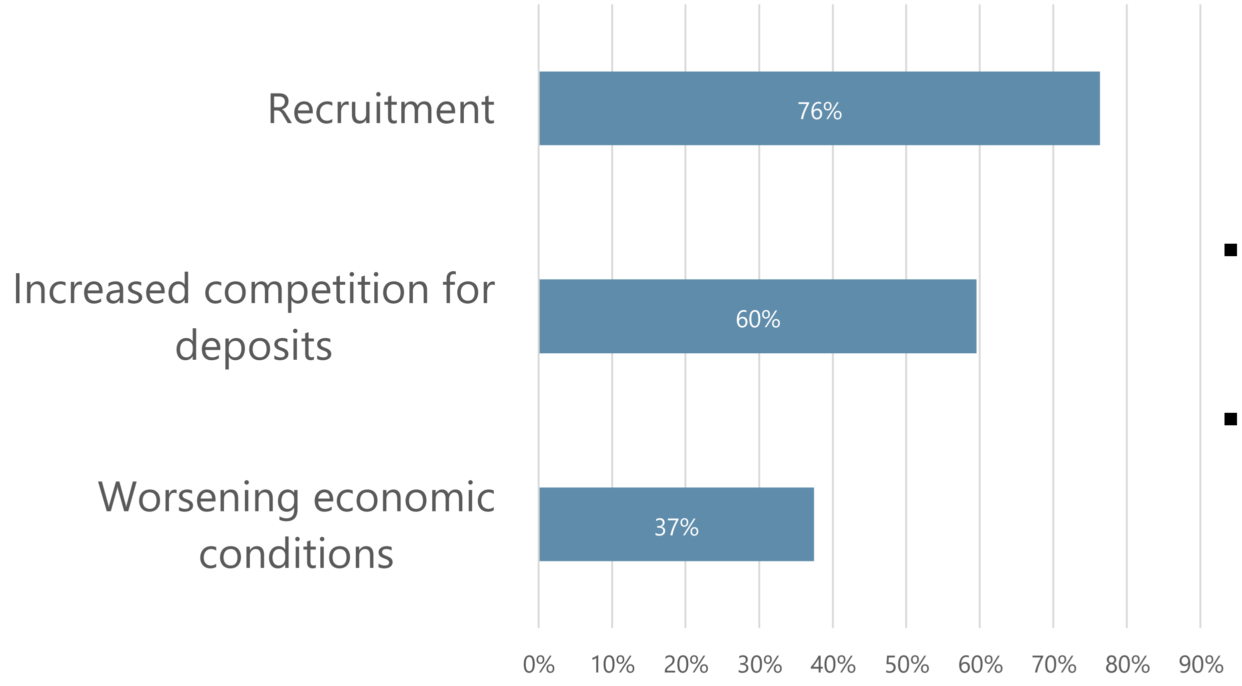




- Clear **drop in prices expected for 2024**, (medium-term) outlook for commercial real estate also broadly pessimistic
- For retail, office and corporate real estate in particular, institutions expect prices to stagnate or fall
- Approx. 10% of institutions expect **loan loss provisions** of 0-5% for retail, office and corporate real estate in 2025 – 2026 (not shown here)
- Outlook for residential property is better, but a decline in market values is expected for residential properties in need of renovation to meet energy efficiency standards

Greatest challenge lies in recruitment

"Top 3" challenges for institutions



Note: Institutions could choose multiple answers

- In the previous survey, most institutions saw the **main driver of competition** as being the increased competition from other banks that operate regionally, which would be likely to have consequences for recruitment and competition for deposits
- **54%** (2022: 58%) **of institutions** could imagine **a merger in the next 5 years** with another institution or are already undergoing a merger
- **63% of institutions expect a slight increase in demand for credit** (2022: 55%); 21% (2022: 28%) expect demand for credit to remain the same or decrease slightly; only 11% (2022: 11%) expect a major increase

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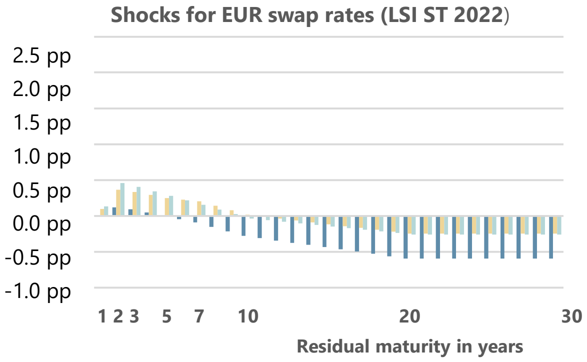
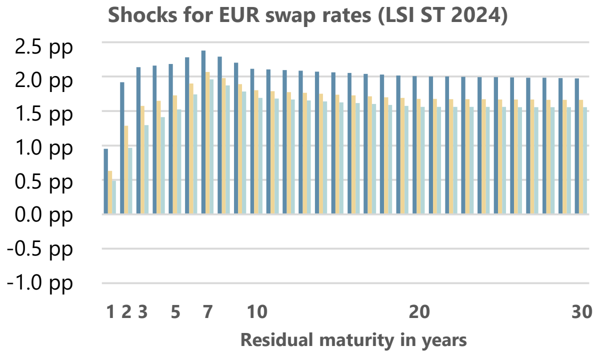
Stress test: adverse scenario simulates "once in a century crisis"

Selected shock parameters from the ECB/ESRB for Germany

Variable	Cumulative three-year growth or shock for Germany under the adverse scenario from the 2022 LSI ST	Cumulative three-year growth or shock for Germany under the adverse scenario from the **2024 LSI ST**
Real GDP	- 4.7%	**- 6.3%**
Unemployment rate	+ 4.1 pp	**+ 4.0 pp**
Harmonised Index of Consumer Prices (HICP)	+ 6.6%	**+ 13.6%**
Residential real estate prices	- 11.0%	**- 28.9%**
Commercial real estate prices	- 22.4%	**- 30.4%**
DAX	- 40.5%	**- 54.6%**
Credit spread (NFCs, BBB rating)	+ 86 bps	**+ 201 bps**





1st projection year 2nd projection year 3rd projection year

- **Shock parameters** in the adverse scenario **are considerably harsher in the 2024 LSI stress test than** in the adverse scenario in the **2022 LSI stress test**
  - greater fall in GDP
  - greater drop in prices in the real estate markets
  - greater fall in the stock market and increases in credit spreads across all rating classes
  - no "*lower for longer*" scenario now with regard to interest rates; significant rises in interest rates instead
  - much higher rates of inflation
- **Rising interest rates scenario particularly challenging for institutions** following **the previous rise in interest rates** and the resulting **depletion of hidden reserves**

Stress test: procedure and results

Procedure and assumptions

- In the stress test, banks simulate the **entire profit and loss account (P&L)** over a **three-year horizon** under **predefined assumptions**
- The supervisors carry out **comprehensive quality assurance** on the submissions

Analysis of all **material risks**

Net interest income	Market risk	Credit risk	Other P&L
• Predefined shocks to the yield curve • Run-off business must be reinvested at the then applicable terms and conditions	• Credit spread increases and interest rate shocks for bonds • Percentage discounts on market values of other positions • Consideration of hedges and reversals of valuation reserves	• Macroeconomic scenario (including significant fall in GDP and increase in unemployment rate) is translated into initial value-dependent PD/LGD dynamics in the projection horizon	• Historical P&L contributions carried forward, partly taking into account percentage discounts • One-off effects considered on case-by-case basis

Result

German **institutions** are **resilient in the stress scenario**

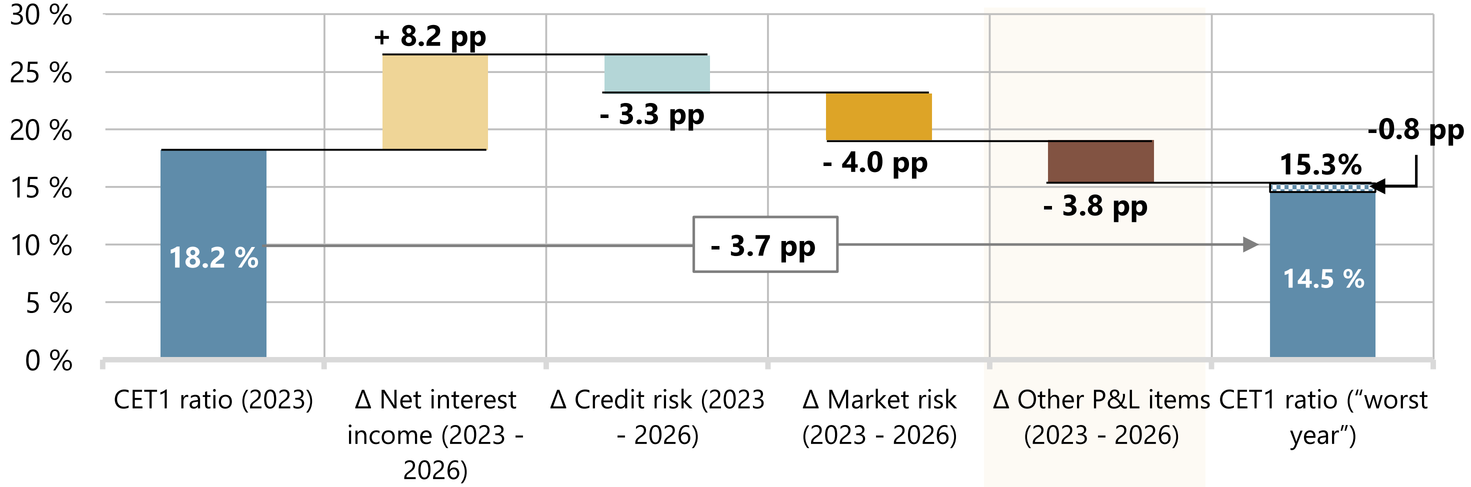
The aggregate CET1 ratio declines by about **3.7 percentage points**

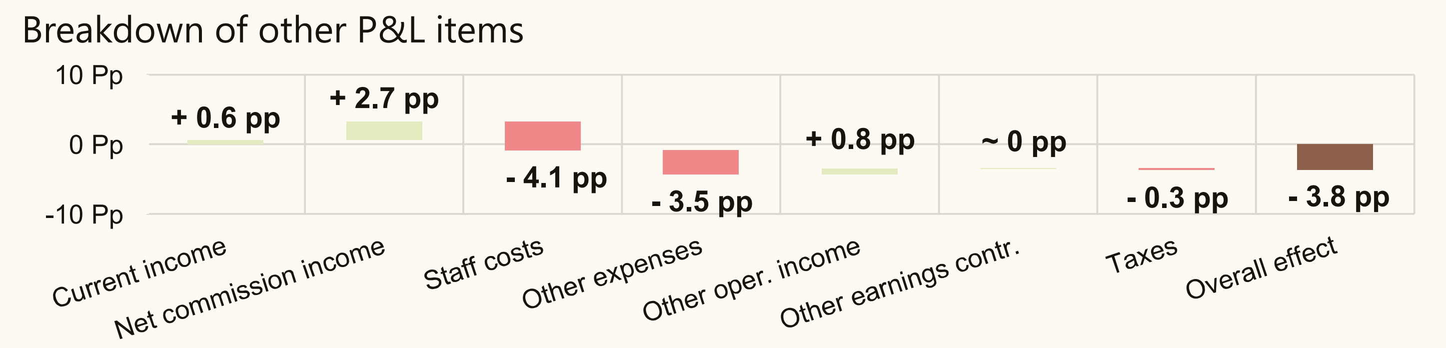
The stress effect is used to determine the future **Pillar 2 guidance (P2G)**

Stress effect reflected primarily in market risk

Cumulative impact of stress effects

Change in aggregated CET1 ratio by risk area

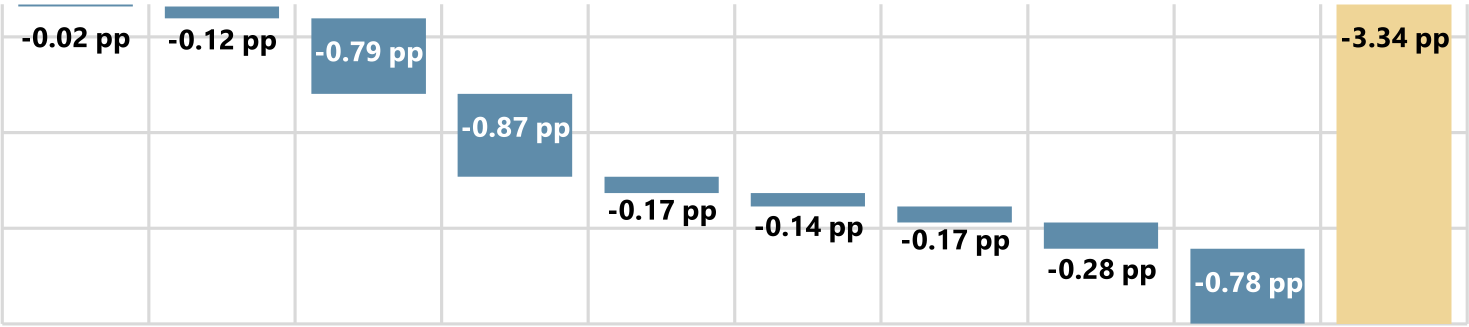




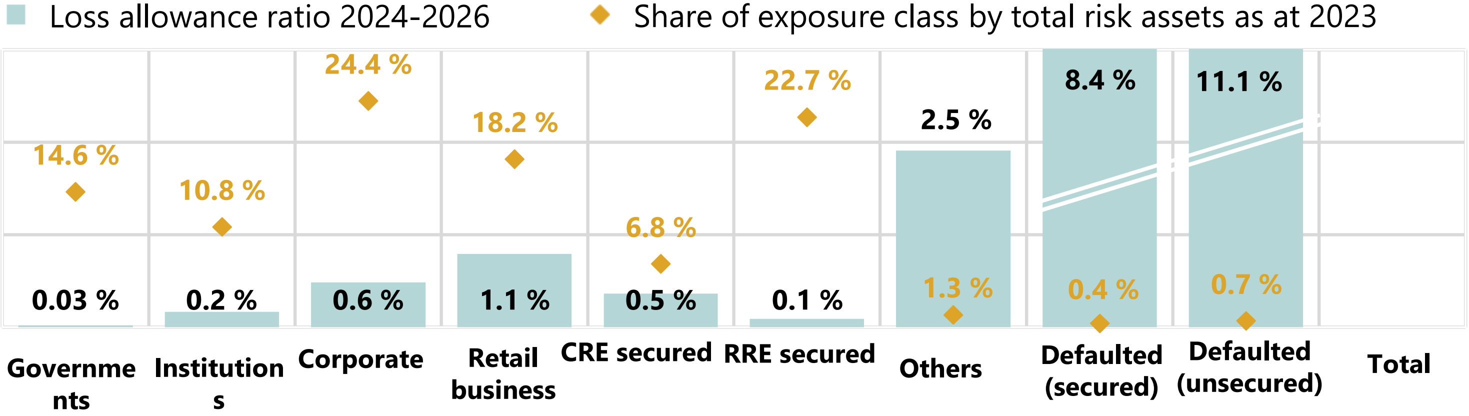
- The **highest stress effect** for the majority of the institutions develops **in the first year**; the cause of this is the ad hoc shock in market risk
- The **lowest CET1 ratio** during the scenario horizon is **14.5%** (this corresponds to capital depletion of 3.7 pp) and is therefore **0.8 pp** below the CET1 ratio in the third year (**15.3%**)
- The **net interest income** continues to bring the **most income** in the stress scenario, while existing **interest rate hedges** cushion against the stress effect
- **Credit and market risk** are key drivers of the stress effect, at **-7.3 pp** in total

Enterprise and retail business exposure classes drive stress effect in credit risk

Cumulative effect on CET1 ratios over three years (in pp)



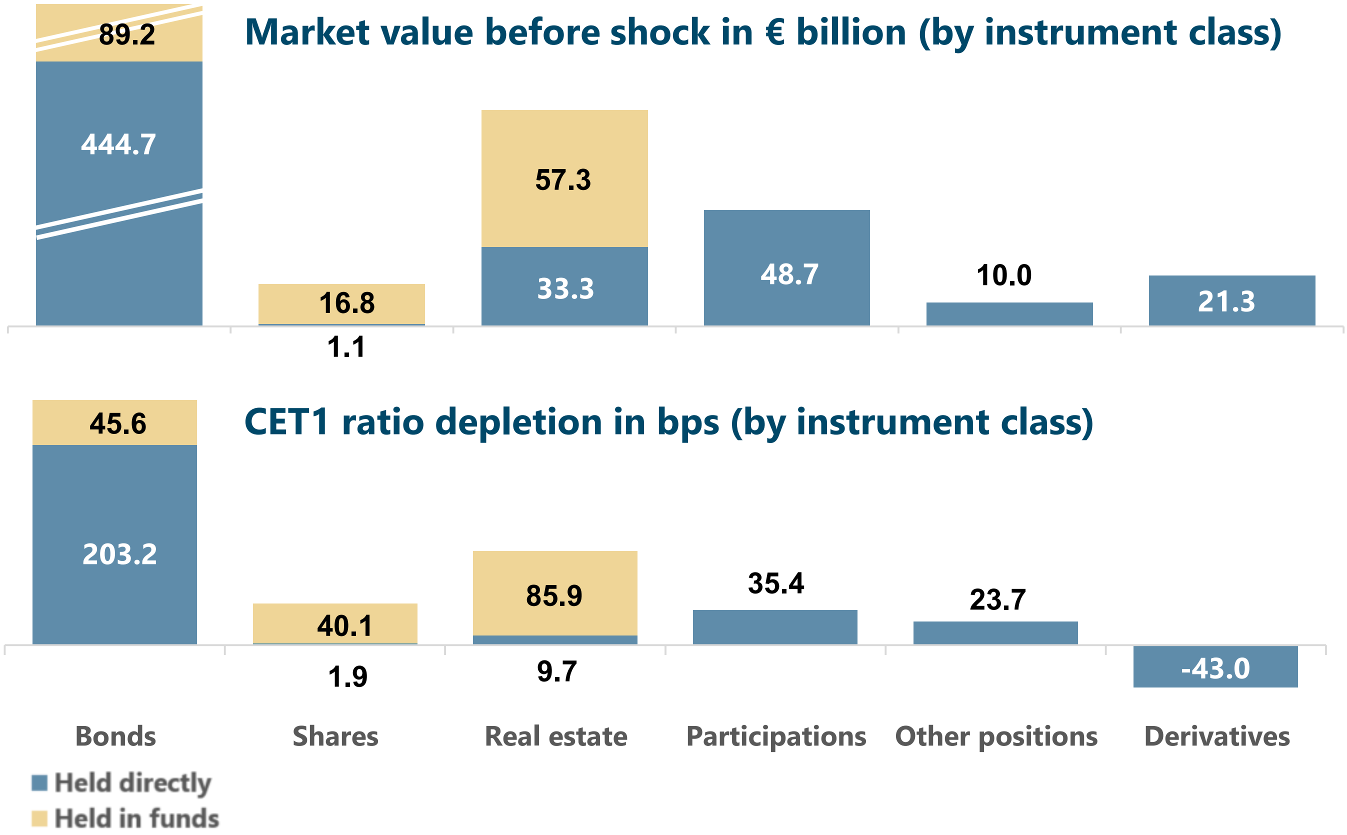
Risk volumes and loss allowances



- Credit risk leads to a 3.3 pp decline in the **CET1 ratio**
- The **main drivers** of the stress effect are loans to **corporates**, in **retail business** and **unsecured defaulted exposures**
- As would be expected, **institutions** and **governments** only have a small impact on the stress effect
- While **secured mortgages** make up a high proportion of the portfolios (22.7%), the high collateralisation ratio and the resulting low loss allowance ratio is reflected in the relatively **low stress effect**

Derivatives cushion against severe effects in market risk stress test

Breakdown of investment volume (in € billion) and the resulting CET1 ratio depletion (in bps) by instrument class

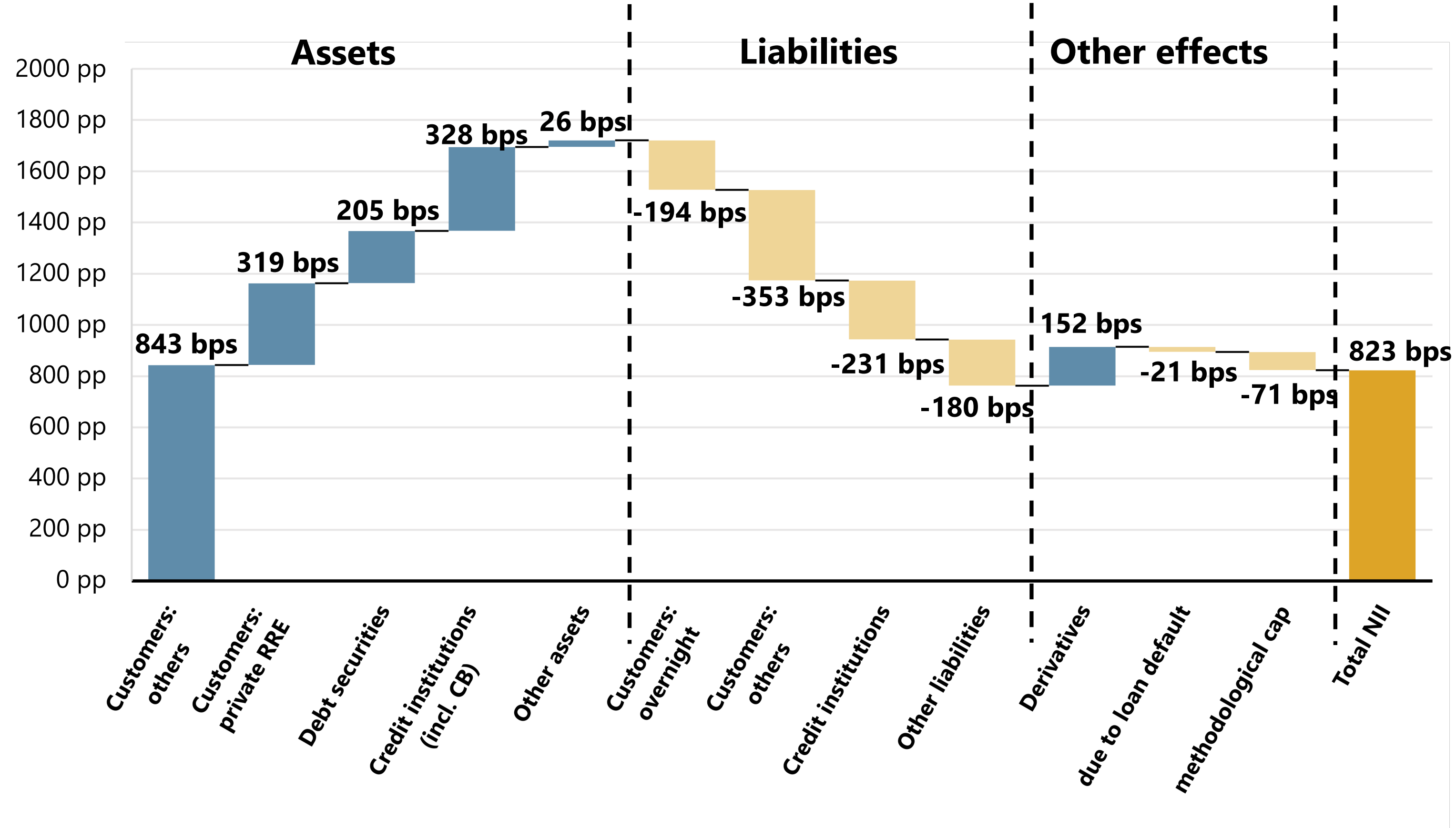


- **Interest-bearing investments** with almost exclusively good ratings (investment grade) make up the majority of the total market risk assets
- **Non-interest bearing investments** have a disproportionately large impact on the stress effect in the adverse scenario, in particular **shares** and **real estate**
- Due to **higher interest rate and credit spread shocks**, the weighting of the interest-bearing positions with respect to the CET1 ratio depletion is increased in comparison with the 2022 LSI stress test
- Overall, the use of **derivatives** clearly **reduces the burden** from the stress effect

Interest income still has a compensating effect in the stress test

Interest rate effects of individual portfolios

Cumulative effect on CET1 ratio over three years



- The majority of interest income is earned from **business with retail and corporate customers**
- **Retail deposits** are the primary source for **refinancing**
- Net interest income from **interest rate derivatives** has a positive impact, while defaults from **credit risk** slightly **reduce** net interest income.
- If there were **no supervisory cap, net interest income** would **rise slightly** (by 19 bps in the year with the greatest stress effect) in comparison with the starting year due to rising interest rates