



EUROPEAN CENTRAL BANK

EUROSYSTEM

Real Estate Markets: Recent developments and financial stability risks

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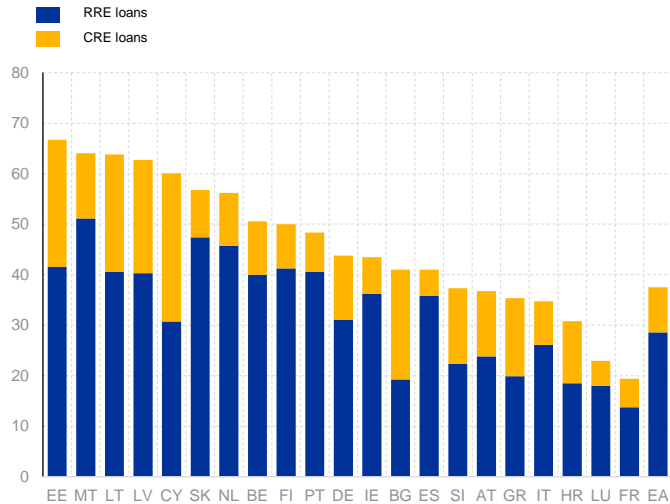
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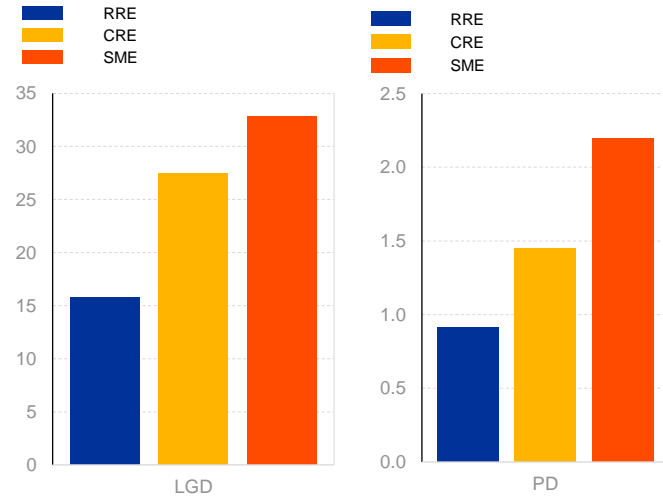
Residential real estate (RRE) vs commercial real estate (CRE) in the euro area

- Mortgages account for almost 30% of EA banks' total loans, while CRE-collateralized for ca. 10%
- Historical tendency for RRE exposures to be relatively less risky than CRE and SMEs exposures
- Wider range of market participants and more international players in CRE markets

Bank's exposures to RRE and CRE (percentage of total loans and advances)



LGD and PD across loan categories (average for new EA loans, 2018, %)



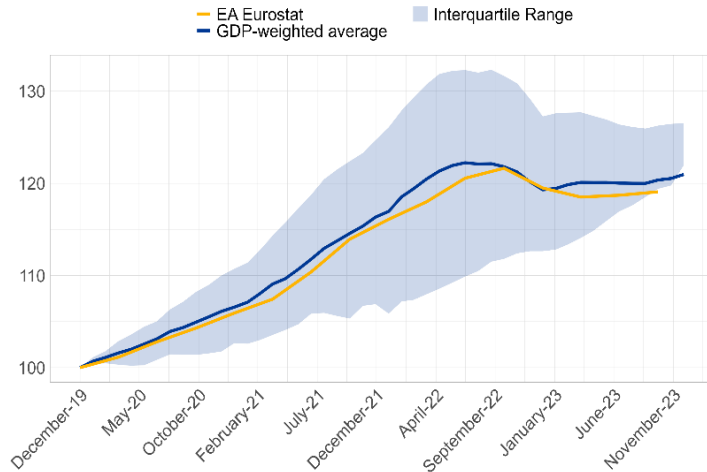
Source: LHS: Supervisory statistics. RHS: SSM Credit Underwriting Data collection.
 Notes: RRE (Residential Real Estate) loans are loans to households collateralised by residential immovable property and CRE (Commercial Real Estate) loans are loans to NFC (Non-Financial Corporation) collateralised by commercial immovable property as a share of total loans and advances.

Residential property markets in a broadly orderly downturn

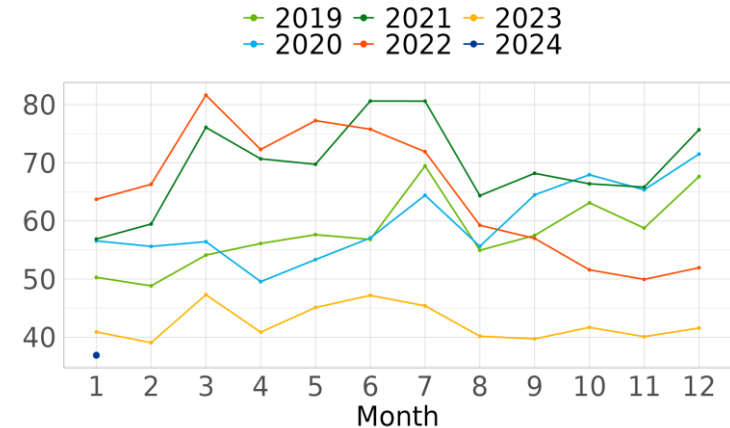
- RRE prices started to decline in H2 2022, but the pace of the decline seems to have slowed down
- Positive contributions from monetary policy to RRE prices dissipated since 2022
- Pure new loans to households for house purchase are at lowest levels since several years
- Despite downturn, there is no widespread RRE risk materialisation

RRE price developments in selected countries

(Index: Jan. 2020 = 100)

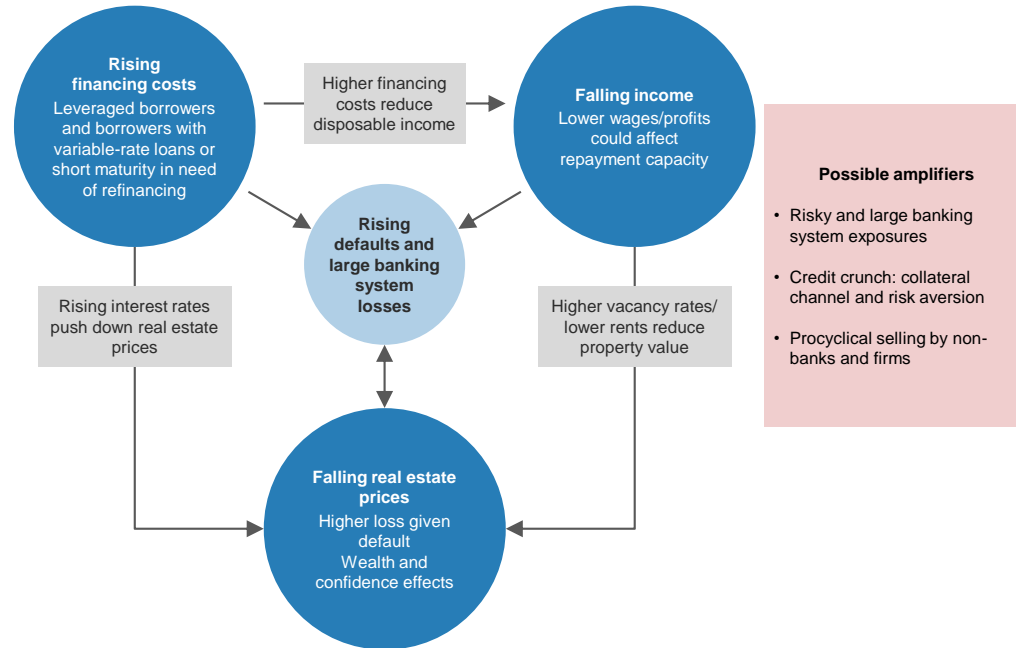


Pure new euro area loans to HHs for house purchase (bn EUR)



What could threaten financial stability?

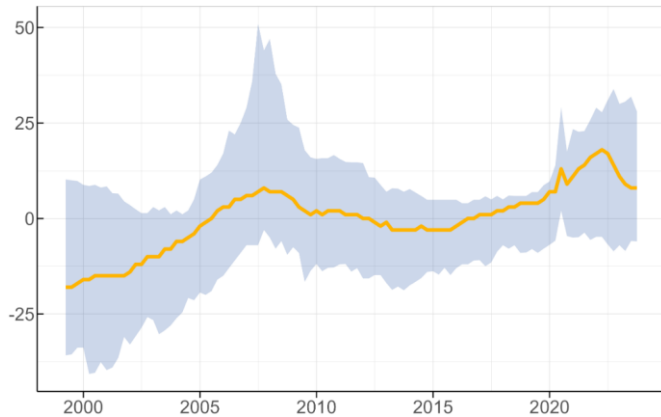
- When real estate prices fall this increases banks' losses given default (LGDs)
- Rising interest rates push up financing costs via higher debt service costs, and this increases the probability of default (PD) – however, robust labour markets are currently helping to mitigate credit risk in mortgage portfolios



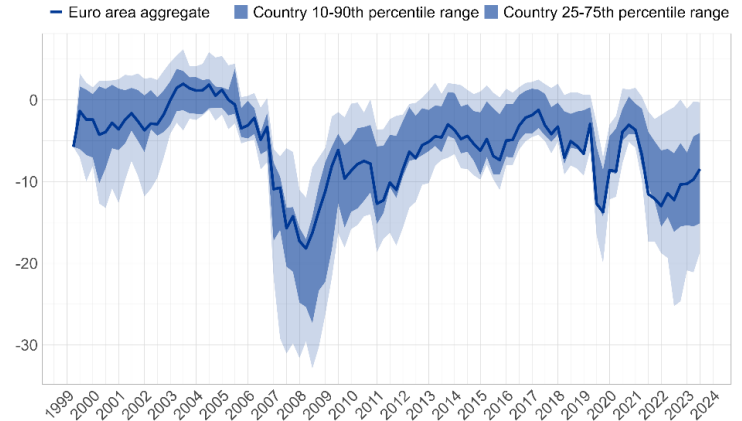
LGDs: Despite the correction in RRE prices, vulnerabilities persist and so do downside risks

- Some euro area RRE markets still show signs of overvaluation....
- ...despite the levelling-off of short-term downside risks to RRE price growth in the last quarters, these remain high in a historical comparison (especially in some countries)

House price overvaluation (house price to income ratio) (EA and IQR across countries, percentages)



Tail risk to euro area house price growth (5th percentile of predicted real year-on-year house price growth rate distribution, percentages)



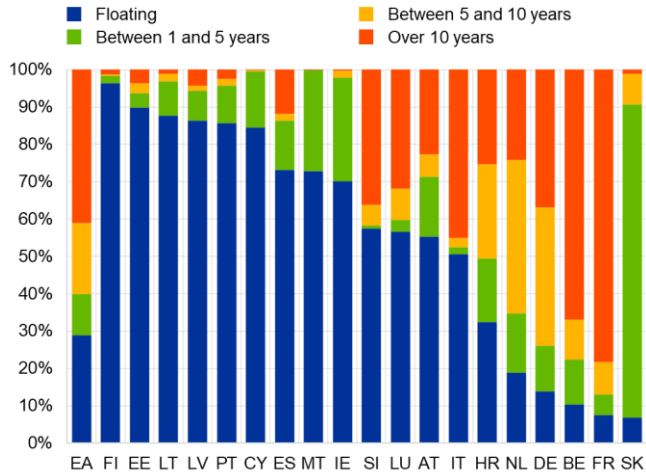
Source: ECB and ECB calculations.

Notes: RHS: results from an RRE price-at-risk model based on a panel quantile regression on a sample of 19 euro area countries. The RRE price-at-risk is defined as the 5th percentile of the predicted RRE price growth; this provides an indication of how severe an RRE price decline could be in extreme cases. Explanatory variables: lag of real house price growth, overvaluation (average of deviation of house price/income ratio from long-term average and econometric model), systemic risk indicator, consumer confidence indicator, financial market conditions indicator capturing stock price growth and volatility, government bond spread, slope of yield curve, euro area non-financial corporate bond spread, and an interaction between overvaluation and a financial conditions index.

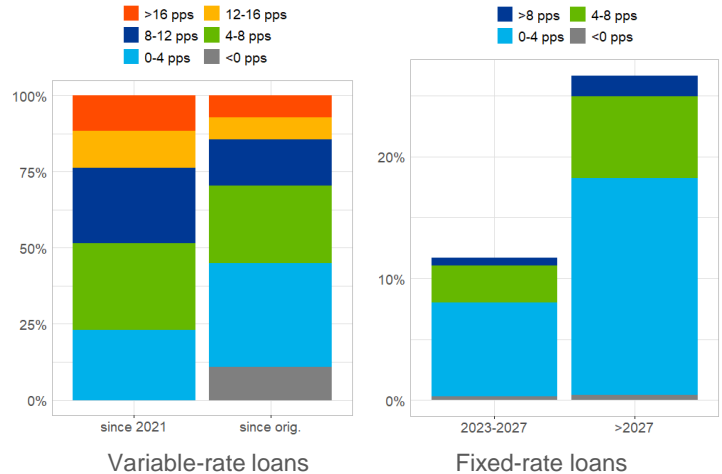
PDs: Increased loan servicing costs due to higher interest rates can expose pockets of vulnerabilities in floating rate lending

- Ca. 70% of EA mortgages are extended with fixed rate loans, shielding households from increases in LSTIs
- LSTI ratios of highly leveraged borrowers with long maturity loans and floating rates increase the most
- Estimated PDs increase substantially when considering different scenarios combining higher interest rates with higher unemployment

Households' exposure to rising interest rates (percentages)



Simulated increases of LSTIs on variable-rate loans since end-2021 (percentages)



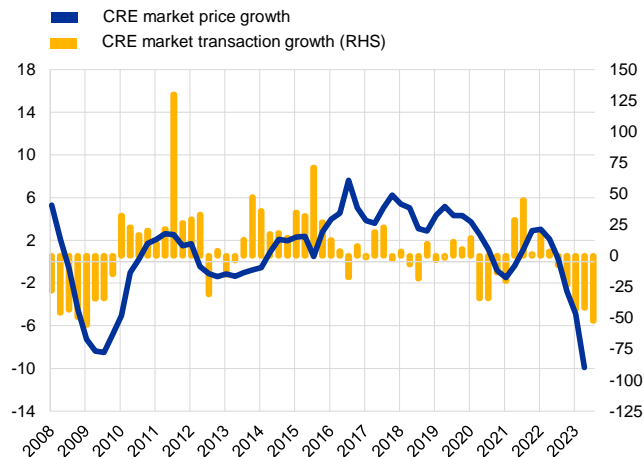
Source: LHS: ECB and ECB calculations. RHS: EDW and ECB calculations.
 Notes: LHS: approximation of information for mortgage stocks using interest rate fixation periods at origination of cumulative mortgage flows since data availability starts or for the period equalling the average mortgage loan maturity when this period is shorter than data availability. RHS: Country availability in EDW: BE, DE, ES, FR, IE, IT, NL, PT. Bars for fixed-rate loans do not stack to 100% as the majority of loans are not due to be repriced in the respective periods. Charts show increases of LSTIs in between 2021 and 2023. The total is weighted by GDP.

CRE markets in clear downturn with further price drops likely

- Evidence of substantial price correction, despite low market activity hampering price discovery
- Further price correction likely when market activity resumes amid rising vacancy rates

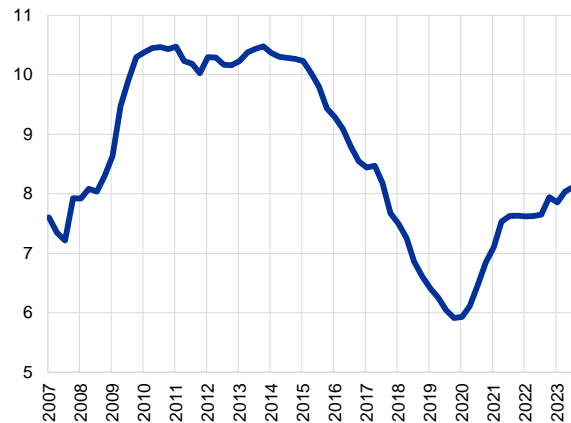
Market activity remains low and prices are falling

(Annual growth of CRE prices and market transactions, %)



Vacancy rates are rising even in prime markets

(Euro area prime market office vacancy rate, %)

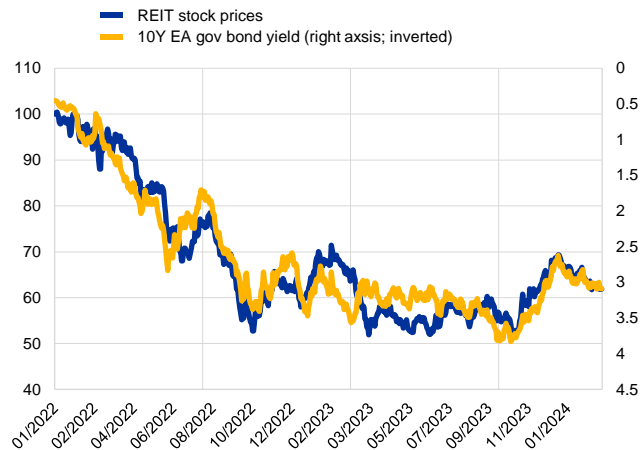


Going forward market faces both cyclical and structural challenges

- CRE asset values directly impacted by higher long-term interest rates
- Behavioural change since Covid-19 and energy-efficiency important structural headwinds

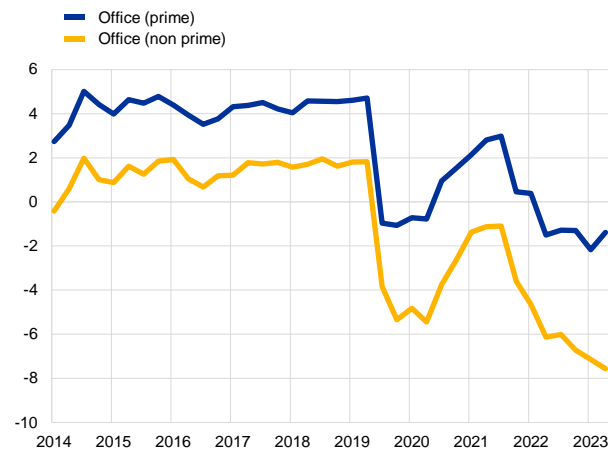
CRE firm valuations affected by long-term interest rates

(left: REIT Index Jan 1st 2022 = 100, right: interest rate in percent)



Outlook for (non-prime) office rents deteriorating

(12 month rent growth forecast, %)

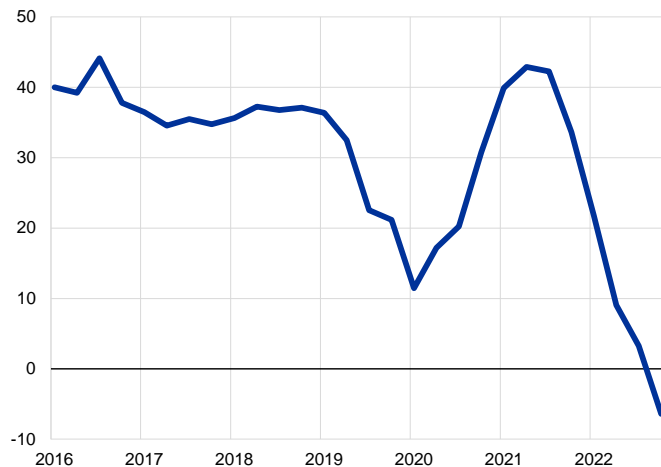


CRE firms face pressure from higher financing costs and falling revenue

- Sharp profit shock already visible and likely to continue due to structural challenges
- Almost 60% of CRE bank loans could be to loss-making CRE firms in an adverse scenario with continued high interest rates and a large drop in revenues

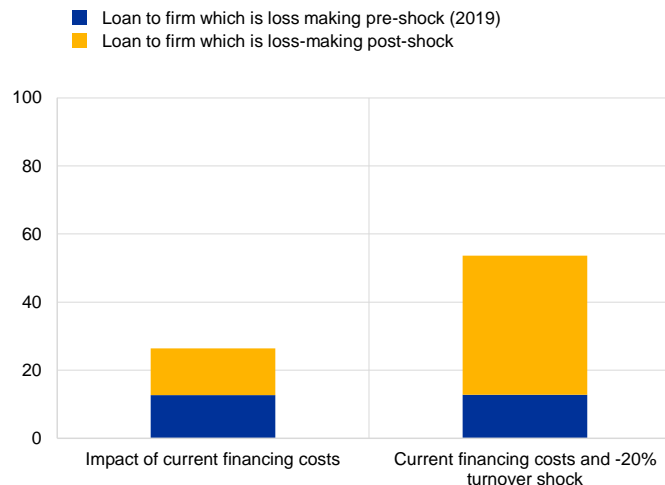
Real estate firms already seeing sharp drop in profits

(Median profit margin across sample of euro area CRE firms, %)



Simulation of bank exposure to loss-making CRE firms

(Percentage of euro area banks' loans to real estate firms, %)



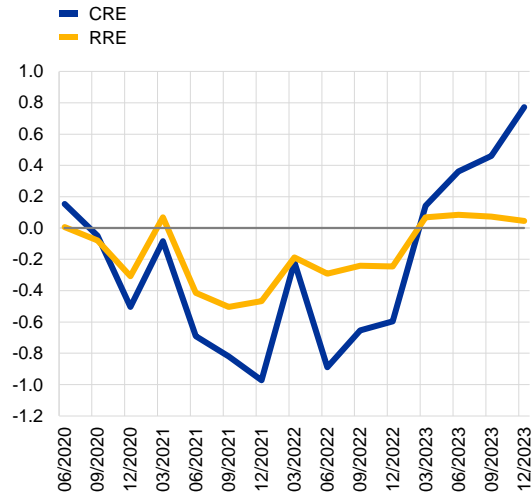
Source: LHS: Capital IQ and ECB calculations. RHS: Orbis, AnaCredit and ECB calculations.
Notes: RHS: Based on a sample of 115,000 EA firms. 2019 firm profits used as pre-shock value. Under the financing costs shock updated firm profits are calculated as: $2019 \text{ net income (excluding the effects of depreciation/amortisation)} - (\text{change in borrower average cost of bank financing}) * \text{total debt}$. Under the turnover shock an additional 20% decline in turnover is uniformly applied to all firms' 2019 income. Bank loan exposures from AnaCredit are as at June 2023.

CRE bank asset quality starting to deteriorate and more headwinds likely

- After years of outflows, euro area banks experience increasing CRE NPL inflows
- Limited revaluation of banks' CRE collateral in recent years could indicate more headwinds

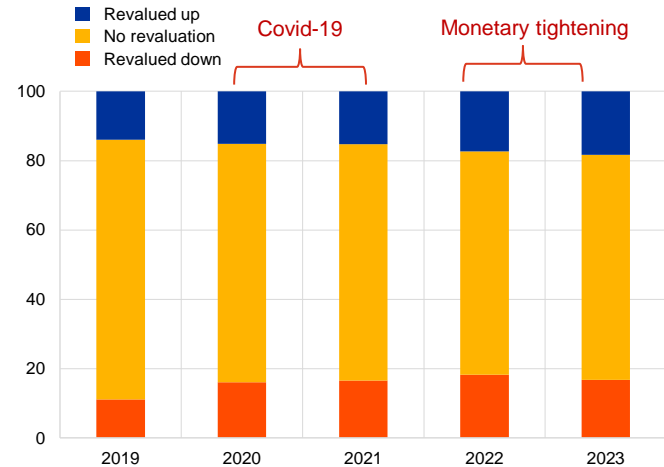
CRE NPL inflows are now positive and rising

(Annualised quarterly net NPL inflow, % of real estate loans)



CRE price drops not seen in more collateral revaluations

(Share of CRE collateral stock held by banks, %)



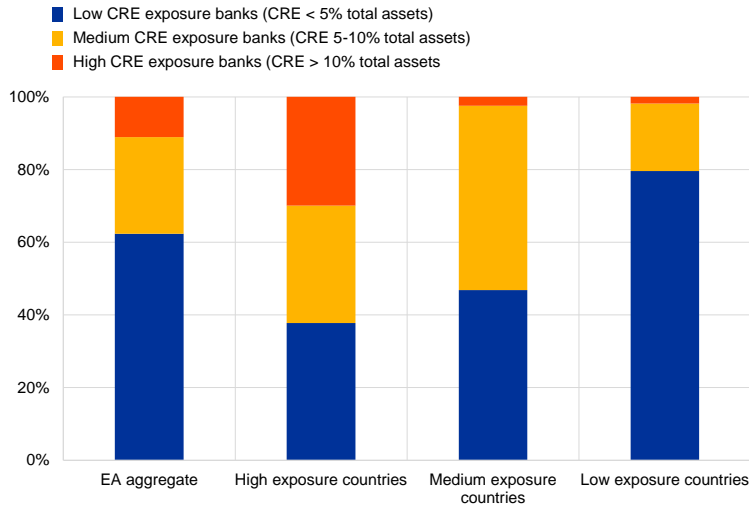
Source: LHS: Supervisory statistics. RHS: AnaCredit and ECB calculations.

Notes: LHS: CRE collateralised and RRE collateralised loans used as proxies for CRE and RRE exposures. RHS: AnaCredit analysis of real estate collateral revaluation builds on analysis from [Horan, Jarmulska and Ryan \(2023\)](#).

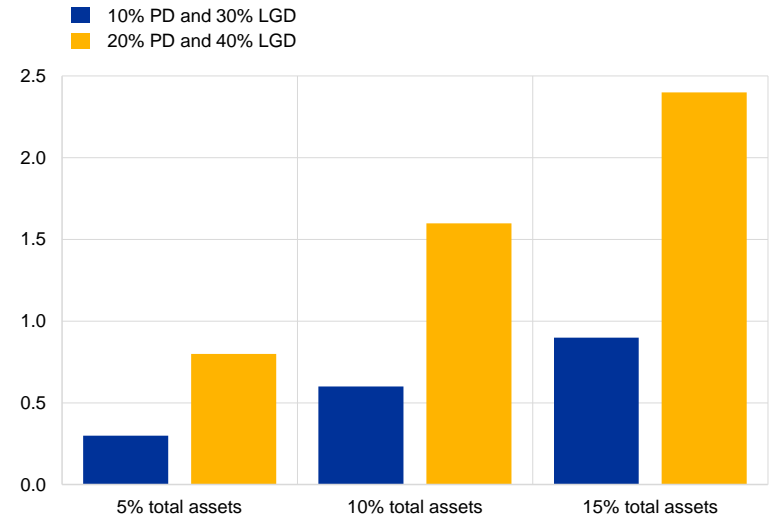
Aggregate bank CRE exposure contained, but some banks more exposed

- CRE exposures (5% TA) not large enough to threaten aggregate banking system solvency on it's own
- Most heavily exposed banks may experience stress and these are geographically concentrated

Aggregate CRE exposures contained but concentrated (Share of total banking system assets, %)



Severe CRE portfolio stress and large CRE exposures needed to induce a potential solvency impact for banks (Reduction in CET1 ratio from hypothetical CRE portfolio stress, pp)

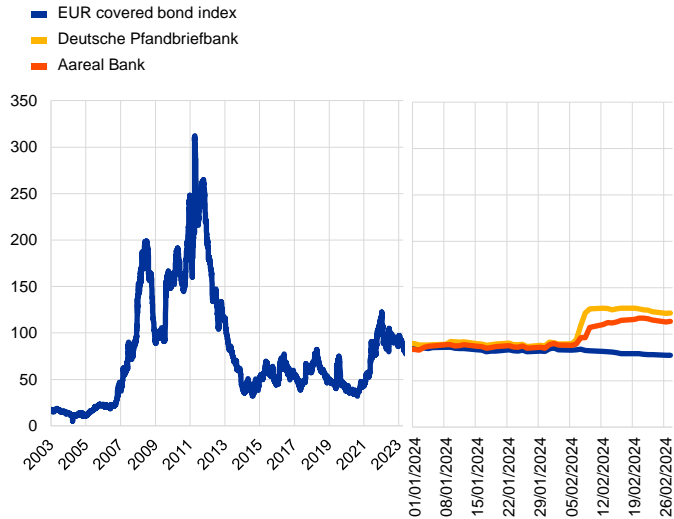


Source: LHS: Supervisory statistics. RHS: ECB calculations.
 Notes: Low exposure countries: FR, LU, BE, ES, FI, IE; Medium : MT, SI, PT, GR, IT; High exposure countries: EE, LV, BG, CY, LT, NL, HR, DE, AT, SK : LHS: CRE collateralised loans used as proxy for CRE exposure. RHS: The chart shows the hypothetical CET1 ratio depletion stemming from CRE exposures, assuming a 50% average risk-weight, and different CRE PDs and LGDs. The x-axis shows the CRE-share in total assets.

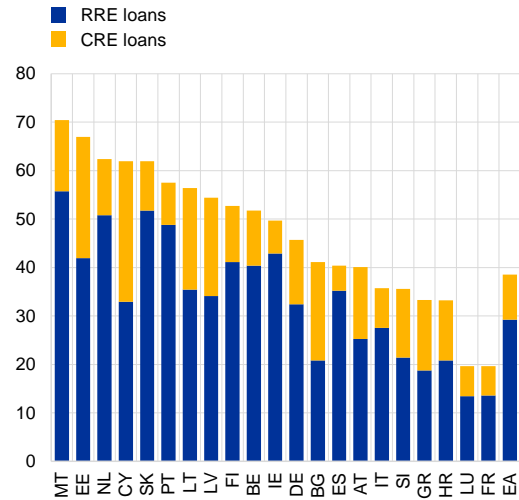
Systemic threat could arise from potential spillovers to bank funding markets or deterioration in other real estate loan portfolios

- Disruption to key bank funding markets could amplify the effect of CRE stress
- CRE losses combined with deterioration in RRE loan book would have systemic implications

Most exposed banks have seen rising covered bond spreads, but no sign of contagion at present (Covered bond z spread, bps)



Banks' combined CRE and RRE exposures are systemic (Real estate loans as % total bank loans)



Source: LHS: Bloomberg. RHS: Supervisory statistics.

Notes: RHS: Loans collateralised by CRE and RRE are used as proxies for CRE and RRE exposures.