



Central And Eastern Europe Banking 2024

Solid performance buffers mounting risks

S&P Global
Ratings

Anna Lozmann

Karim Kroll

Cihan Duran

Lukas Freund

Heiko Verhaag

Markus Schmaus

Nov. 21, 2023

This report does not constitute a rating action

Contents

Overview	3
Macro Environment	12
Banking Sector	21
Additional Loss Absorbing Capacity	31
Analytical Contacts	33

Overview

Key Takeaways

- Economic conditions have stabilized in most of Central and Eastern Europe (CEE) after a tricky start to 2023. Falling energy prices have contributed to lower inflation and reduced external deficits, as regional exchange rates recovered and government bonds normalized.
- In terms of wealth, most CEE countries are lagging Western European (WE) countries despite high catch-up growth recently. Sovereign ratings are also typically weaker. Still, not all CEE markets are inherently riskier than WE markets.
- Corporate and household indebtedness is generally lower in CEE than in WE, which somewhat alleviates credit risks for banks amid economic slowdown and higher costs of living and borrowing.
- Policy rates in CEE have increased significantly over recent years, but in several countries we already see rate decreases. In addition, due to ongoing repricing of deposits and the need for issuance to meet the minimum requirement for own funds and eligible liabilities (MREL), we expect net interest margins (NIMs) to fall from their peak in 2023.
- Average return on equity in most CEE countries was below 10% over the past five years, but materially higher than in WE, so that CEE exposure has boosted WE banks' results, a trend we expect to continue. Windfall taxes remain a tail risk for countries where not yet implemented (now in place in Hungary, Czechia, and Croatia, and planned in Slovenia, Slovakia and Romania).
- While asset quality improved over the past five years, it is more sensitive to economic downturns. European Banking Authority (EBA) stress test data show that, under an adverse scenario, CEE exposures would experience the highest percentage-point increase in defaults.

Largest Banking Systems In CEE: A Function Of Population And Wealth

Total consolidated assets of financial institutions at year-end 2022



We only include CEE countries for which we conduct a separate Banking Industry And Country Risk Assessment (BICRA). Therefore, Albania, Kosovo, Montenegro, and North Macedonia are excluded. Total consolidated assets are converted from local currency to euros using the exchange rate at Dec. 31, 2022. BIH--Bosnia and Herzegovina. SVN--Slovenia. Source: S&P Global Ratings.

Convergence with opportunities

- The CEE banking sector remains relatively insignificant in the European context, with 4% of EU-wide total assets, but growth remains strong, as the region converges to higher wealth standards.
- The scale of CEE banking markets differs widely. The two largest markets--Poland and Czechia--represent about 60% of the region's total assets.
- Western European banks see attractive growth opportunities in CEE markets, which are still mainly underpenetrated when it comes to banking and asset management business.
- We believe that banks will continue to benefit from economic convergence of CEE countries toward Western Europe, leading to wealthier households and corporates.

Most Rated CEE Banks Are Investment Grade

Rating scores of banks in CEE

	Country	Anchor	Business position	Capital and earnings	Risk position	Funding and liquidity	CRA	SACP	Support	ICR/Outlook
CSOB	Czechia	bbb+	Adequate (0)	Strong (+1)	Adequate (0)	Adequate/ Adequate (0)	0	a-	Group (+2)	A+/Stable
Komerční Banka	Czechia	bbb+	Adequate (0)	Strong (+1)	Adequate (0)	Adequate / Strong (0)	0	a-	Group (+1)	A/Stable
Ceska Sporitelna	Czechia	bbb+	Adequate (0)	Strong (+1)	Adequate (0)	Adequate / Strong (0)	0	a-	ALAC (+1)	A/Negative
Bank Pekao	Poland	bbb	Adequate (0)	Strong (+1)	Adequate (0)	Adequate / Strong (0)	0	bbb+	-	BBB+/Positive
Nova Ljubljanska Banka	Slovenia	bbb-	Adequate (0)	Adequate (0)	Adequate (0)	Adequate / Strong (0)	0	bbb-	ALAC (+1)	BBB/Stable
mBank S.A.	Poland	bbb	Adequate (0)	Adequate (0)	Moderate (-1)	Adequate/ Adequate (0)	0	bbb-	ALAC (+1)	BBB/Stable
OTP Bank	Hungary	bbb-	Strong (+1)	Adequate (0)	Moderate (-1)	Strong / Strong (+1)	0	bbb	Sovereign (-1)	BBB-/Stable
Alior Bank	Poland	bbb	Constrained (-2)	Strong (+1)	Constrained (-2)	Adequate/ Adequate (0)	0	bb	Group (+1)	BB+/Stable

CRA--Comparable ratings adjustment. SACP--Stand-alone credit profile. ICR--Issuer credit rating. CSOB--Ceskoslovenska Obchodni Banka A.S. ALAC--Additional loss-absorbing capacity. Source: S&P Global Ratings.

Foreign Banks In CEE: Selective Presence And Diverging Growth Strategies

- Foreign banks continue to have a significant presence in CEE banking systems. The largest foreign banks in the region are Erste Bank Group, Raiffeisen Bank International (RBI), KBC Group, UniCredit, and OTP Bank.
- Foreign banks' strategies in the region differ widely, with some players like RBI being present in a high number of markets, while others have a smaller presence, for example SocGen in only two countries and KBC in only four.
- Several Western European banks are active exclusively in Poland (Banco Comercial Portugues and Banco Santander) or have a dominant share of CEE business allocated in this country (ING Groep, BNP Paribas, and Commerzbank). Poland offers the largest scale opportunities, given its size. However, profitability and outlook remain clouded by the foreign currency loans saga.
- Poland also has the lowest proportion of foreign participation, along with Hungary, with shares below 50%. The remainder of CEE systems are 70%-90% foreign-owned.
- Growth in CEE remains central for RBI, Erste, KBC, Nova Ljubljanska Banka (NLB), and OTP. We might see mergers and acquisitions as banks with larger capital buffers seek to expand. Commerzbank's long-term plan to exit Poland might create opportunities for others.
- The geographical asset split has changed only marginally over recent years, mainly driven by deals related to the resolution of Sberbank Europe and NLB's expansion in the former Yugoslavia. The largest deal was in Hungary and resulted in a shift between domestic players as MBH Bank Group took over two local players. The most recent announcements relate to two transactions in Romania: Intesa Sanpaolo plans to acquire First Bank and UniCredit targets acquisition of most of Alpha Bank's Romanian business.

Large Western Players Generally In Top 5 In Most CEE Markets

Country-by-country comparison of international banking groups active in CEE markets

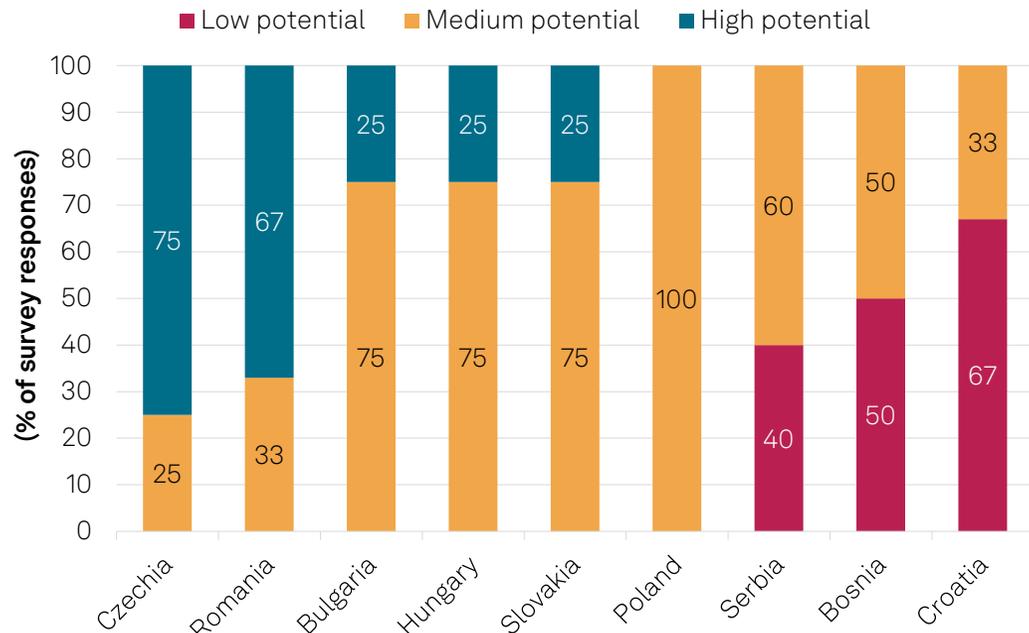
	Erste Bank Group	KBC Group	UniCredit	RBI	OTP Bank	Societe Generale	Intesa Sanpaolo	Banco Santander	ING Groep	Commerzbank
	Number denotes market position§						Active in market		Not active in market	
Bosnia	6 th		1 st	2 nd			5 th			
Bulgaria		3 rd	1 st		2 nd					
Croatia	3 rd		2 nd	5 th	4 th		1 st			
Czechia	2 nd	1 st	4 th	5 th		3 rd				
Hungary	4 th	3 rd	5 th	6 th	1 st		7 th			
Poland								3 rd	4 th	5 th
Romania	2 nd		7 rd	4 th	9 th	3 rd	14 th			
Serbia	8 th		4 th	3 rd	2 nd		1 st			
Slovakia	1 st	4 th	5 th	3 rd			2 nd			
Slovenia	8 th		5 th		3 rd		4 rd			
% of loans*	43%	32%	13%	50%	93%†	8%	8%	3%	5%	10%
CEE importance to strategy	High	High	Moderate	High	High	Low	Moderate	Low	Low	Low

The table focuses only on the largest international banking groups in CEE. *The share of the group loan book is computed by adding up the gross customer loans of the subsidiaries in the respective CEE country and dividing by the group's gross customer loans. Data is as of year-end 2022. §Ranking based on total assets as of year-end 2022. †This refers to CEE exposures including Hungary, which is the home country of OTP, but excluding Russia and Uzbekistan. Source: S&P Global Ratings.

Differences In Market Attractiveness According To Survey Data

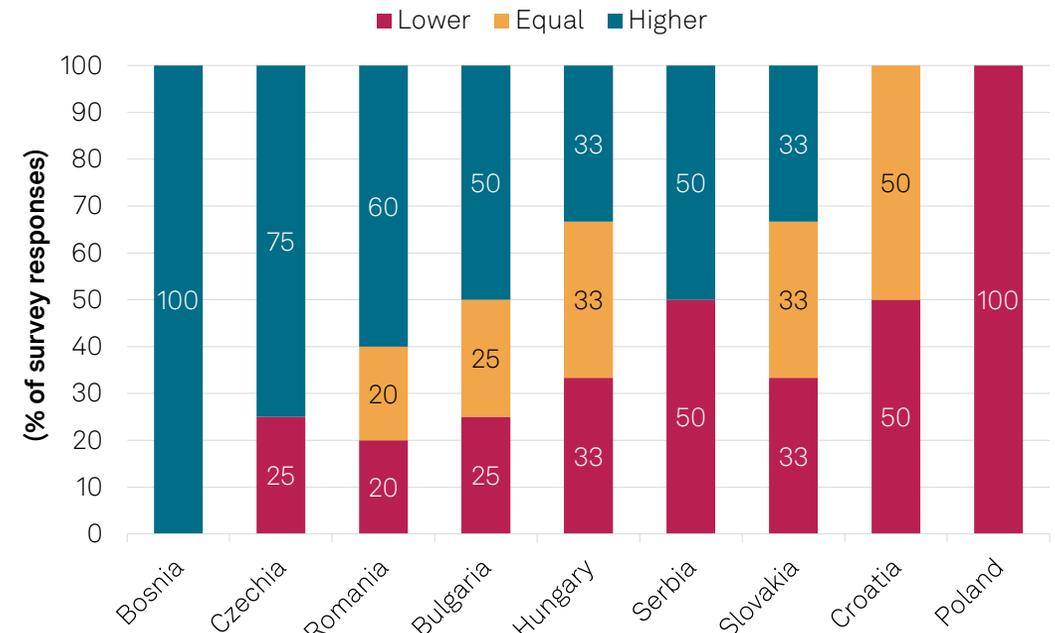
International parent group's assessment of market potential and profitability (survey responses)

Market potential



Overall, the survey involves 12 international banking groups operating in Central, Eastern, and South-Eastern Europe. The survey result only takes into account parent groups active in the respective market. In the survey, details for Slovenia are not presented due to the low number of banking groups operating in the country. Source: European Investment Bank - CESEE Bank Lending Survey – Spring 2023.

Risk-adjusted return on equity relative to overall group



Overall, the survey involves 12 international banking groups operating in Central, Eastern, and South-Eastern Europe. The survey result only takes into account parent groups active in the respective market. In the survey, details for Slovenia are not presented due to the low number of banking groups operating in the country. Source: European Investment Bank - CESEE Bank Lending Survey – Spring 2023.

Forecast | High Earnings As First Line Of Defense Against Credit Losses

Good capital buffers are a second line of defense for adverse scenarios



Macro-economic environment	Growth	<ul style="list-style-type: none"> We expect moderate GDP growth in 2023, and even stagnation in some countries. However, we project a quicker rebound than the eurozone in 2024.
	Inflation	<ul style="list-style-type: none"> Inflation will decline moderately in 2023 but remain higher than the eurozone. We project a more pronounced drop in inflation for 2024.
	Housing prices	<ul style="list-style-type: none"> In our base case, we expect a mild correction of housing prices in most markets.
Banking sector	Profitability	<ul style="list-style-type: none"> A slight drop in profits in 2023 due to higher funding costs and government intervention in some markets. We expect a further small decrease in 2024 amid lower net interest margins and a moderate catch up of credit losses, coupled with inflation-driven higher operational costs.
	Credit quality	<ul style="list-style-type: none"> We expect only a moderate rise in risk costs in 2023-2024, thanks to low unemployment, which is key to asset quality. However, we regard CEE asset quality as more sensitive to economic downturns than Western Europe.
	Capitalization	<ul style="list-style-type: none"> We forecast CEE banks will maintain robust capitalization despite large dividend payouts to shareholders and growth of the loan book.
	Funding and liquidity	<ul style="list-style-type: none"> Banks are predominantly funded with customer deposits, with low reliance on capital markets, which remain largely underdeveloped. High granularity of deposits and large portfolios of liquid securities somewhat mitigate liquidity risks.

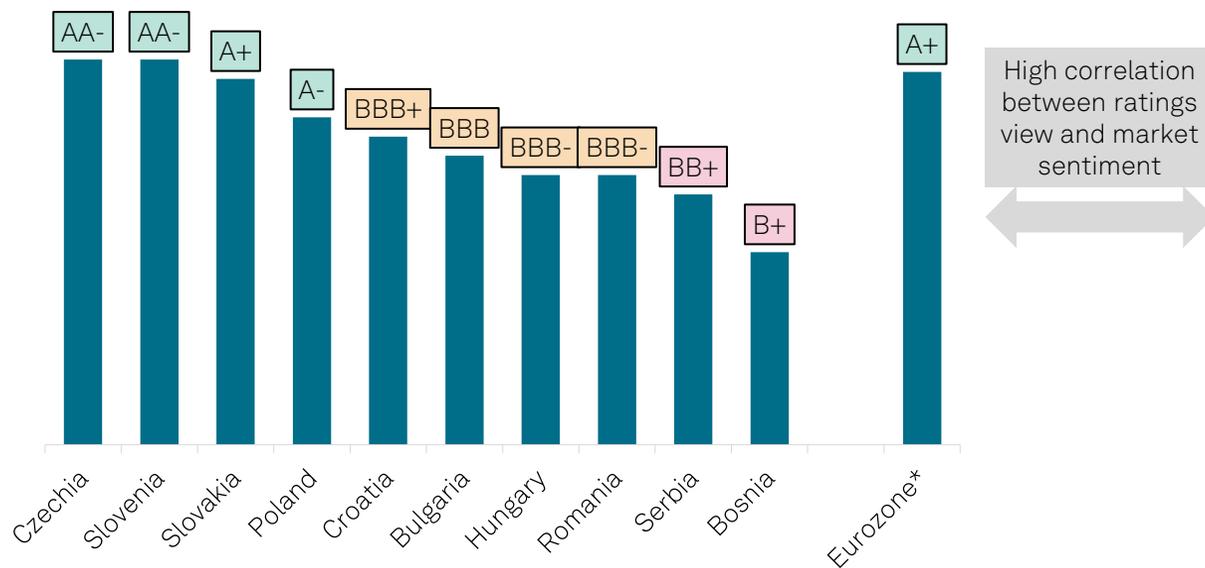
Disclaimer: Forecast is a broad trend statement for the CEE region and does not necessarily apply to every country and to each bank. Source: S&P Global Ratings.

Macro Environment

Default Risk Of CEE Sovereigns Is Higher Than In The Eurozone

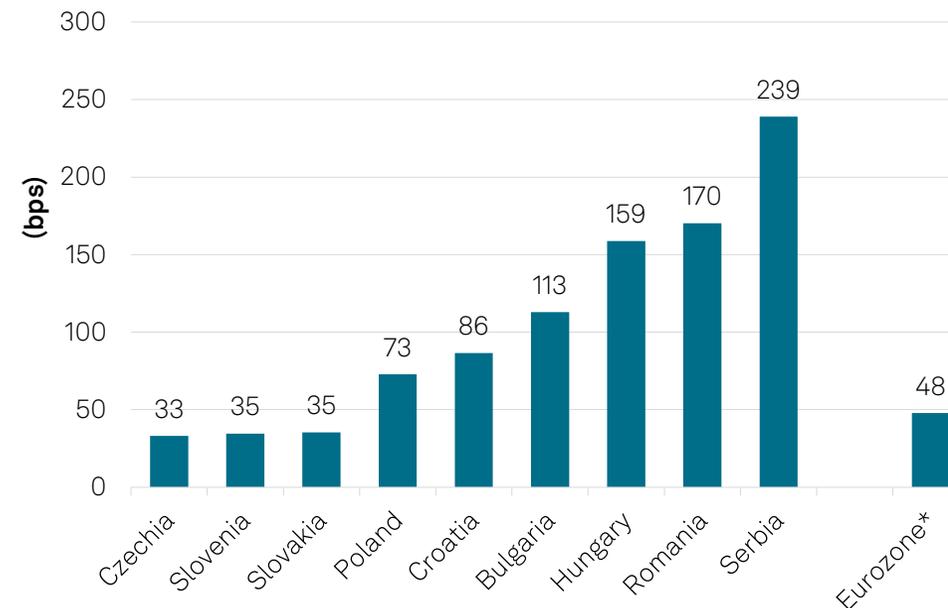
- We generally cap our banks ratings at the sovereign level, which limits potential for bank ratings improvements. Weak economic resilience remains an issue for many CEE banking systems.

Sovereign foreign currency rating
Rating view



Eurozone rating refers to the simple arithmetic average of all eurozone countries except Croatia, Slovakia, and Slovenia. Source: S&P Global Ratings.

Credit default swap (CDS) spread (five-year tenor)
Market sentiment

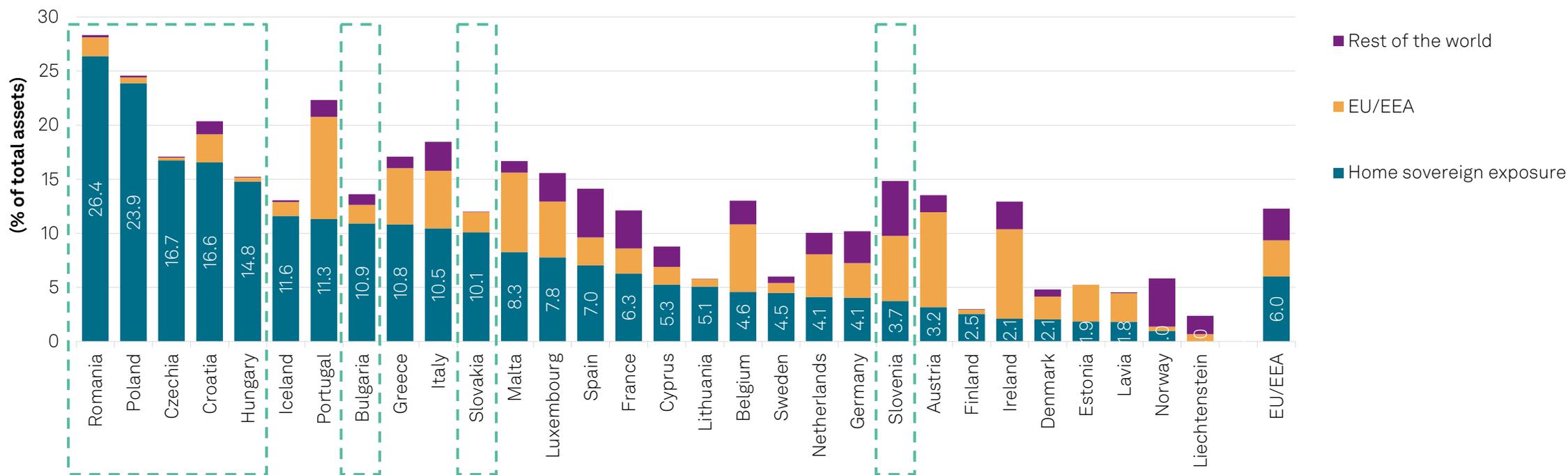


bps--Basis point. Eurozone CDS spread refers to the simple arithmetic average of all eurozone countries except Croatia, Slovakia, and Slovenia. Data as of Nov. 10, 2023. Source: Capital IQ.

High Exposure Of CEE Banks To Home Sovereign Makes Banks Sensitive

- One of the reasons for high sensitivity to the sovereign ratings is direct exposure to the home sovereign. The breakdown of sovereign exposures relative to total assets highlights the risk.

Split of Banks' Sovereign Exposures To Total Assets As Of End-June 2023

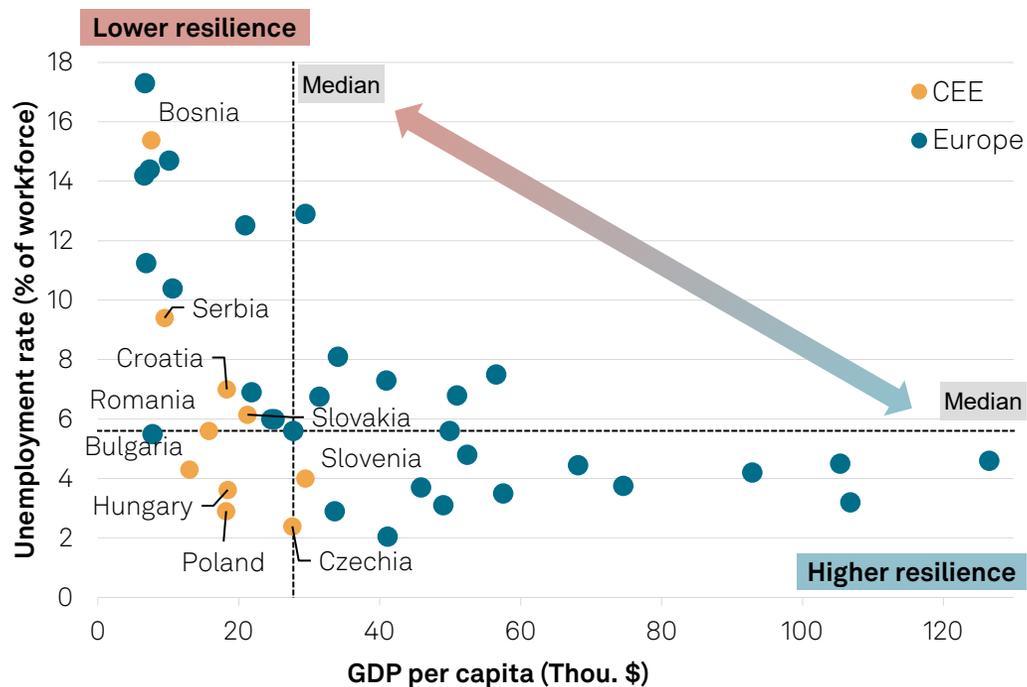


Serbia and Bosnia are not included in the EBA Risk Dashboard. The Risk Dashboard is based on a sample of 164 banks, covering more than 80% of the EU/EEA banking sector (by total assets). Source: EBA Risk Dashboard Q2 2023.

CEE: Below Average Wealth Levels, But Higher Growth Potential

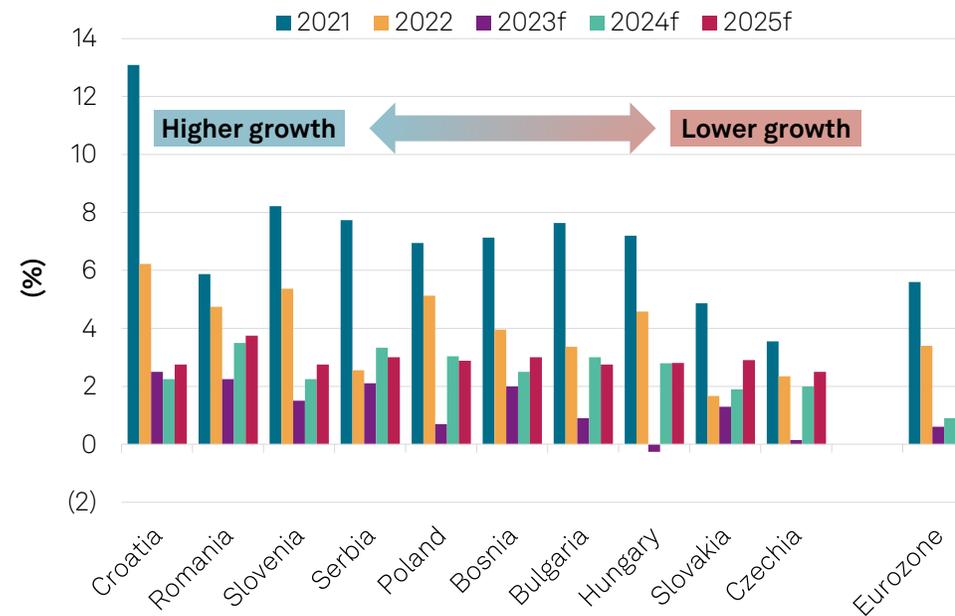
Comparison of GDP per capita, unemployment, and real GDP growth

GDP per capita and unemployment rate in 2022



X-axis is cut at 130 and y-axis at 18 for better visual display. Therefore, Liechtenstein and Ukraine are not shown in the chart. Source: S&P Global Ratings (Sovereign Risk Indicators as of Oct. 9, 2023).

Real GDP growth between 2021 and 2025f



Countries (except eurozone) are sorted by the average growth rate over the period (2021-2025f). Eurozone estimate is taken from "Economic Outlook Eurozone Q4 2023: Slower Growth, Faster Tightening," published Sept. 26, 2023. Source: S&P Global Ratings (Sovereign Risk Indicators as of Oct. 9, 2023).

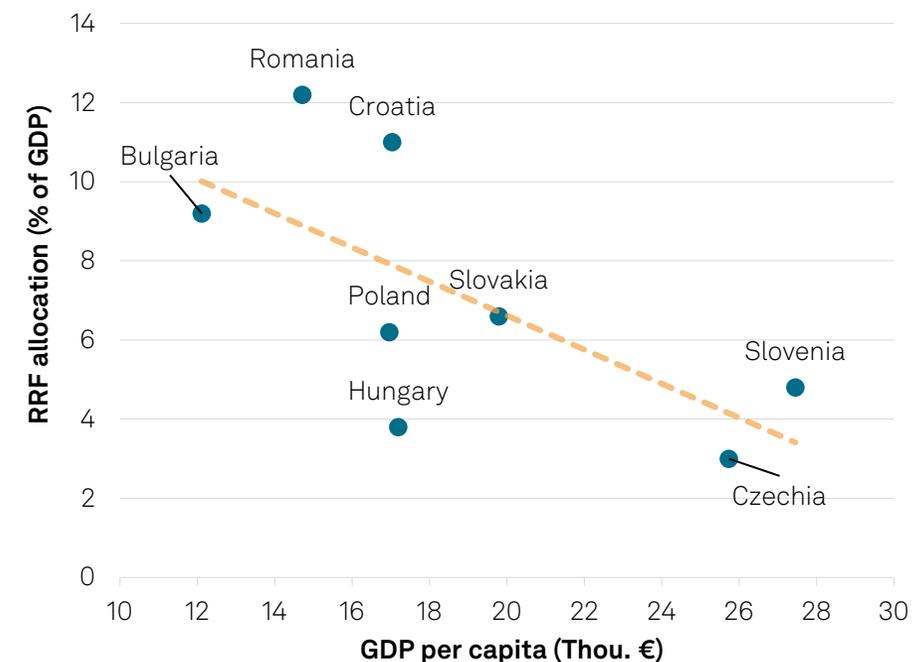
RRF Funding As A Short-Term Driver For Growth And Business Opportunities

Recovery and resilience facility (RRF) volumes until end of 2026

RRF is a temporary instrument intended to finance reforms and investments in EU countries

	Total RRF volume (Bil. €)	Received funds (Bil. €)	Total RRF allocation (% of GDP)
Romania	29.2	9.1	12.2%
Croatia	6.3	2.2	11.0%
Bulgaria	6.3	1.4	9.2%
Slovakia	6.4	1.9	6.6%
Poland	35.4	0	6.2%
Slovenia	2.5	0.3	4.8%
Hungary	5.8	0	3.8%
Czechia	7.0	1.8	3.0%

RRF funds are a function of economic wealth

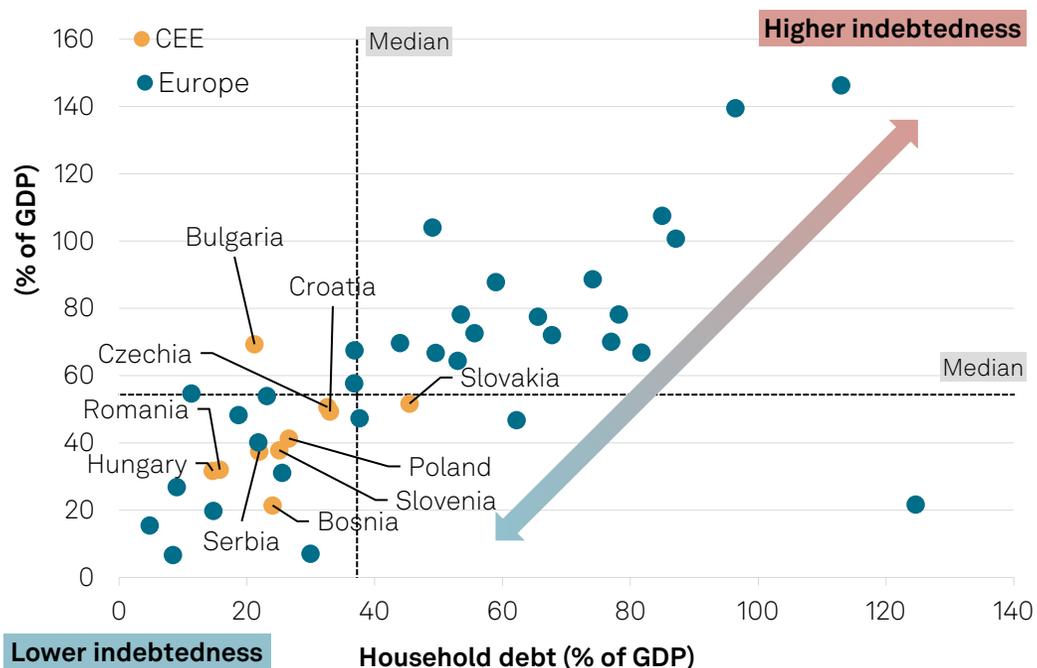


Received funds are as of October 2023. The Recovery and Resilience Facility entered into force on Feb. 19, 2021. However, the payouts only started in 2022. Source: European Commission.

Tail Risks Are High, Despite Low Debt Levels

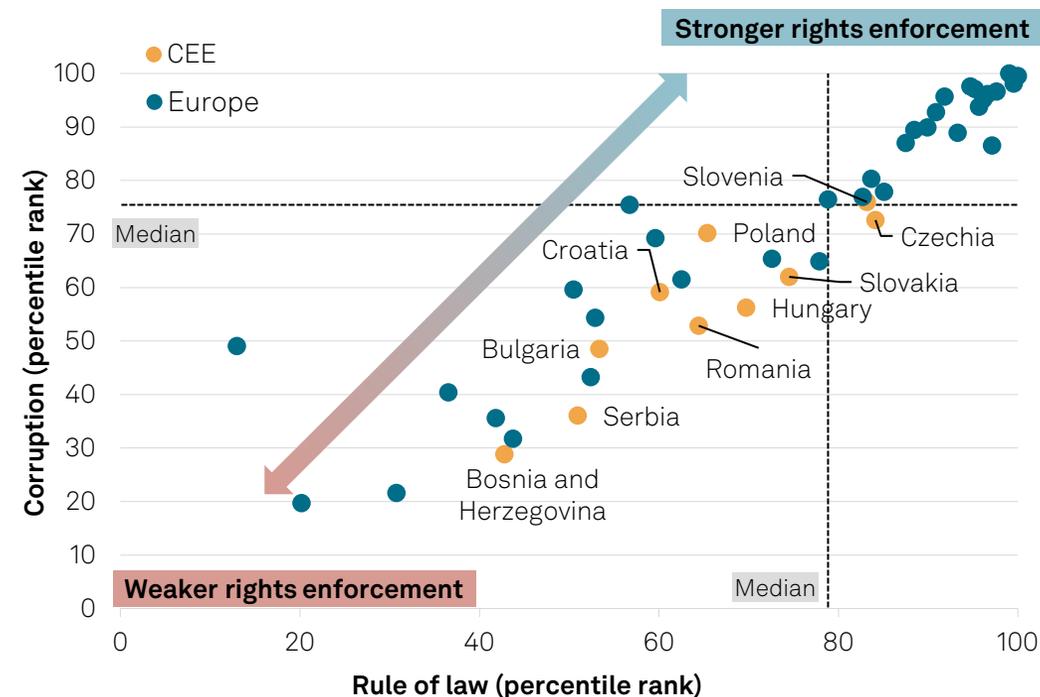
- Generally low penetration of banking services gives potential for growth as income levels increase; however, higher performance volatility, weak rule of law, and high corruption remain among major tail risks.

Corporate and household debt in 2022



Source: S&P Global Ratings.

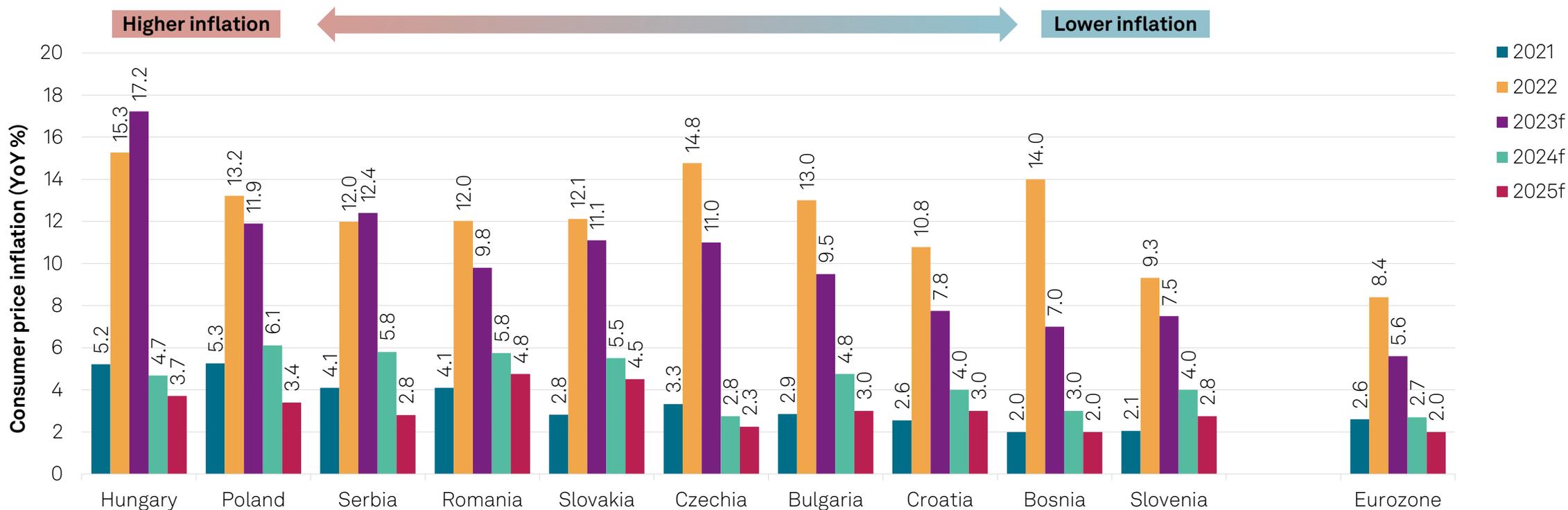
Rule of law and control of corruption in 2021



Higher values indicate less corruption and better rule of law. Ranks are calculated by the World Bank based on all countries worldwide. Source: Worldbank. Data refer to 2021, which is the latest available date.

Higher Energy-Price Dependence Drives Inflation Differential With Eurozone

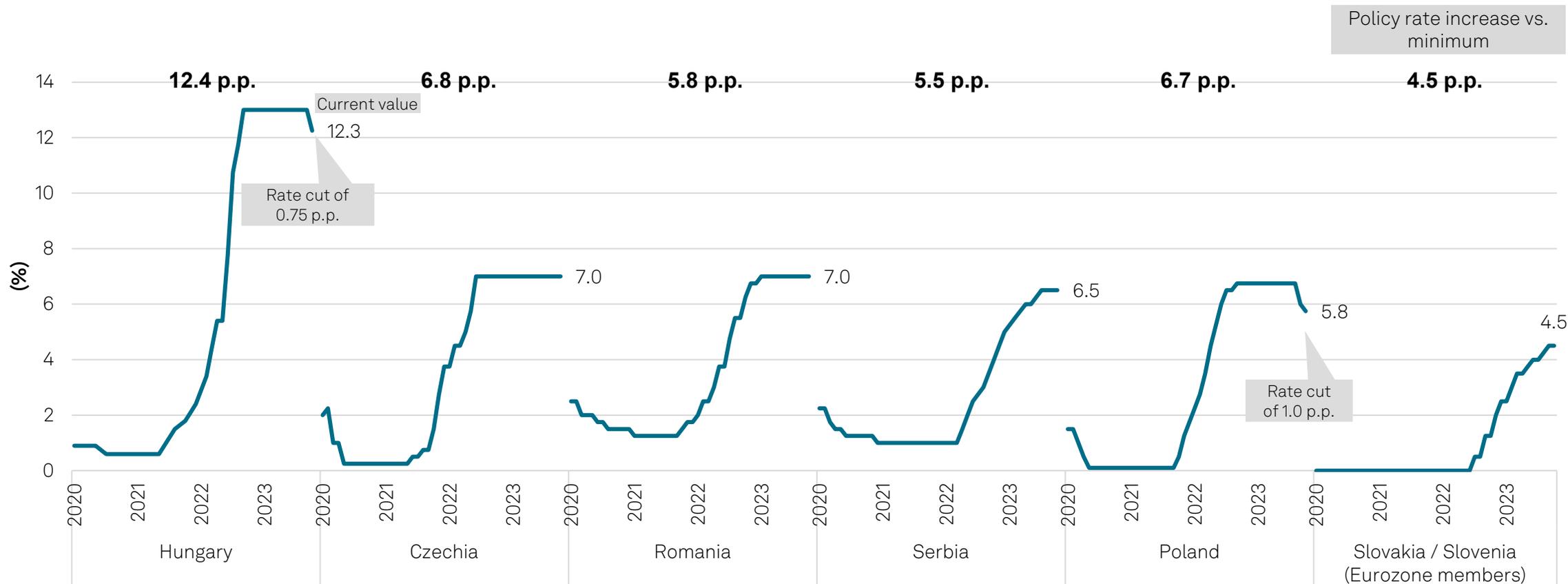
High consumer price inflation between 2021 and 2025f, also driven by foreign-exchange-rate changes



Countries (except eurozone) are sorted by the average inflation rate over the period (2021-2025f). Weaker central bank independence in CEE is one of the reasons for higher inflation in these countries. YoY—Year-on-year. Source: S&P Global Ratings (Sovereign Risk Indicators as of Oct. 9, 2023).

Policy Rates Appear To Have Peaked After An Unprecedented Increase

Policy rates in CEE between January 2020 and October 2023

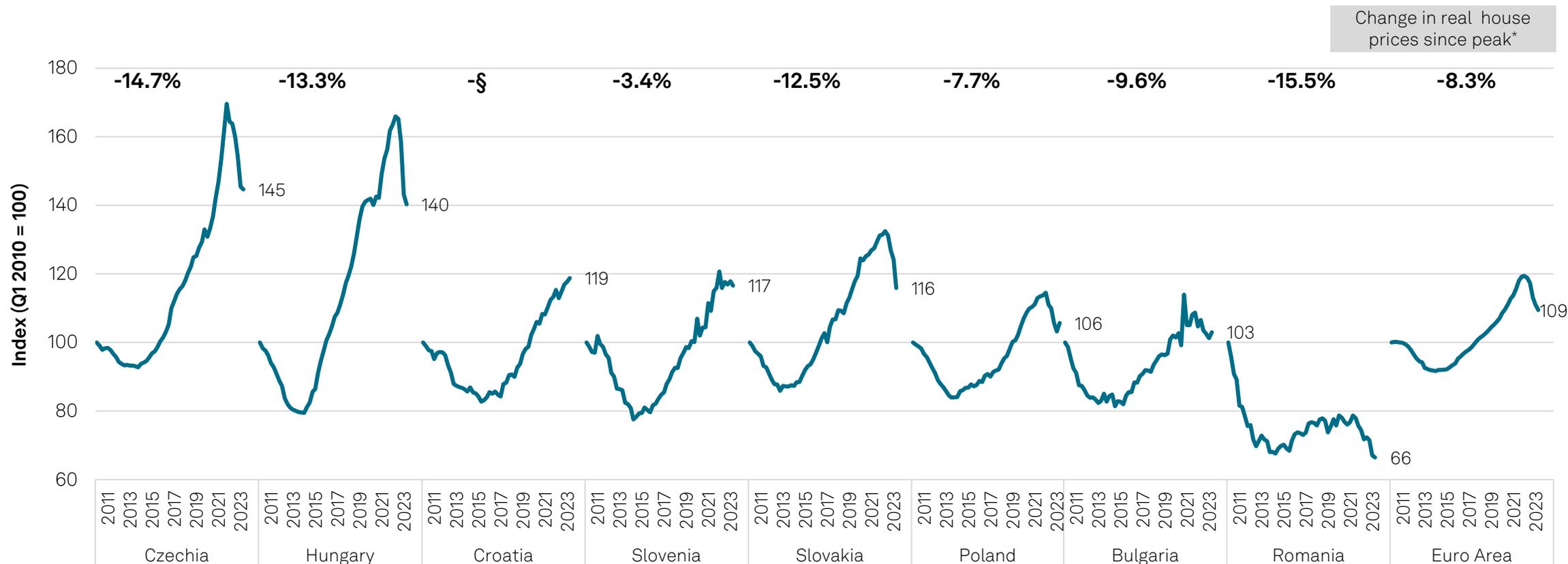


p.p.—Percentage points. The central banks of Bulgaria and Bosnia operate under a currency board (i.e. they maintain a fixed exchange rate to the euro). Thus, they cannot pursue an independent monetary policy. Croatia adopted the euro on Jan. 1, 2023. Source: BIS – Central bank policy rates (monthly data – end of period).

Strong Declines In Real Housing Prices, But A Bubble Burst Is Unlikely

Real housing price index between Q1 2010 and Q2 2023

Supply constraints will limit further declines

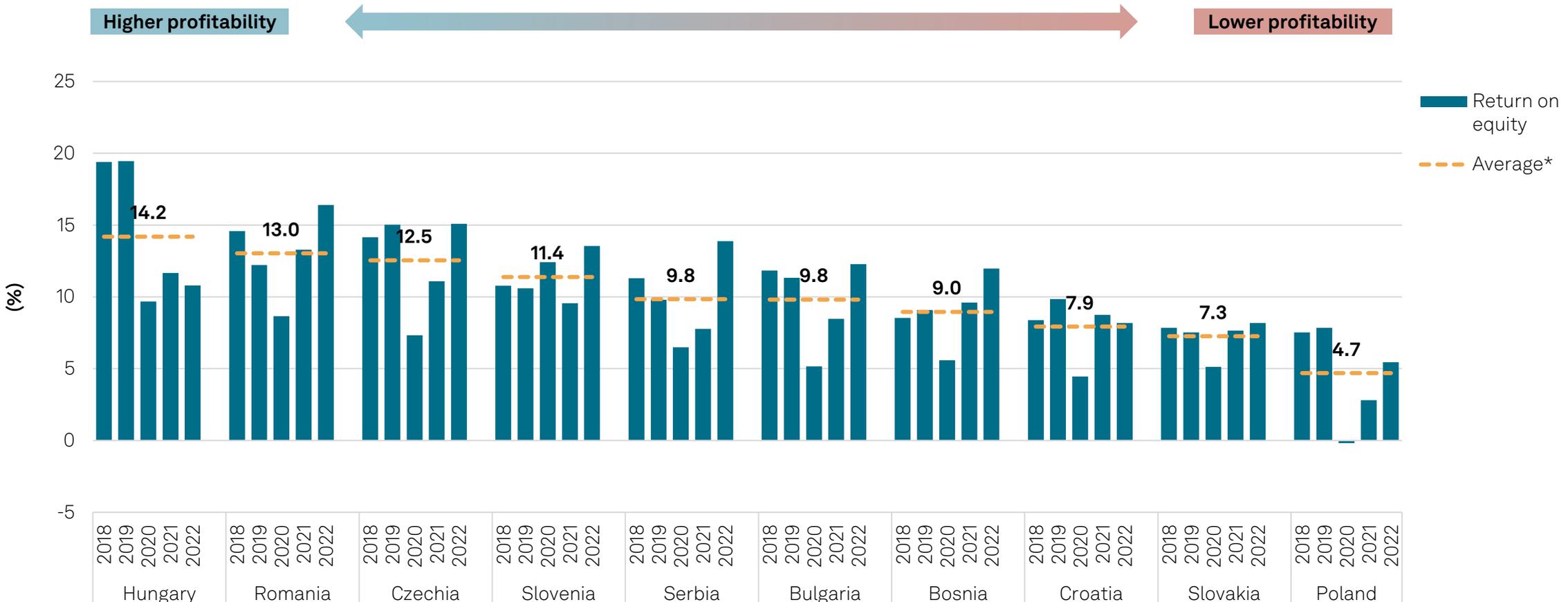


*We look at the peak since the start of the pandemic. Depending on the country the peak varies between Q4 2020 and Q2 2022. §Real housing prices have not declined in Croatia since the start of the pandemic, according to OECD data. Source: OECD Analytical House Price Indicators. Serbia and Bosnia are not covered by the OECD data.

Banking Sector

Average Return On Equity Varies Between 5% And 14% Across Countries

Systemwide return on equity between 2018 and 2022



Croatia joined the eurozone in 2023. The different interest rate environment could hamper comparability with past profitability. *Country average is calculated for the sample period (2018-2022). Source: IMF Financial Soundness Indicators, National Bank of Serbia.

Windfall Taxes Will Dent Profitability Unevenly

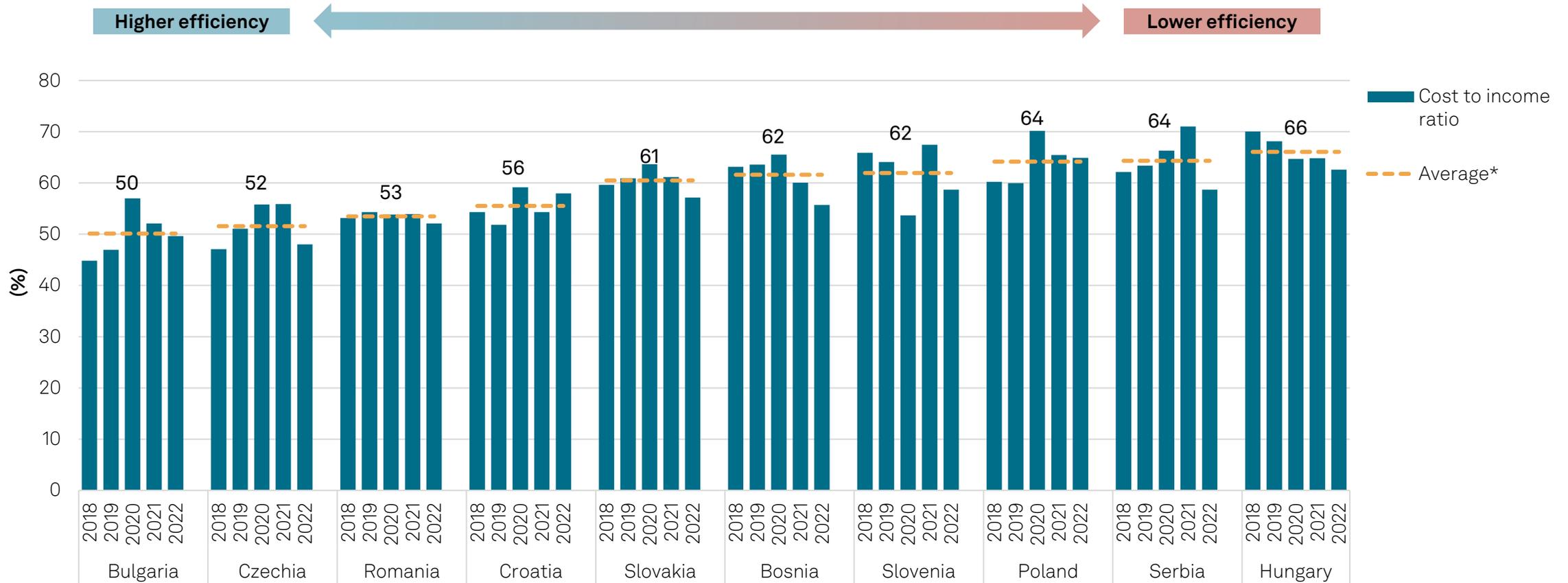
Windfall taxes on banks as of November 2023

	Windfall tax	Tax base	Tax rate
Bosnia	No	-	-
Bulgaria	No	-	-
Croatia	Yes	Pretax profits - 1.2 x average pretax profits in 2018-2021	33%
Czechia*	Yes	Pretax profits - 1.2 x average pretax profits in 2018-2021	60%
Hungary	Yes	Net revenues generated in Hungary in previous year	8%
Poland	Yes (General Banking Tax)	Total assets – PLN 4 billion	0.44%
Romania	Yes (from 2024)	Operating revenues	2% (first 2 years) then 1%
Serbia	No	-	-
Slovakia	No (but a plan announced)	Excessive profits (Details to be defined)	-
Slovenia	No (but planned for 2024)	Total assets of domestic operations	0.2%

*We expect a marginal impact from windfall taxes on rated Czech banks in 2023. Source: S&P Global Ratings.

Sizable Differences In Operational Efficiency

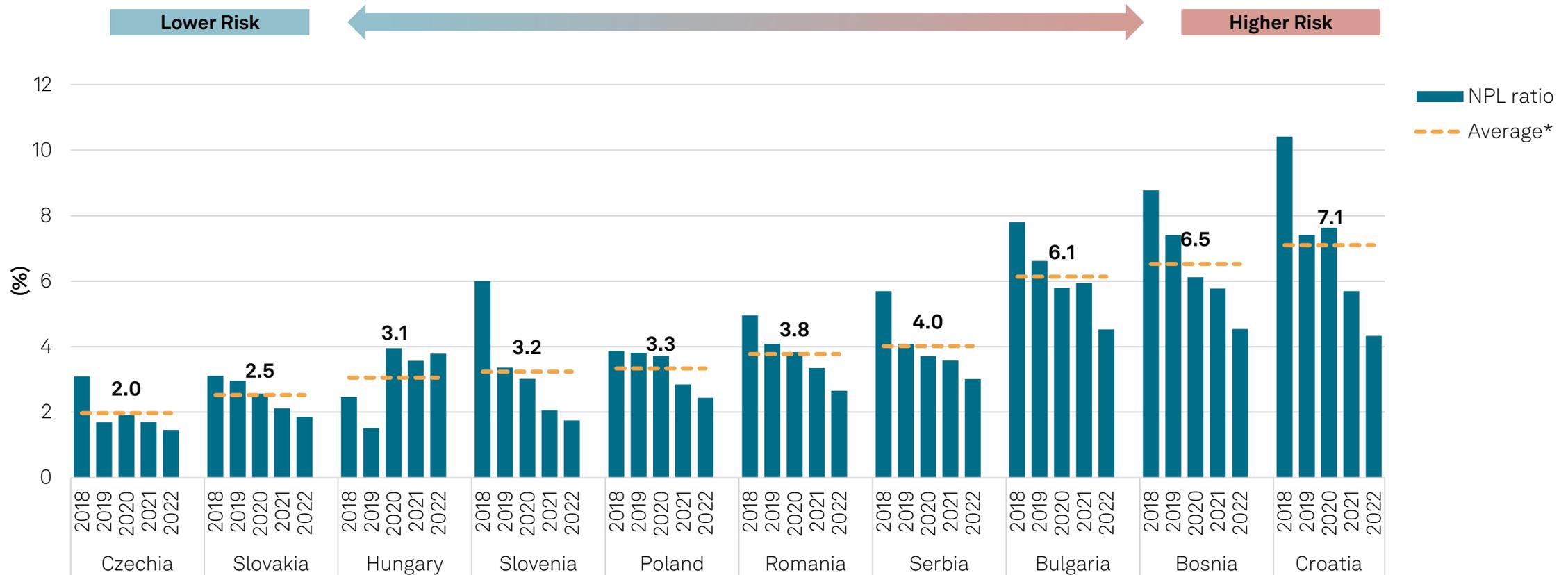
Systemwide cost-to-income ratio between 2018 and 2022



*Country average is calculated for the sample period (2018-2022). Source: IMF Financial Soundness Indicators, National Bank of Serbia.

Significant Reduction In Nonperforming Loans Across CEE

Systemwide nonperforming loan§ ratio between 2018 and 2022

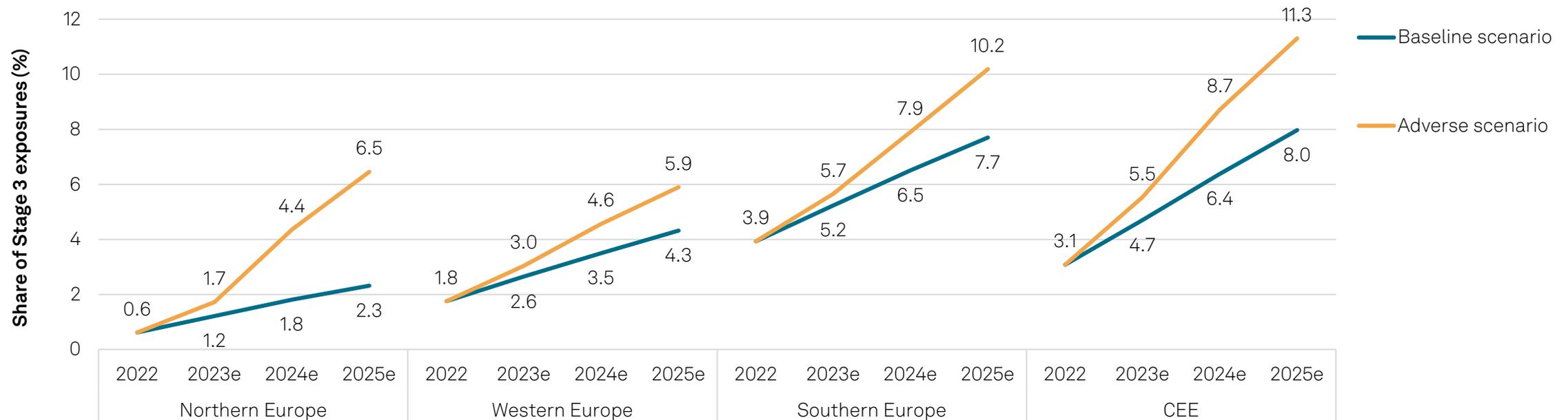


* Country average is calculated for the sample period (2018-2022). §NPLs are defined as those loans for which (1) payments of interest or principal are past due by 90 days or more; or (2) interest payments equal to 90 days or more have been capitalized (reinvested into the principal amount), refinanced, or rolled over (payment delayed by agreement); or (3) evidence exists to reclassify them as nonperforming even in the absence of a 90-day past due payment, such as when the debtor files for bankruptcy. The amount of loans recorded as nonperforming should be the gross value of the loan as recorded on the balance sheet, not just the overdue amount. Source: IMF Financial Soundness Indicators, National Bank of Serbia.

CEE Exposures Are The Most Sensitive To Economic Headwinds

Share of stage 3 exposures toward different regions under the baseline and adverse scenario (EBA stress test)

- Due to various assumptions and modelling constraints, the EBA stress test results are not a tool for projecting the future. However, they do provide a consistent methodology to compare developments across banks and countries.

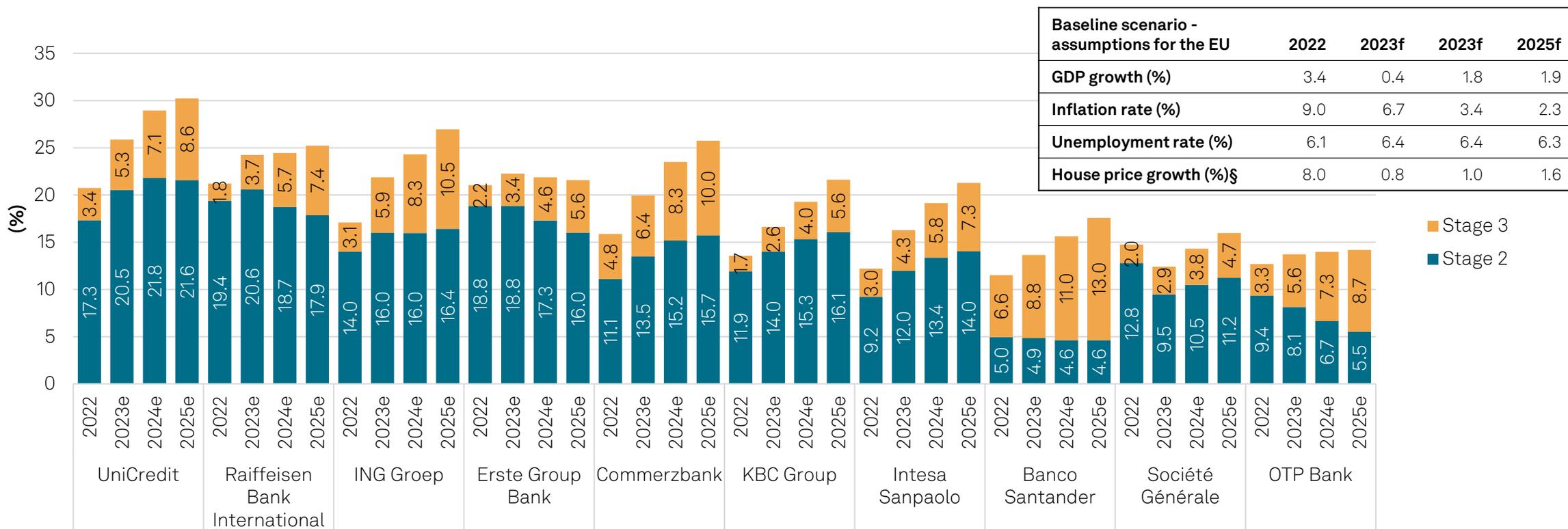


e--Estimate. The results are based on the exposures (corporate and retail) of all 70 banks included in the EBA stress test toward the respective region. For more information on the EBA stress test and the scenario definitions see our publication "EU Banks Resist Tough Assumptions In Latest Stress Tests" published Aug. 1, 2023. Northern Europe--Finland, Iceland, Norway, and Sweden. Western Europe--Andorra, Austria, Belgium, France, Germany, Ireland, Liechtenstein, Luxembourg, Monaco, Netherlands, Switzerland, and United Kingdom. Southern Europe--Cyprus, Greece, Vatican, Italy, Malta, Portugal, San Marino, and Spain. Central and Eastern Europe--The 10 countries that that are within the scope of this report (i.e. Bosnia, Bulgaria, Croatia, Czechia, Hungary, Poland, Romania, Serbia, Slovakia, and Slovenia.). Source: EBA Stress Test 2023, own calculations.

Gradual Increase In Stage 3 CEE Exposures Under The Baseline Scenario

Share of Stage 2 and Stage 3 exposures toward CEE under the baseline scenario (EBA stress test)

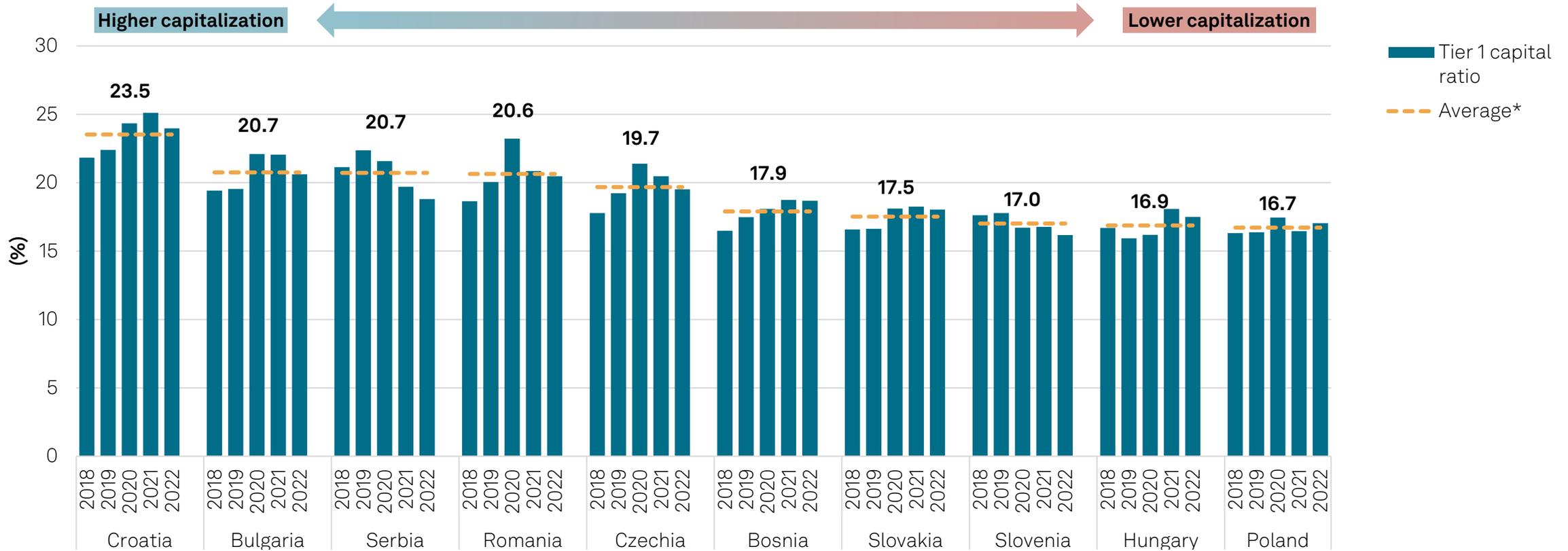
- Stress test is a tool to assess relativities between banks and not a means of forecasting the future.†



e--Estimate. f--Forecast. For every banking group we look at corporate and retail exposures toward the 10 CEE countries that we cover in this report. §Residential real estate price. †For example, the methodology assumes a constant balance sheet, fixed dividend payout ratios, no cure of stage 3 assets. In addition, interest income, fee income, and trading income are subject to certain regulatory modelling caps. Source: EBA Stress Test 2023, own calculations.

Regulatory Capital Ratios Are Strong For CEE Banks

Systemwide tier 1 capital ratio between 2018 and 2022



*Country average is calculated for the sample period (2018-2022). Source: IMF Financial Soundness Indicators, National Bank of Serbia.

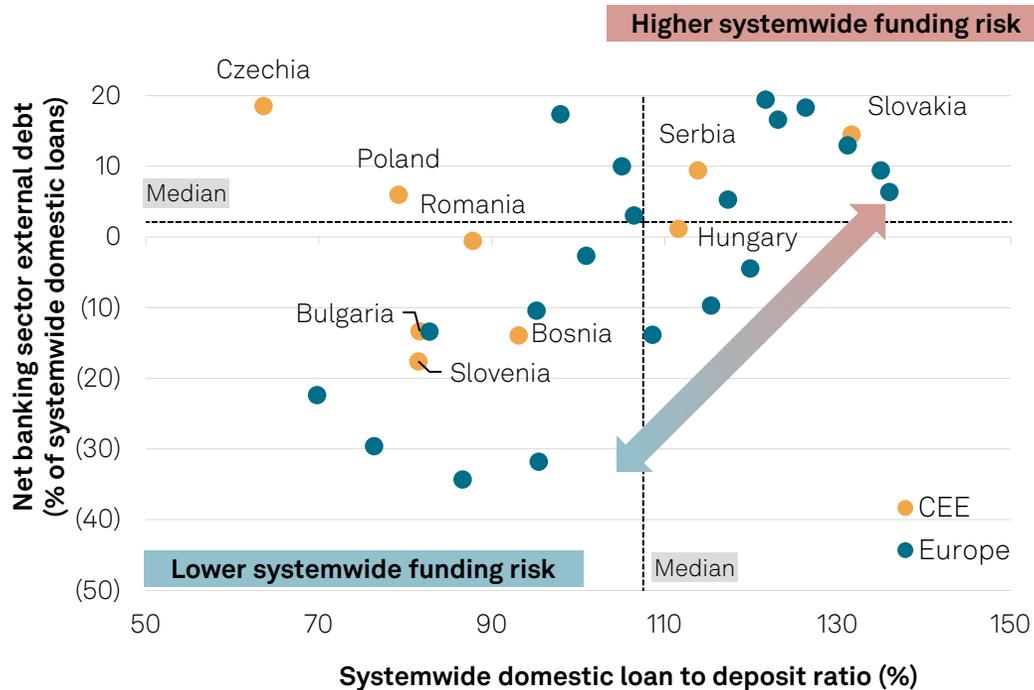
Funding

- CEE capital markets are often underdeveloped, also reflecting very comfortable levels of customer deposits.
- Most CEE banks' funding and liquidity metrics are higher than those of Western European banks, but these characteristics are generally applicable to the whole banking system, so that in most cases we reflect them in the anchor analyses and not in the bank-specific analyses.
- Both limited possibilities to fund on local markets and a high level of customer deposits result in generally very low reliance on the capital markets. This limits banks' risks, but also growth opportunities.
- At the same time, we have seen some improvements in local capital markets, particularly in most developed CEE countries. However, given the spike in deposits driven by the pandemic, this has hardly changed banks' funding structures so far.
- To comply with the MREL requirements (to become legally binding from Jan. 1, 2024), some CEE banks--local significant institutions or subsidiaries of banking groups that are multiple point of entry in resolution--raised different types of subordinated instruments, including additional tier 1, tier 2, and senior nonpreferred over 2023. We understand that a material proportion of the investors in these instruments are foreign players, with the market estimation being that the European Bank for Reconstruction and Development alone holds about 20%.

CEE Banks Exhibit Stronger Funding And Liquidity Metrics

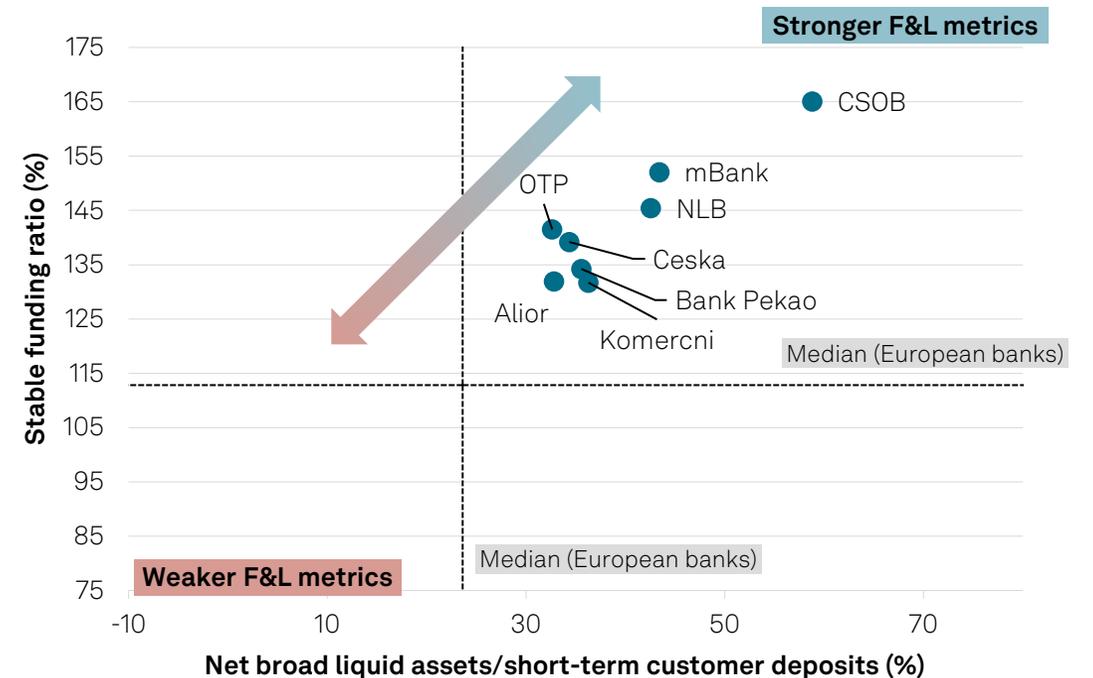
Comparison of systemwide funding in CEE and funding and liquidity metrics of rated CEE banks

Systemwide loan-to-deposit ratio and net external banking sector debt (2023 forecast)



These metrics are only a rough starting point in analyzing systemwide funding. A number of other additional qualitative and quantitative factors must be considered as well. Source: S&P Global Ratings.

Comparison of funding and liquidity metrics for rated CEE banks (H1 2023)



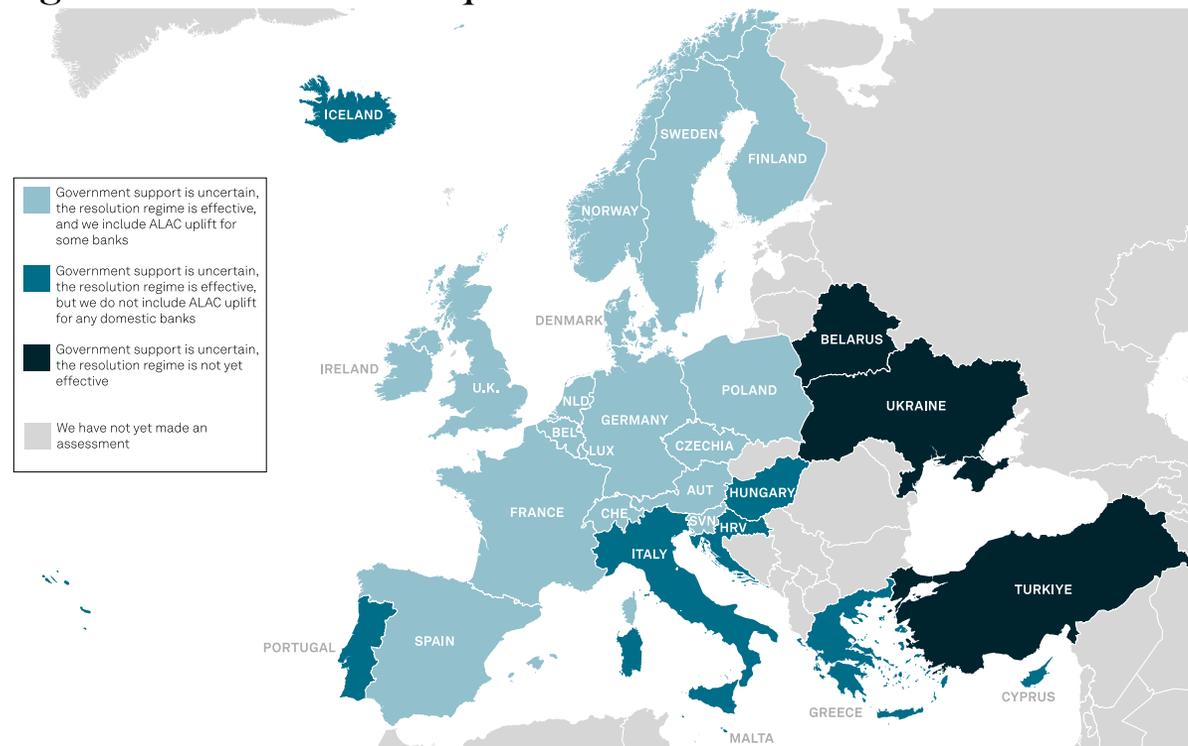
The median reflects all S&P Global-rated European banks that have a stand-alone credit profile. These metrics are only a rough starting point in analyzing funding and liquidity. A number of other additional qualitative and quantitative factors must be considered as well. Source: S&P Global Ratings.

Additional Loss Absorbing Capacity

Banks In Three CEE Countries Benefit From ALAC Support

- Country map showing whether banks in Europe benefit from rating uplift due to the buildup of additional loss-absorbing capacity (ALAC), which protects senior creditors in a potential resolution scenario.

Banks with ALAC support usually come from jurisdictions with the highest subordination requirements



AUT—Austria. BEL—Belgium. CHE—Switzerland. HRV—Croatia. LUX—Luxembourg. NLD—Netherlands. SVN—Slovenia. ALAZ—Additional loss absorbing capacity. Source: S&P Global Ratings, JP Morgan CEEMEA Credit Research.

Resolution story for European banks

- We believe that that banks' comprehensive resolution plans and robust loss-absorption capacity make government bailouts of failing banks less likely. Therefore, resolution remains our analytical base case for systemic European commercial banks that become nonviable.
- We expect that more CEE banks will be able to buildup sufficient ALAC buffers and become eligible for ALAC uplift (for groups that are multiple point of entry in resolution or stand-alone local systemic banks).
- For CEE subsidiaries of Western European banks that are subject to single point of entry resolution, we already incorporate ALAC notches in their ratings, as we believe that CEE subsidiaries will benefit from the wider group's ALAC buffers in case of need (Ceskoslovenska Obchodni Banka and Komerčni Banka in Czechia).

Contacts



Anna Lozmann, Director

anna.lozmann@spglobal.com

+ 49 693 399 9166



Karim Kroll, Senior Analyst

karim.kroll@spglobal.com

+ 49 693 399 9169



Cihan Duran, Associate Director

cihan.duran@spglobal.com

+ 49 693 399 9177



Lukas Freund, Associate Director

lukas.freund@spglobal.com

+ 49 693 399 9139



Heiko Verhaag, Associate Director

heiko.verhaag@spglobal.com

+ 49 693 399 9215



Markus Schmaus, Managing Director

markus.schmaus@spglobal.com

+ 49 693 399 9155

Copyright © 2023 by Standard & Poor's Financial Services LLC. All rights reserved.

No content (including ratings, credit-related analyses and data, valuations, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of Standard & Poor's Financial Services LLC or its affiliates (collectively, S&P). The Content shall not be used for any unlawful or unauthorized purposes. S&P and any third-party providers, as well as their directors, officers, shareholders, employees or agents (collectively S&P Parties) do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Parties are not responsible for any errors or omissions (negligent or otherwise), regardless of the cause, for the results obtained from the use of the Content, or for the security or maintenance of any data input by the user. The Content is provided on an "as is" basis. S&P PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED, OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs or losses caused by negligence) in connection with any use of the Content even if advised of the possibility of such damages.

Credit-related and other analyses, including ratings, and statements in the Content are statements of opinion as of the date they are expressed and not statements of fact. S&P's opinions, analyses, and rating acknowledgment decisions (described below) are not recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security. S&P assumes no obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P does not act as a fiduciary or an investment advisor except where registered as such. While S&P has obtained information from sources it believes to be reliable, S&P does not perform an audit and undertakes no duty of due diligence or independent verification of any information it receives. Rating-related publications may be published for a variety of reasons that are not necessarily dependent on action by rating committees, including, but not limited to, the publication of a periodic update on a credit rating and related analyses.

To the extent that regulatory authorities allow a rating agency to acknowledge in one jurisdiction a rating issued in another jurisdiction for certain regulatory purposes, S&P reserves the right to assign, withdraw, or suspend such acknowledgement at any time and in its sole discretion. S&P Parties disclaim any duty whatsoever arising out of the assignment, withdrawal, or suspension of an acknowledgment as well as any liability for any damage alleged to have been suffered on account thereof.

S&P keeps certain activities of its business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain business units of S&P may have information that is not available to other S&P business units. S&P has established policies and procedures to maintain the confidentiality of certain nonpublic information received in connection with each analytical process.

S&P may receive compensation for its ratings and certain analyses, normally from issuers or underwriters of securities or from obligors. S&P reserves the right to disseminate its opinions and analyses. S&P's public ratings and analyses are made available on its Web sites, www.spglobal.com/ratings (free of charge) and www.ratingsdirect.com (subscription) and may be distributed through other means, including via S&P publications and third-party redistributors. Additional information about our ratings fees is available at www.spglobal.com/ratings/usratingsfees.

Australia: S&P Global Ratings Australia Pty Ltd holds Australian financial services license number 337565 under the Corporations Act 2001. S&P Global Ratings' credit ratings and related research are not intended for and must not be distributed to any person in Australia other than a wholesale client (as defined in Chapter 7 of the Corporations Act).

STANDARD & POOR'S, S&P and RATINGSDIRECT are registered trademarks of Standard & Poor's Financial Services LLC.

spglobal.com/ratings