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APRIL 2025

Monthly Report

Germany's historic fiscal policy shift

Does inflation retard growth? Not necessarily!

EU enlargement and climate neutrality: taking up the twofold challenge of economic and environmental convergence

The state of the Czech automotive industry and the outlook for it

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The Vienna Institute for International Economic Studies
Wiener Institut für Internationale Wirtschaftsvergleiche

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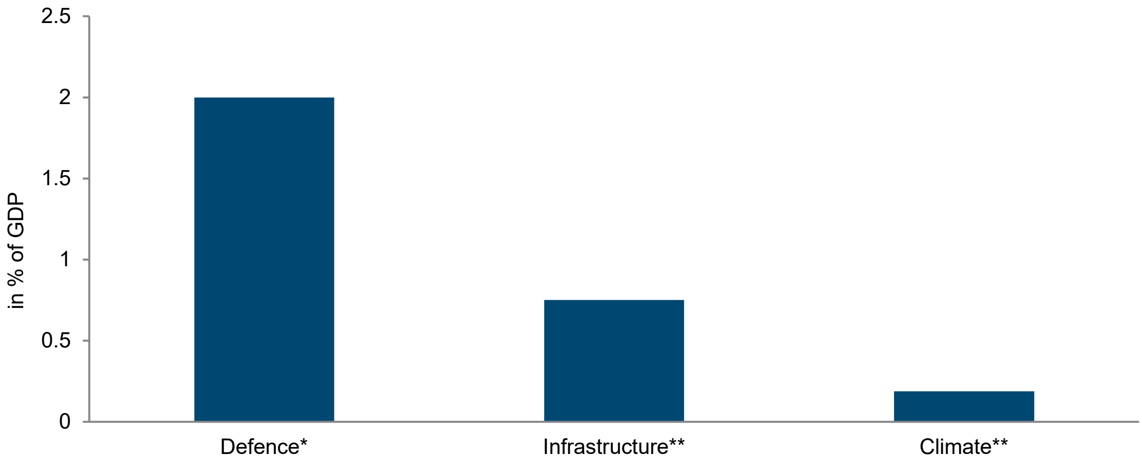
Chart of the Month: Germany's historic fiscal policy shift

BY PHILIPP HEIMBERGER

Figure 1 / Projected annual government spending in the context of the greater flexibility introduced by Germany to the debt brake in March 2025



Note: * Defence spending will be exempt from the debt brake in excess of 1% of GDP and is essentially uncapped. Here, we assume that German fiscal policy makers will meet an annual spending target for military expenditure of 3% of GDP, i.e. that the change in the debt brake will lead to an exemption for annual military spending of 2% of GDP. ** EUR 100bn of the EUR 500bn infrastructure fund for the next 12 years is to be channelled into climate spending (Climate and Transition Fund). Taken over 12 years, EUR 100bn in total climate spending will amount to around 0.2% of GDP in annual spending, while the remaining EUR 400bn for infrastructure spending will amount to 0.75% of GDP annually.
Source: Decision passed in the German parliament on 18 March 2025; own calculations.

Drawing on the votes of the Conservatives (CDU/CSU), the Social Democrats (SPD) and the Greens, the German Bundestag passed a major fiscal package in mid-March that makes the constitutional debt brake more flexible. According to the historic agreement, any spending on defence in excess of 1% of GDP will be exempt from the debt brake. A special fund of EUR 500bn is to finance investment in infrastructure and climate neutrality over the next 12 years. Furthermore, Germany's federal states are now allowed to run a structural fiscal deficit of 0.35% of GDP per year. Finally, the coalition agreement between the Conservatives and the Social Democrats includes a commitment to set up an expert working group to make recommendations for a more systematic revision of the debt brake that is to be completed by the end of 2025. However, reform of the debt brake will again require a two-thirds majority in parliament, meaning that the next coalition government – which consists of the CDU/CSU and the SPD – will not be able to pass a reform on its own; instead, it will require votes from the Greens and the Left Party.

The historic shift in German fiscal policy has led to a substantial upward revision (relative to the baseline of no policy change) in the economic growth forecast for Europe's economically most powerful country, with the potential for positive spill-over effects in some other countries (especially in Europe's industrial core, including Austria and EU-CEE countries). However, the prospect of a much more expansionary German fiscal policy stance has, to some extent, also increased long-term inflation expectations and reduced the scarcity of German government bonds, thereby triggering a rise in government bond yields. In reaction to the announcement of the original agreement between the Conservatives and the Social Democrats in early March, the 10-year German bond yield rose by around 40 basis points. As Germany's bonds are considered to be a benchmark for the wider euro area, bond yields rose in tandem for other euro area countries, thereby raising government financing costs.

However, German bond yields have since fallen, while US bond yields have increased. German bonds are emerging as a safe haven amid the trade war chaos – despite the prospect of a shift towards much more expansionary fiscal policy in Germany.

Opinion Corner*: Does inflation retard growth? Not necessarily!

BY LEON PODKAMINER[1]

Inflation is commonly believed to lead to various misfortunes – above all, the misallocation of productive resources. However, seemingly over the longer run it correlates positively with per capita GDP growth: it appears that the higher the inflation, the faster the economic growth. Against this background, one of the sources of weakness in the euro area economy may have been the overactive fight against inflation, rather than inflation itself.

Nobody (I think) actually approves of inflation. Among those who express an extreme aversion to it are numerous economists, especially of the liberal-conservative bent. For them, inflation should be kept at bay with a bargepole. In their zeal of denunciation, they accuse inflation of causing various misfortunes: impoverishment of the already poor, erosion of the real value of incomes, enhanced uncertainty and, above all, misallocation of productive resources. I recall, for example, a certain leading-light of the 'economic sciences' discipline arguing that with inflation, enterprises have no motivation to make investments. The view that persistently low inflation is conducive to economic growth is less radical in denouncing inflation: the higher and more persistent the inflation, the weaker the economic growth. This view motivates economic policy practices (fiscal and, above all, monetary) aimed at 'fighting inflation'. It is worth recalling that the main stated policy objective of the European Central Bank (ECB) is to maintain stable prices (targeting 2% inflation) 'and thus support economic growth and job creation'.[2]

Of course, it is not difficult to identify countries or territories where inflation is rampant and the economy is 'in ruins'. However, the examples of Zimbabwe or Venezuela do not conclusively prove the thesis about the destructive role of high inflation. In failed states, economic disintegration gives rise to inflation (or manifests itself in it). But economic destruction is not necessarily caused by inflation alone. The misfortunes suffered by those countries can be traced back to the attempts to replace democracy and a market economy with authoritarian rule and central management of the economy. The Soviet-type economies of Europe similarly went into decline well before they suffered high inflation, which only came in the wake of their terminal disintegration. Incidentally, President Erdoğan's Turkey is an interesting case in point: it has managed to combine extremely high inflation with strong economic growth.[3]

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* Disclaimer: The views expressed in the Opinion Corner section of the Monthly Report are exclusively those of the authors and do not necessarily represent the official view of wiiw.

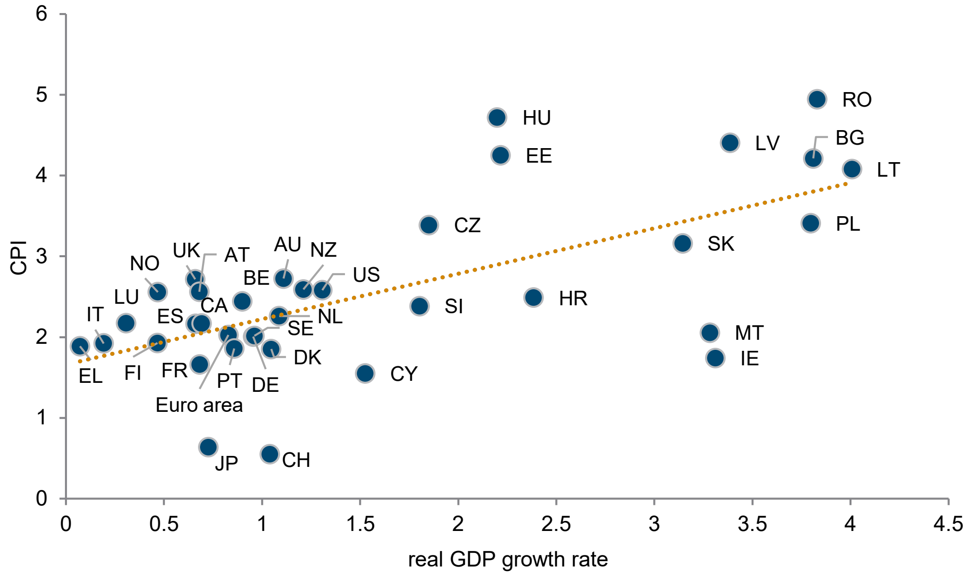
1 Advisor to the Governor of the National Bank of Poland and wiiw Senior Research Associate.

2 www.ecb.europa.eu/ecb/orga/tasks/monpol/html/index.en.html

3 Overall, with regard to growth, Turkey has been the best performer among the CESEE countries, despite its recurring balance-of-payments troubles.

A review of the statistical data for the advanced economies seems to contradict the statement about the necessarily beneficial effects (for economic growth) of permanently low inflation. It turns out that in the longer run, inflation correlates *positively* with the per capita GDP growth rate. Generally, the higher the inflation, the more rapid the economic growth. This is illustrated in Figure 1. For instance, in Poland the average inflation rate over the past two decades has been 3.4% – and the average GDP per capita growth rate has been 3.8%. Meanwhile, in Germany the average inflation rate has been exactly 2%, while GDP per capita has grown by less than 0.9% annually (the indicators for the entire euro area are almost the same – though slightly worse).

Figure 1 / Average inflation rate (CPI) and average growth rate of real GDP per capita in advanced countries, 2004-2024, in %



Note: The sample includes all EU countries, the UK, the US, Norway, Switzerland, New Zealand, Australia, Canada and Japan. The correlation coefficient for the scatter plot in Figure 1 equals +0.6521.
Source: AMECO.

Of course, we are not talking about some kind of close relationship between the growth rate and the inflation rate. Both of those items are influenced by a multitude of different factors: macroeconomic (e.g. fiscal policy, exchange rate developments) or structural (e.g. demography, structure of the economy, etc.). One of the factors is, naturally, the way in which monetary policy is conducted.

To be sure, I do not approve of active stimulation of higher inflation (e.g. via extremely expansionary fiscal/monetary policies) in the hope that this might translate into faster economic growth: such a treatment of the inflation-growth relationship would be very naïve and certainly unproductive. It would also be self-defeating, as the so-called Goodhart's Law suggests.[4] But there is even less reason to expect overactive suppression of inflation to foster economic growth. I also tend to think that the stubborn pursuit of the 2% inflation target by the ECB may have been one of the main reasons for the euro area's economic stagnation. In my view, it is not inflation that is a source of weakness in the economy of the euro area, but the overactive fight against inflation. Inflation in 2022-2023 may well have

[4] Two versions of Goodhart's Law: 1) 'Any statistical relationship will break down when used for policy purposes'; 2) 'When a measure becomes a target, it ceases to be a good measure.'

acted as a drag on economic growth; but that inflation was sparked by exogenous supply-side shocks, which had an impact on growth before inflation struck.

A POSTSCRIPT

A paper has just been published that examines the relationship between GDP growth and inflation for a total of 130 countries over the period 1960-2021.[5] Its conclusion is that there is no body of evidence showing that economies at any level of development consistently experience stronger economic growth outcomes when inflation is maintained at less than 3 percent as opposed to higher inflation rates, certainly within a 4-5 percent inflation range and, in some circumstances, somewhat higher rates still.

5 R. Pollin and H. Bouazza (2024). Considerations on inflation, economic growth, and the 2 per cent inflation target. *Review of Keynesian Economics*, 12(4), 453-474.

EU enlargement and climate neutrality: taking up the twofold challenge of economic and environmental convergence

BY AMBRE MAUCORPS AND ALEXANDRE BERNIER*

The EU's goal of achieving climate neutrality by 2050 has recently been embraced by EU candidate countries, demonstrating their commitment to reducing polluting emissions. Although their recent progress on the carbon intensity of their economies has been promising, their heavy dependence on fossil fuels and the limited fiscal room they have cast doubt on their capacity to meet EU environmental performance standards. Without substantial support from the EU even before accession, it is unlikely that candidate countries will manage to decarbonise their economies sufficiently by 2050 to be on a par with the rest of the EU.

INTRODUCTION

In December 2019, the European Commission presented the European Green Deal as the EU's roadmap to making Europe the first climate-neutral continent by 2050. According to this roadmap, the EU's economy should grow steadily while decoupling from the use of resources, so that – within three decades at most – it will produce zero net emissions of greenhouse gases (GHGs). Intermediate milestones include a reduction in net GHG emissions of at least 55% by 2030, compared to the 1990 levels (a target enshrined in the European Climate Law), and of 90% by 2040. Over the period 2015-2021, the EU progressed towards that goal, albeit at a pace deemed too slow by many experts (European Climate Neutrality Observatory, 2023).

In February 2022, Russia's full-scale invasion of Ukraine disrupted energy supply chains in Europe and exacerbated the rise in energy costs, prompting the EU to take swift action. With the REPowerEU plan launched in May 2022, the EU aimed to save energy, diversify its energy supplies (and above all, reduce its dependence on Russian fossil fuels) and produce more clean energy (thereby accelerating the green transition). However, the shift to clean energy sources cannot come about immediately, and in 2022 EU imports of both solid fossil fuels and natural gas were higher than before the pandemic.[1] Nevertheless, the EU's final energy consumption was 2.8% lower in 2022 than in 2021, and 3.0% lower in 2023 than in 2022.[2] In October 2023, the EU also committed itself to having renewables occupy at least a 42.5% share in the structure of its final energy consumption by 2030.[3]

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1 Source: Eurostat, Simplified energy balances (online data code: nrg_bal_s). Pre-pandemic levels refer to the year 2019.

2 Source: Eurostat, Simplified energy balances (online data code: nrg_bal_s).

3 This represents a binding target, as laid out in the revised Renewable Energy Directive EU/2023/2413. The ambition is to go beyond 42.5% and reach 45%.

The prospects of EU enlargement being extended to the countries of the Western Balkans and, since 2022, to Ukraine, Moldova and Georgia further complicate the path towards climate neutrality. Indeed, all these countries (bar Albania) are still largely dependent on coal or natural gas for their energy supply. As a result, their economies emit significantly more GHGs than their EU counterparts, relative to economic output. Their financial capacity is also more limited, leaving them in greater need, but with less fiscal room for green investment; and in Ukraine, the energy infrastructure has been massively damaged by Russian bombing. Importantly, though, the EU candidate countries[4] have aligned their climate policies with that of the EU: while the Western Balkans committed to working towards the 2050 climate-neutrality goal back in 2020, Georgia included that goal in its Long-Term Low Emission Development Strategy adopted in 2023, and Ukraine and Moldova embedded the goal in legislation in 2024.

CARBON INTENSITY OF EUROPEAN ECONOMIES ON A (STEEP) DOWNWARD SLOPE

The carbon intensity of an economy refers to the amount of GHGs (in carbon dioxide equivalent, or CO_2e) emitted per unit of gross domestic product (GDP) produced, hence it is a key indicator for evaluating a country's decarbonisation efforts over time. In fact, there may be several factors behind a reduction in carbon intensity: increased adoption of renewables in the energy mix; improvements in energy efficiency; or a more decarbonised economy (for instance, growth in non-carbon-intensive sectors). To ensure a consistent comparison across all EU member states and candidate countries, we include only GHG emissions from fuel combustion in the calculation of carbon intensity, which nonetheless accounts for the bulk of GHG emissions (Box 1).[5]

BOX 1 / MAIN DRIVERS OF GHG EMISSIONS

Among GHGs, carbon dioxide (CO_2) is the main contributor globally, accounting for 78% of the EU's total GHG emissions. Approximately 90% of CO_2 emissions come from fuel combustion (coal, oil and gas), while the remaining 10% originate from industrial processes. Methane (CH_4) is the second most important GHG (14% of the EU's total GHG emissions) and results chiefly from agricultural activities and, to a lesser extent, leaks in gas pipelines and infrastructure. Nitrous oxide (N_2O) is another notable GHG (6% of the EU's total GHG emissions), mainly produced through industrial activities and chemical reactions.[6]

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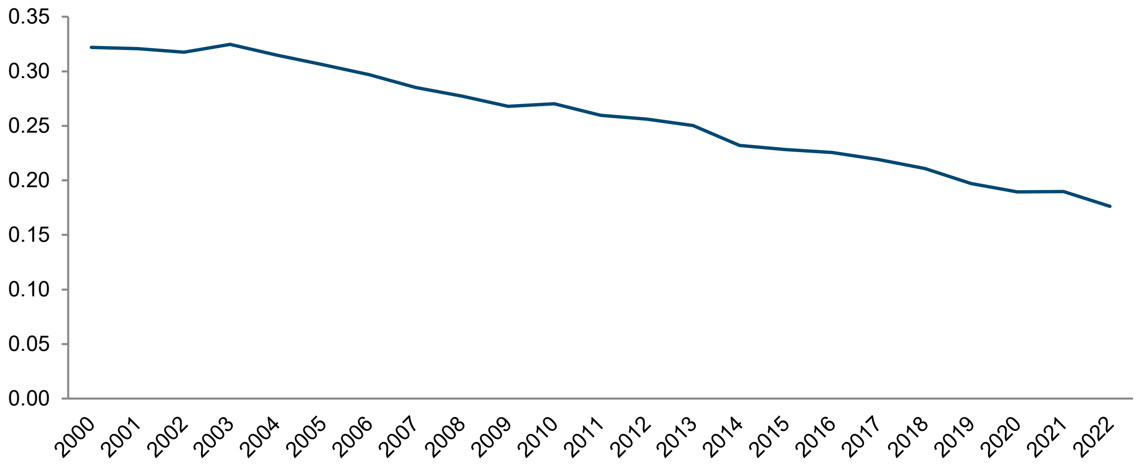
4 This article does not cover Turkey, whose accession negotiations with the EU have long been stalled, but does cover Kosovo as part of the Western Balkans, even though the country has only 'potential candidate' status.

5 Eurostat and World Bank data on GHG emissions do not cover all EU candidate countries, while IEA data cover all countries, but encompass only those emissions that stem from fuel combustion, as well as fugitive emissions. GHG refers here to CO_2, CH_4 and N_2O.

6 Source: World Bank, World Development Indicators.

The carbon intensity of the EU's economy has followed a fairly linear, clearly declining trend since the mid-2000s (Figure 1). In 2022, only 0.16 kg of CO_2e were emitted per US dollar of GDP[7] (that is around 0.18 kg per EUR),[8] down from 0.29 kg two decades earlier. In a similar manner, most Western Balkan economies have recorded a big drop in carbon intensity over recent years – albeit this started from (and is still at) a higher level than in the EU (Figure 2).[9] Ukraine's economy has likewise profoundly decarbonised: in 2000, its carbon intensity was 4.26 kg of CO_2e per US dollar (i.e. more than 13 times that of the EU for that year), but it was 'only' 1.50 kg just before the full-scale invasion (i.e. eight times that of the EU) (Figure 3). In Moldova, carbon intensity halved between 2000 and 2022 and is now five times the figure for the EU. Conversely, the carbon intensity of Georgia's economy has been hovering at around 0.50 kg of CO_2e per US dollar since the mid-2010s.

Figure 1 / Carbon intensity of the EU27's economy, kg of CO_2e per USD of GDP (in constant 2015 prices)



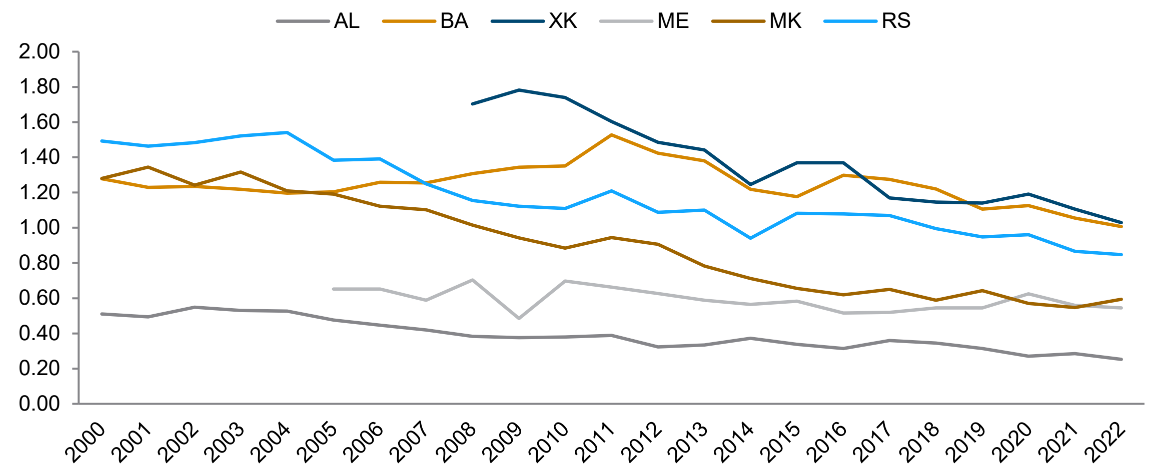
Source: IEA (CO_2 emissions from fuel combustion) and World Bank, World Development Indicators.

7 Here and below: expressed in 2015 constant prices.

8 Converted at the average exchange rate for the year 2015.

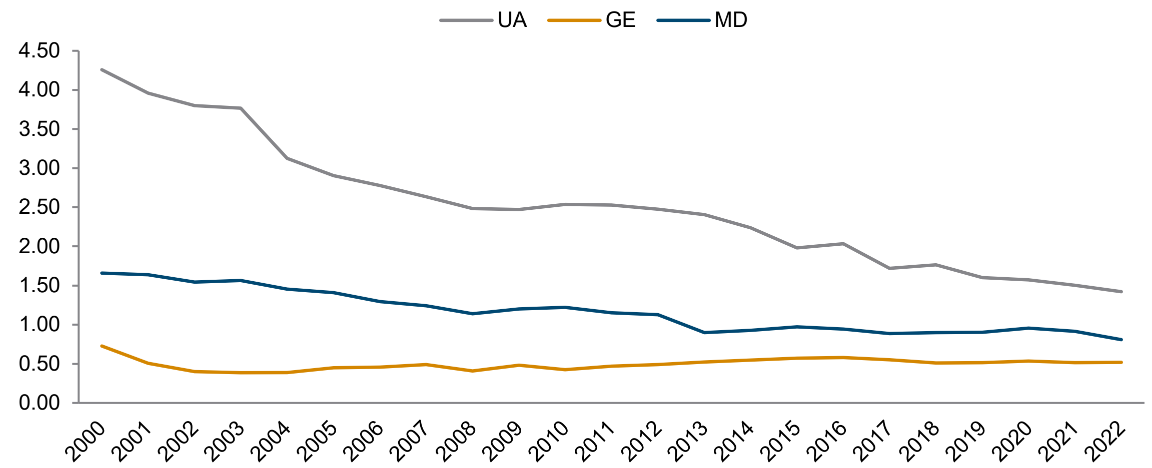
9 It is important to note that, in this article, we measure GDP in US dollars at exchange rates and not at Purchasing Power Parity (PPP). As EU candidate countries have lower price levels than the EU on average, the carbon intensity of their economies measured in kg of CO_2e per USD of GDP at PPP is substantially closer to (but still higher than) the EU (except Albania, whose economy has a slightly lower carbon intensity than the EU, when measured in kg of CO_2e per USD of GDP at PPP).

Figure 2 / Carbon intensity of Western Balkan economies, kg of CO_2e per USD of GDP (in constant 2015 prices)



Note: Earlier data missing for Montenegro and Kosovo.
Source: IEA (CO_2 emissions from fuel combustion) and World Bank, World Development Indicators.

Figure 3 / Carbon intensity of the economies of Ukraine, Moldova and Georgia, kg of CO_2e per USD of GDP (in constant 2015 prices)

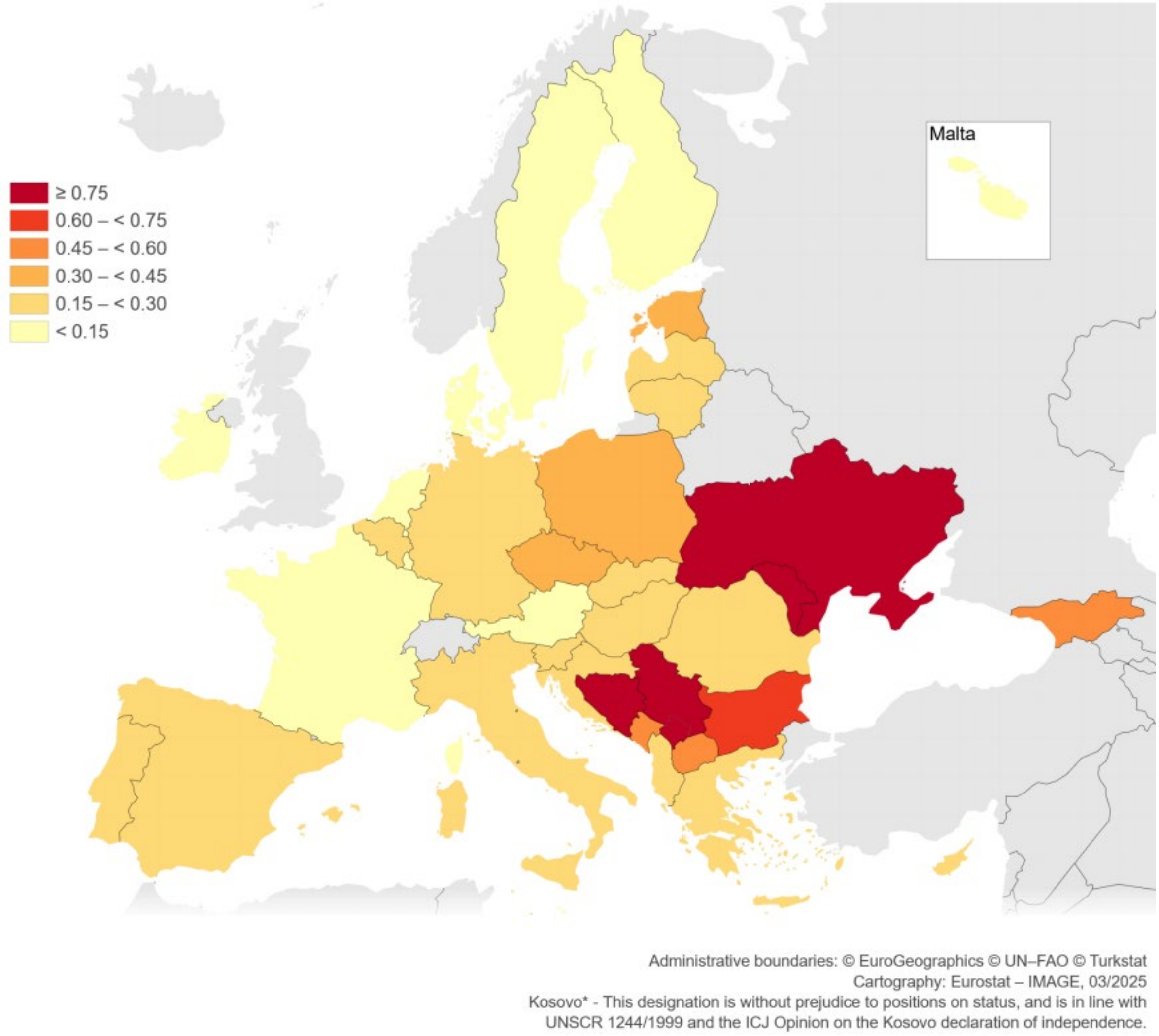


Source: IEA (CO_2 emissions from fuel combustion) and World Bank, World Development Indicators.

THE CARBON INTENSITY OF EUROPEAN ECONOMIES TODAY: A VERY MIXED PICTURE

As of 2022, the carbon intensity of European economies presents a stark contrast between EU member states and candidate countries (Figure 4). Indeed, the EU's average carbon intensity of 0.16 kg of CO_2e per US dollar is far below the figure for the countries aspiring to join the bloc. Even in most EU-CEE countries that still have operating coal mines (e.g. Poland, Romania, Czechia, Slovakia, Hungary and Slovenia), carbon intensity is below 0.50 kg of CO_2e per US dollar; from the pool of candidate countries, only Albania can boast a figure below that. This strong heterogeneity logically raises concerns as regards the capacity of candidate countries to catch up further with the EU average.

Figure 4 / Carbon intensity of European economies as of 2022, kg of CO_2e per USD of GDP (in constant 2015 prices)



Source: IEA (CO_2 emissions from fuel combustion) and World Bank, World Development Indicators. Map elaborated with the European Commission's IMAGE Interactive map generator.

THE IMPLICATIONS OF EU ENLARGEMENT FOR THE EU'S ENVIRONMENTAL PERFORMANCE

Following Russia's invasion of Ukraine, there has been a resurgence of interest in EU enlargement. This has served to point up the policy relevance of anticipating the challenges and opportunities for progress towards climate neutrality that will be presented by the accession of new countries. To assess the potential implications of EU enlargement for the EU's (future) environmental performance, we start by making two core assumptions: first, the future trend of carbon intensity for the EU and the candidate countries; and second, an enlargement scenario covering which countries would join the EU, and when.

With regard to the first assumption, we proceed with several linear regressions and conclude that the log-linear model is best suited to depicting carbon-intensity trends in Europe (Box 2). As for the second assumption, we have decided to use the staged enlargement scenario from Nunez Ferrer et al. (2024) in their assessment of the potential impacts of enlargement on regional Cohesion Policy allocations; this is built around two enlargement waves:

› 2030: Western Balkan candidate countries (i.e. Albania, Bosnia and Herzegovina, Montenegro, North Macedonia and Serbia) join the EU; and

› 2037: Ukraine, Georgia and Moldova join the EU.

BOX 2 / FORECASTING CARBON-INTENSITY TRENDS IN EUROPE

Given that 1) carbon emissions should tend to zero as decarbonisation progresses, and 2) the amount of decarbonisation should decrease as carbon intensity gets very low, due to technological constraints, we use a log-linear model of the form:

$$log(y) = \beta_0 + \beta_1 x + u$$

That is equivalent to:

$$y = \widetilde{\beta_0} e^{\beta_1 x} e^u$$

where:

› y is the carbon intensity of the economy measured in kg of CO_2e per US dollar, and

› x is the time measured in years.

This appears to fit well with both the historical trend and the technical requirements of carbon-intensity developments over time. In practical terms, this model implies that carbon intensity increases yearly by a constant rate equal to $e^{\beta_1} - 1$. With carbon intensity following a decreasing trend, as shown in Figures 1-3, the β_1 coefficient is actually negative, so that carbon intensity increases by a negative percentage, i.e. decreases. In other words, the *pace* of decarbonisation is constant, and the *amount* of decarbonisation (i.e. the absolute amount of GHG emissions saved) decreases with each year. As x (i.e. the time) tends to the infinite, y (i.e. carbon intensity) tends to zero.

The econometric regression of the log-linear model outlined above yields an R^2 of between 0.89 and 0.96, depending on the candidate country (except for Georgia, Montenegro, and Bosnia and Herzegovina), and of 0.98 for the EU; hence the log-linear model demonstrates a very high goodness-of-fit for most countries in our sample. Removing the carbon-intensity values from the earlier years (i.e. before the peaks achieved in 2010 and 2011 for Montenegro and Bosnia and Herzegovina, respectively), as well as the pandemic-related outlying value in 2020 (for Montenegro only) yields an R^2 that is above 0.5 in the case of both Montenegro and Bosnia and Herzegovina. Therefore, the coefficients estimated in the limited-period regressions for these two countries are used for our subsequent assessment.

The table below indicates the value of the decarbonisation pace for the whole of the EU and the candidate countries in our sample, except for Georgia, whose carbon intensity does not follow an obvious decreasing or increasing trend.

Box-Table 1 / Average decarbonisation pace of the EU and candidate countries 2023-2037

Countries	EU	AL	BA	XK	ME	MK	MD	RS	UA
Decarbonisation pace	-2.7%	-3.2%	-3.2%	-3.9%	-1.5%	-4.6%	-3.3%	-2.6%	-4.7%
R^2	0.98	0.89	0.85*	0.92	0.50*	0.96	0.92	0.90	0.96

Note: The decarbonisation rate refers to the year-on-year decrease in GHG emissions per unit of GDP.
* indicates a regression run on a more limited period of time than the period 2000-2022.
Source: Authors' own calculations.

Finally, the example of Croatia shows that neither accession negotiations nor EU membership disrupts the ongoing decarbonisation trend and pace; hence we assume that the estimated constant decarbonisation pace would not be affected by an acceleration or intensification of the accession process.

According to our projections, all candidate countries bar Georgia (whose carbon intensity does not follow an obvious decreasing or increasing trend) are expected to record a decline in their carbon intensity, with an annual decrease (in percentage terms) that is larger than the average for the EU (except Montenegro, whose carbon intensity decreases more slowly than that of the EU). Nonetheless, these countries are expected to remain, in absolute terms, well above the EU average carbon-intensity level in both 2030 and 2037 (Table 1).

Table 1 / Estimated carbon-intensity levels of the EU and candidate countries in 2030 and 2037, in kg of CO_2e per US dollar of GDP

Year	EU	AL	BA	XK	ME	MK	MD	RS	UA
2022	0.18	0.25	1.01	1.03	0.54	0.59	0.81	0.85	1.42
2030	0.14	0.21	0.80	0.76	0.46	0.37	0.62	0.71	1.00
2037	0.11	0.17	0.64	0.58	0.42	0.27	0.49	0.59	0.72

Source: Authors' own calculations.

These projections highlight the dual environmental and economic challenge that EU candidate countries face before, upon – and most likely after – accession. Their backwardness vis-à-vis the EU average is significant, owing to factors such as their current energy mix (skewed towards fossil fuels) and lower level of economic development (with a lower prevalence of energy-saving technologies). Indeed, only Serbia and Bosnia and Herzegovina currently exceed the EU average in terms of GHG emissions *per capita* (a metric also often cited as the benchmark for a country's environmental performance), while all other candidate countries lie below that average.[10] The analysis of carbon intensity thus provides an important nuance to the common observation that EU candidate countries pollute less than EU member states: if the former aim for economic convergence even before – but definitely at the time of – accession, they will need to substantially improve their performance in terms of CO_2 emissions *per unit of GDP* produced.

LOOKING AHEAD: DECARBONISATION CHALLENGES FOR EU CANDIDATE COUNTRIES

For EU candidate countries, improving the environmental performance of their economy is likely to be a bumpy road. They will face several major challenges, first and foremost linked to their dependence on fossil fuels.

Dependence on (Russian) gas

Since the expiration of the gas transit agreement between Ukraine and Russia in December 2024, gas flows have been significantly disrupted on the continent. Since then, only the TurkStream pipeline has continued to supply some European countries with Russian gas (not taking into account liquefied natural gas (LNG)).[11] Moldova has been hit particularly hard by the suspension of gas transit through Ukraine, despite its recent progress in cutting Russian gas imports. In December 2024, the country declared a state of emergency that led to a substantial reduction in energy consumption.[12] With around 75% of the country's electricity previously coming from the Cuciurgan gas plant (located in Transnistria and, since January 2025, no longer supplied with Russian gas),[13] Moldova has had to resort to expensive imports of electricity from Romania (Astrov and Hanzl-Weiss, 2025).

The Balkans have taken a more reserved stance than the EU on Russian gas, with countries like Serbia continuing to import it. At the same time, diversification efforts are under way. Croatia, for instance, has expanded the capacity of its Krk LNG terminal, and there are plans to connect it to the Southern Gas Corridor through the construction of the Ionian Adriatic Pipeline (IAP), a 2,715 km pipeline project linking Albania, Montenegro, Croatia and Greece.[14] In parallel, large-scale gas projects are advancing in the region, including the development of LNG terminals in Montenegro and Albania. However, these

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10 Source: World Bank, per capita CO_2 emissions, year 2023.

11 https://www.robert-schuman.eu/questions-d-europe/775-entre-la-baltique-et-les-balkans-une-geopolitique-du-gaz-recomposee

12 https://www.lemonde.fr/international/article/2024/12/14/la-moldavie-decrete-l-etat-d-urgence-energetique_6447949_3210.html

13 https://ceenergynews.com/electricity/moldova-ensures-electricity-supply/

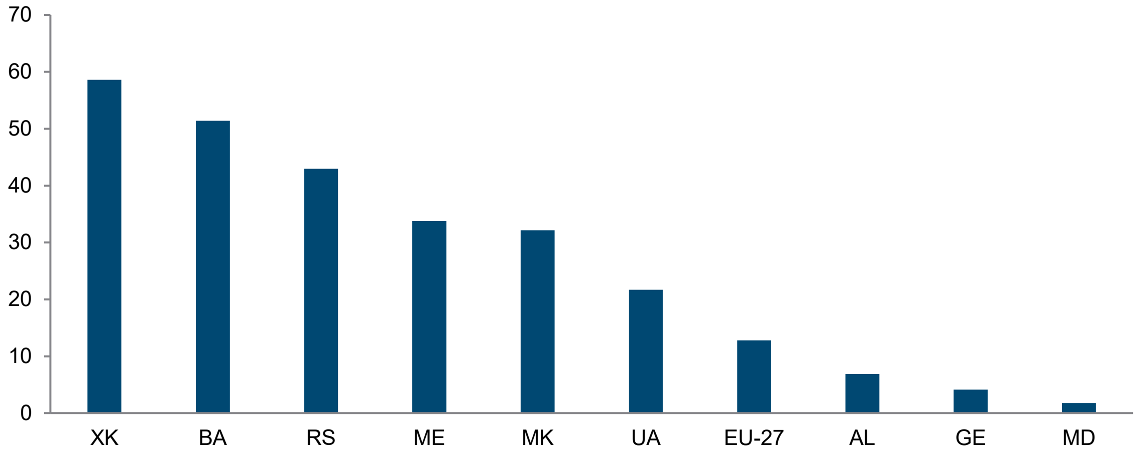
14 https://balkangreenenergynews.com/iap-pipeline-lng-terminal-are-strategic-projects-for-montenegro-minister/?

developments could expose the region to volatile LNG market prices, which could prove challenging in terms of energy costs and security.[15]

Dependence on coal

In fact, notwithstanding their recent record of progress and their willingness to achieve the same environmental performance as the EU, the current energy mix of the candidate countries – with coal as a critical source of energy in many of them (Figure 5) – suggests that decarbonisation efforts will become more arduous. With nearly 138,000 jobs directly linked to coal mining and coal-based power generation in the Western Balkans and Ukraine in 2018 (Ruiz Castello et al., 2021), the shift towards cleaner energy sources could result in substantial job losses if not tackled properly. While some of the countries have pledged to phase out coal by 2030 (e.g. North Macedonia), others are aiming for a later phase-out (e.g. Montenegro) or do not have any such plans yet (e.g. Bosnia and Herzegovina).[16]

Figure 5 / The share of coal in the total energy supply of the EU and candidate countries in 2022, %



Source: IEA, Total energy supply, by country.

Substantial financing needs and limited own resources

The Western Balkans (and, more generally, the EU candidate countries) are confronted with a mounting challenge when it comes to financing their transition to renewable energy sources – a challenge that EU member states can more easily overcome (Frey, 2024). As a matter of fact, Croatia alone plans to allocate some EUR 3.9bn from the EU's Recovery and Resilience Facility to climate objectives;[17] meanwhile the entire Western Balkan region is receiving just EUR 1bn from the EU Energy Support Package, complemented by at least EUR 3bn from the Instrument for Pre-accession Assistance (via the Growth Plan for the Western Balkans) to support infrastructure investment and connectivity, including

[15] https://www.euractiv.fr/section/energie-climat/news/les-projets-gaziers-dans-les-balkans-occidentaux-comportent-des-risques-economiques-et-securitaires/

[16] https://beyondfossilfuels.org/europes-coal-exit/

[17] Source: European Commission, Croatia's Recovery and Resilience Plan.

transport, energy, and the green and digital transitions.[18] Furthermore, upcoming EU rules – such as the 2035 ban on new vehicles with an internal combustion engine – mean that these countries will have to invest more heavily in electric vehicle infrastructure and other green technologies, if they are to comply with the newest requirements.

CONCLUSIONS

Achieving climate neutrality will certainly be trickier for the EU candidate countries than recent carbon-intensity developments would suggest. Indeed, their decarbonisation pace is faster than the average for the EU, but the carbon intensity of their economies remains – and over the next decade, assuming a business-as-usual scenario, will continue to remain – well above the EU average. In fact, their reliance on fossil fuels and the limited fiscal room they have to invest in renewable energy and green technologies are major hurdles in their pursuit of further decarbonisation efforts.

Therefore, it is crucial for the EU to step up its support to candidate countries in their attempts to achieve both economic and environmental convergence. In fact, this support would come with significant benefits for the EU itself: a deepened integration of the European energy market across the continent, which would facilitate access to renewable energy sources (e.g. from Albania) and critical raw materials (e.g. from Serbia), two core components of the green transition.

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[18] Source: European Commission, Overview of Pre-accession Assistance.

The state of the Czech automotive industry and the outlook for it

BY DORIS HANZL-WEISS AND MICHAL HRUBÝ*

This article considers the state of the Czech automotive industry and the outlook for it, and sheds light on two aspects of it – cars and battery production and exports – making various comparisons with Slovakia. It highlights Czechia's relatively robust production portfolio, with its increasing share of electric vehicles, its reliance on geographically close export markets with low geopolitical risk, and its ongoing integration into battery supply chains (albeit with a heavy reliance on imported battery cells). While the overall outlook for the automotive industry may appear gloomy, Czechia could hardly have entered this period in a better position.

INTRODUCTION

The automotive industry is prominent in the EU member states of Central and Eastern Europe (EU-CEE). Driven by an influx of foreign direct investment in the early 1990s, it has today become a major industry in Czechia, Slovakia and Hungary, as well as in Romania, Poland and Slovenia (Delanote et al., 2022). With almost 1.5m passenger cars (henceforth either cars or vehicles) produced and 93% of them exported in 2024, Czechia remains by far the biggest car manufacturer in EU-CEE; meanwhile, with almost 1m cars produced in 2024, Slovakia ranks second and retains the distinction of being the 'largest car producer per capita'.[1]

Weak demand and increased competitive pressure from Chinese and other global producers meant that several EU countries witnessed a decline in car production in 2024. For instance, Slovakia saw a decline of 8.1% and Germany of 1.0%. At the same time, Czech car production grew by 3.9%, to reach a record high. The dynamic growth of the Czech auto industry since COVID has been remarkable, compared to Slovakia and Germany – the EU's auto industry heartland (Figure 1). However, the declining trend in overall German production since 2018 and its stalled post-COVID recovery are of concern to the region, given its close integration with German value chains and the dependence of the automotive firms on foreign ownership. Besides, although the recently imposed 25% US car import tariff will hurt Slovakia first and foremost, the direct and indirect effects will also damage the Czech auto industry (Stehrer, 2025). Although its overall production volume trend was previously growing steadily, the cycle was negative throughout 2024 and has been on a downward slope since 2023. Nevertheless, some well-designed characteristics of the Czech auto industry could help it stay resilient in the years to come: for instance, its relatively broad and robust production portfolio, including newly produced electric vehicles

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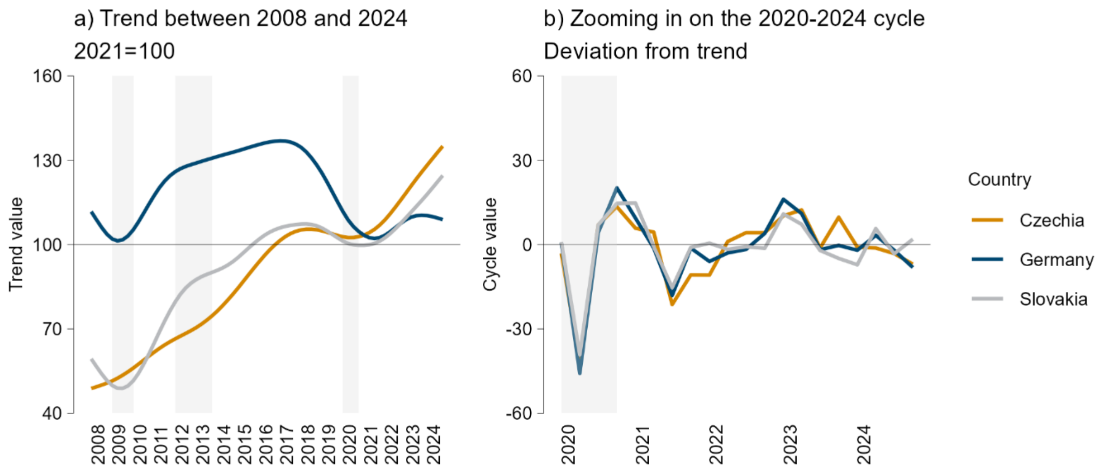
1 The main car manufacturers in Czechia include Škoda Auto, Hyundai and Toyota. Slovakia hosts four main car makers: Volkswagen, Stellantis, KIA and Jaguar Land Rover.

and their battery systems. The co-location of battery cell production within the borders of the country could be another milestone for Czechia and its automotive industry.

Figure 1 / Trends and cycles of automotive production in Czechia, Slovakia and Germany



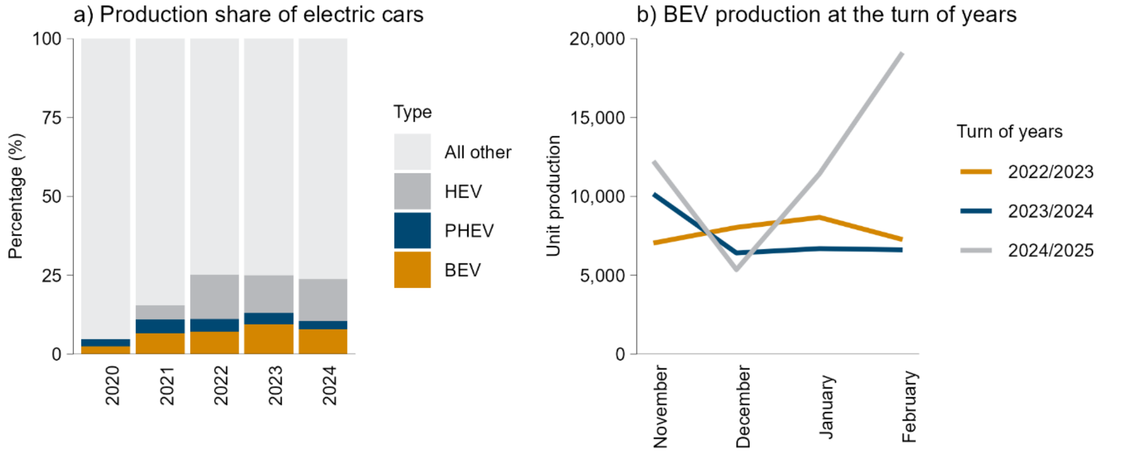
Note: Seasonally adjusted. Trend and cycle decomposition via boosted Hodrick-Prescott filter (Phillips and Shi, 2021). The Czech and German indices represent the automotive industry (NACE C29). Slovakia reports an index for the transport equipment industry (NACE C29-C30). Quarterly recession periods in Czechia (grey bars) are estimated by Jordán (2025).
Source: own calculations, based on Eurostat and Statistical Office of the Slovak Republic.

PRODUCTION OF ELECTRIC VEHICLES ON THE RISE

In the Czech car production portfolio, electric vehicles accounted for almost 24% in 2024, up from just below 5% in 2020. The largest increases in the production of electric vehicles occurred from 2020 to 2021 and from 2021 to 2022, while their share remained relatively stable from 2022 onwards (see Figure 2a). The shift toward electric vehicle production has been driven by the European Commission's CO_2 fleet emission targets, which became fully operational in 2021 and have hastened the transition to electromobility across Europe (European Commission, 2025).

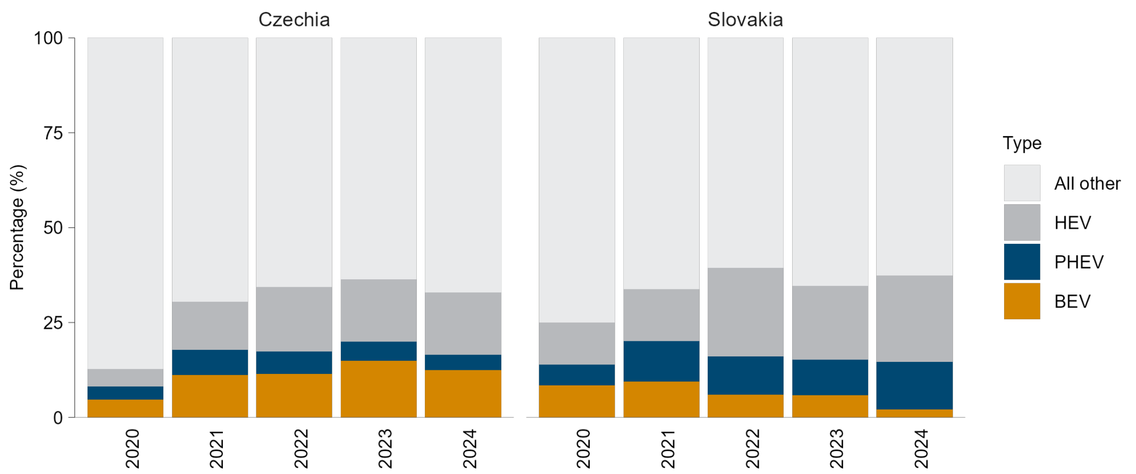
In general, electric vehicles include full hybrid electric vehicles (HEV), plug-in hybrid electric vehicles (PHEV) and battery-electric vehicles (BEV). Between 2020 and 2021, Czechia saw a significant upward shift in the share of plug-in electric vehicles and battery-electric vehicles, as production of the Hyundai Tucson (PHEV), Hyundai Kona Electric (BEV) and Škoda Enyaq (BEV) gradually came on line. From 2022 onwards, full hybrid vehicles have accounted for the largest proportion of electric vehicles manufactured in Czechia – a figure that has mainly been driven by the Toyota Yaris. Thus, in 2024 the production share was 13.3% for full hybrid vehicles, 2.6% for plug-in electric vehicles and 7.8% for battery-electric vehicles. The data for 2025 suggest a strong surge in BEV production at the beginning of the year. With the roll-out of the Škoda Elroq in January 2025, the Czech industry received a further boost to its BEV production that was already visible in the data for February 2025 (which showed an increase of 189% over February 2024). That month, BEV amounted to 13.6% of total car production (see Figure 2b).

Figure 2 / Production of electric cars in Czechia, as % of total car production and in units



Note: Production share of HEV is not reported by either AutoSAP or CDV and is estimated on the basis of company press releases and annual reports, with production starting in 2021.
Source: Czech Automotive Industry Association (AutoSAP), Transport Research Centre (CDV).

Figure 3 / Czech and Slovak car exports, by car type, as % of total car exports



Note: New BEV – HS 87038010, new PHEV – HS 87036010, new HEV – HS 87034010, all other – the remaining car types – HS 8703. Nominal EUR values.
Source: Eurostat Comext.

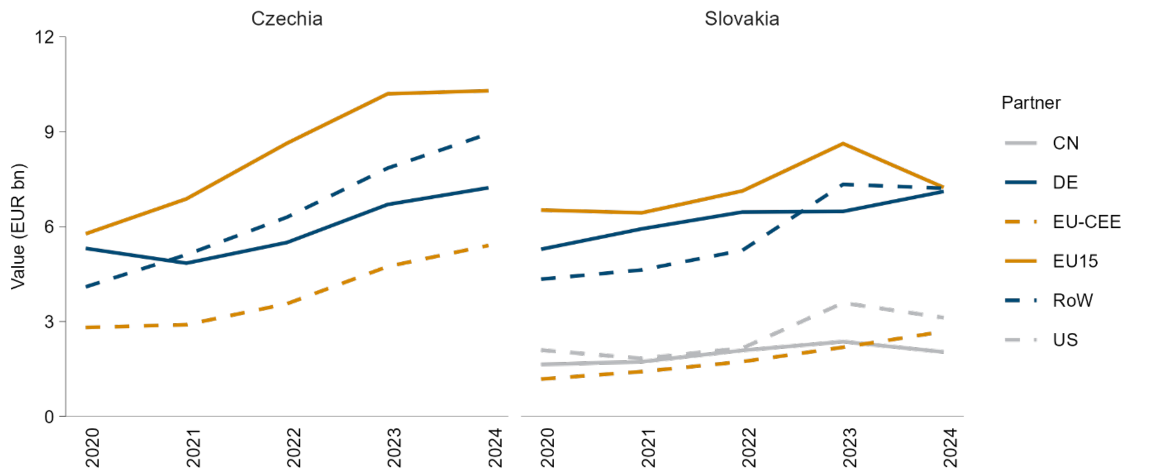
In the absence of detailed production data for electric vehicles in Slovakia, export data are used as a proxy to compare the electric vehicle portfolios of Czechia and Slovakia and to highlight differences and similarities. In both countries, the export share of electric vehicles jumped from 2020 to 2021, reaching 33% of all cars in Czechia and 37% in Slovakia in 2024. However, differences emerge at the detailed level (see Figure 3). The share of HEV and PHEV was much greater in Slovakia than in Czechia in 2024, while the share of BEV was much smaller. Although the Volkswagen e-up! had been produced in Slovakia since 2013, its production ended in 2023, and the export share of BEV gradually declined between 2021 and 2024. In the meantime, BEV's share of Czech exports grew between 2020 and 2023, to reach 14.9%; this was followed by a slight drop in production volume and export share in 2024. Thus, Czechia seems to be better positioned for a pure BEV transition. In Slovakia, all the main car manufacturers have plans for electric vehicle production. Moreover, a Volvo plant is under construction and will produce electric vehicles from 2026/2027 onwards.

CZECH EXPORT MARKETS LESS PRONE TO TRADE DISPUTES THAN THOSE OF SLOVAKIA

A key difference between Czechia and Slovakia is the importance of car exports to the whole economy. Although in value terms their car exports were similar in 2024 (Czechia: EUR 31.9bn; Slovakia: 29.4bn), the share of total exports was very different for the two countries: 13% in Czechia versus 28% in Slovakia. Slovakia's excessive dependence on car exports is a concern that has been raised by, for example, Stehrer (2025).

Let us look more closely at the two countries' dependence on individual export markets. Both countries, but especially Czechia, benefit from their proximity to (and demand from) Western European markets (see Figure 4). Not surprisingly, Germany and other Western European EU member states (EU15) are key trading partners for them – alongside the rest of the world (RoW). The countries of EU-CEE absorb a larger share of Czech exports than those of Slovakia. Important in today's geopolitical context of trade disputes, in 2024 Slovakia exported 18% of its cars to the US and China, while Czech exports to those two countries remain close to 0%.

Figure 4 / Czech and Slovak car exports, by importing partner, in EUR bn



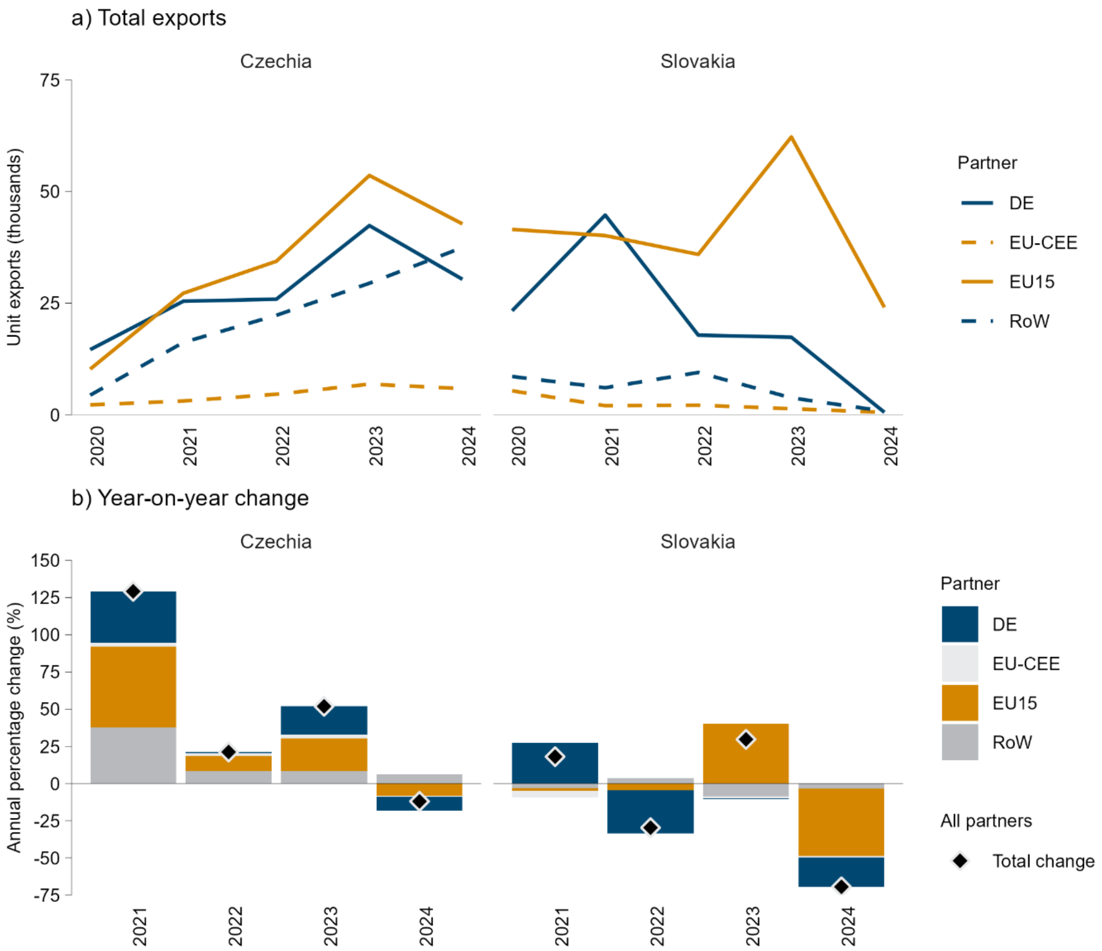
Note: Data from Eurostat Comext follow the Harmonised System nomenclature: cars – HS 8703. Czech exports to China and the US are above zero, but remain indistinguishable from zero after plotting. Nominal EUR values. EU15 includes Austria, Belgium, Cyprus, Denmark, Greece, Spain, Finland, France, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal and Sweden.
Source: Eurostat Comext.

We now focus on exports of electric vehicles by import partner, employing data on the units of cars exported; these are available for new battery-electric vehicles and are comparable to production statistics.

In 2024, Czechia exported 116,000 units of BEV (down from 132,000 units in 2023), 95% of which went to EU15, RoW and Germany. Although there was a drop in exports to EU15 and Germany compared to 2023 (hand in hand with a decline in production volumes), RoW partly offset this decrease (see Figure 5). Interestingly, RoW (which includes the United Kingdom as an increasingly important partner in car trade with Czechia) is the only 'partner' to increase the Czech BEV unit imports each year over the observed period; it made a positive contribution of 6.1 percentage points to the annual export change in 2024 (which eventually reached -12% in total). Although EU-CEE is transitioning only slowly towards electromobility and does not yet play an important role as an export destination for Czech BEV, the coming years could see increased demand in the region, given the strategic role of electromobility promoted by the EU.

By contrast, in 2024 Slovakia exported only 26,000 BEV units (down from 85,000 in 2023), 93% of which went to EU15. Its exports of battery-electric vehicles are down especially because of the 2023 phasing-out of the only BEV previously produced, the Volkswagen e-Up!.

Figure 5 / New BEV unit exports, by importing partner



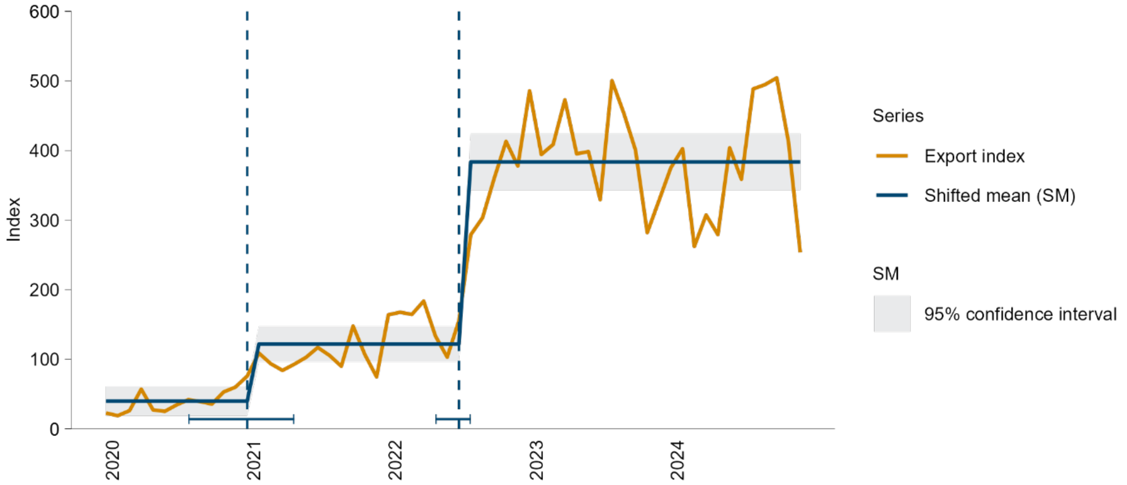
Note: Czech exports to the US are above zero, but remain indistinguishable from zero after plotting. Czech and Slovak exports to China are zero. HS 87038010 (new BEV) in units of exported cars.
Source: Eurostat Comext.

INTEGRATION INTO BATTERY SUPPLY CHAINS, BUT RELIANCE ON IMPORTED CELLS

Czechia has integrated well into the battery supply chains, though as yet without high value-added activities. Local companies, including Hyundai and Škoda Auto, produce battery systems from imported battery cells for their BEV. Notably, Škoda Auto produces the battery systems for other Volkswagen brands in Germany and elsewhere. While not all imports of batteries (HS 850760 of lithium-ion accumulators, including cells, modules and final battery systems) go into the production of electric cars (other purposes include energy storage systems), most of the Czech battery exports are destined for the automotive industry. Integration into a battery production network without a single battery cell ‘gigafactory’ is possible, but it would not help to build a value and supply chain of a scale comparable to the production of cells.

To track developments in the export of battery systems to the automotive industry, we introduce a Czech battery export index: this indicates shifts in the mean of the monthly time series (see Figure 6), which is based on the weight of the batteries exported. It aims to track changes in exports on the basis of information provided by Škoda Auto. The first shift (in January 2021) seems to correspond to the gradual investment by Škoda Auto announced in 2020, increasing the 2021 annual production and export of PHEV battery systems (in units) by 68% and 105%, respectively. The second sizeable shift (in July 2022) corresponds to the launch of production of BEV battery systems in May 2022 (Škoda Auto, 2022). That year, PHEV battery production increased by only 1%, whereas exports of all battery systems rose by 47% (in terms of units). The company discontinued the production of PHEV in favour of BEV battery systems in 2024.

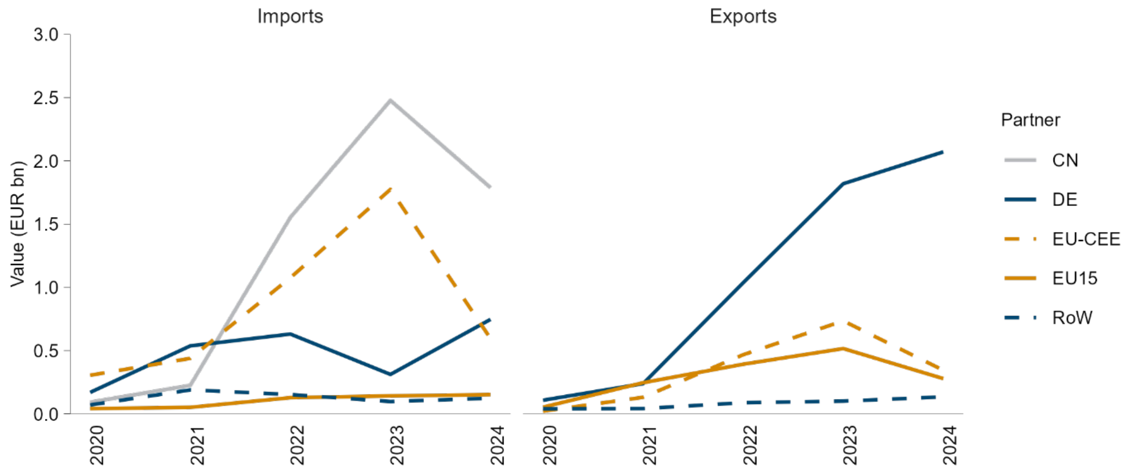
Figure 6 / Czech battery export index, 2021=100



Note: Not seasonally adjusted, calculated as Czech exports of batteries (in kg) (HS 850760) scaled by automotive industry production volume (NACE C29). The shift in the mean is based on a sequential test of the structural change model of Bai and Perron (1998).
Source: Eurostat, Eurostat Comext.

In 2024, Czechia’s overall battery trade (imports plus exports) amounted to EUR 6.3bn, of which EUR 2.8bn were exports (compared to car exports of EUR 31.9bn). By contrast, Slovakia achieved a battery trade of EUR 1bn in 2024, of which only EUR 210m were exports (compared to EUR 29.4bn in car exports). Figure 7 shows details of the Czech battery trade over time. On the import side, China and EU-CEE (notably, Hungary and Poland) are the most important battery cell providers, including CATL from China, LG from Poland and Samsung from Hungary. Germany has become the most important export destination for Czech batteries, thanks to Volkswagen's strategy for Škoda Auto.

Figure 7 / Czech battery imports and exports, by trading partner, in EUR bn



Note: Czech exports to the US and China and imports from the US are above zero, but remain indistinguishable from zero after plotting. Nominal EUR values.
Source: Eurostat Comext.

The EU's Net Zero Industry Act (European Commission, 2023) calls for domestic, European battery cell production to counter the continent's high import dependence on China. However, negotiations on Samsung's investment in the first-ever cell production in Czechia have stalled (Ministry of Industry and Trade of Czechia, 2025), primarily because of the uncertainty faced by investors, the local community's objections and environmental concerns. By contrast, in Slovakia an ongoing joint 'gigafactory' project by Slovakia's InoBat and the Chinese group Gotion could shortly begin construction in a (now declared) strategic project location (Ministry of Economy of Slovakia, 2025); that said, it faces similar concerns as those raised in Czechia, plus worries about the influx of foreign workers. Slovakia would, nevertheless, join the cell production value chain faster than Czechia, with possible net benefits for the local economy over time.

CONCLUSION

Although the automotive industry plays a prominent role in EU-CEE, and although Czechia is one of the EU's leading car producers, weaker demand and competitive pressure from China and other global producers represent a major challenge. A further issue is the slow transition to electromobility. In 2020, the CO_2 fleet emission targets adopted by the EU encouraged the transition of European companies to electromobility. The 2025 fleet emission target, albeit now stretched over the next three years, should provide a further boost to sales and encourage the introduction of new electric models (European Commission, 2025). Concerns over possible fines for failing to meet the CO_2 targets have faded into the background in the wake of the US tariffs announced by President Trump. These 25% car import tariffs will put the European automotive industry under further pressure and will have repercussions for Czech car production, mainly through indirect effects.

This article has looked at the state of the Czech auto industry and the outlook it faces, focusing on two aspects (cars and batteries) and drawing on several comparisons with Slovakia. It has indicated: 1) the relatively robust production portfolio of Czech auto producers, with an increasing share of electric vehicles, especially BEV; 2) the sector's solid reliance on export markets in Europe, with low geopolitical risk compared to some overseas markets; and 3) the high degree of integration into battery supply chains through battery systems production, though without any final investment decision having been made regarding local battery cell production. While the overall market outlook may appear gloomy, Czechia could hardly have entered this period in a better position.

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Monthly and quarterly statistics for Central, East and Southeast Europe

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Baseline data and a variety of other monthly and quarterly statistics, **country-specific** definitions of indicators and **methodological information** on particular time series are **available in the wiiw Monthly Database** under: https://data.wiiw.ac.at/monthly-database.html. Users regularly interested in a certain set of indicators may create a personalised query which can then be quickly downloaded for updates each month.

Conventional signs and abbreviations used

%	per cent
ER	exchange rate
GDP	Gross Domestic Product
HICP	Harmonised Index of Consumer Prices (for new EU member states)
LFS	Labour Force Survey
NPISHs	Non-profit institutions serving households
p.a.	per annum
PPI	Producer Price Index
reg.	registered
y-o-y	year on year

The following national currencies are used:

ALL	Albanian lek	HUF	Hungarian forint	RON	Romanian leu
BAM	Bosnian convertible mark	KZT	Kazakh tenge	RSD	Serbian dinar
BGN	Bulgarian lev	MDL	Moldovan leu	RUB	Russian rouble
BYN	Belarusian rouble	MKD	Macedonian denar	TRY	Turkish lira
CZK	Czech koruna	PLN	Polish zloty	UAH	Ukrainian hryvnia

EUR euro – national currency for Montenegro, Kosovo and for the euro-area countries Estonia (from January 2011, euro-fixed before), Latvia (from January 2014, euro-fixed before), Lithuania (from January 2015, euro-fixed before), Slovakia (from January 2009, euro-fixed before), Slovenia (from January 2007, euro-fixed before) and Croatia (from January 2023, euro-fixed before).

Sources of statistical data: Eurostat, National Statistical Offices, Central Banks and Public Employment Services; wiiw estimates.

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wiiw Annual Database	wiiw Monthly Database	wiiw FDI Database

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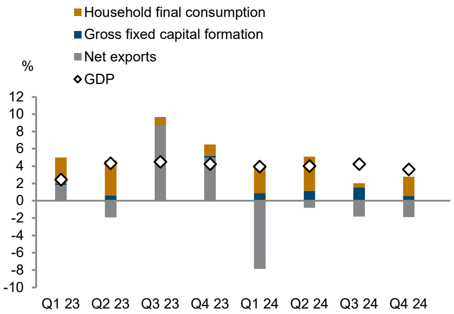
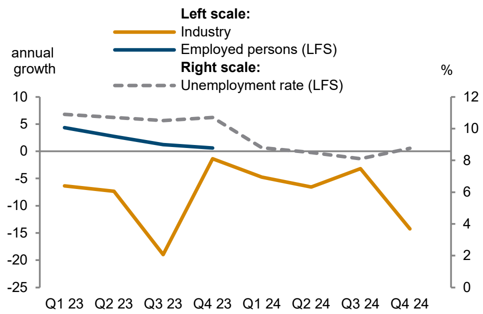
Albania

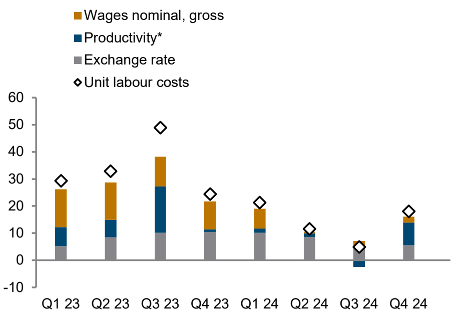
Real GDP growth and contributions
y-o-y



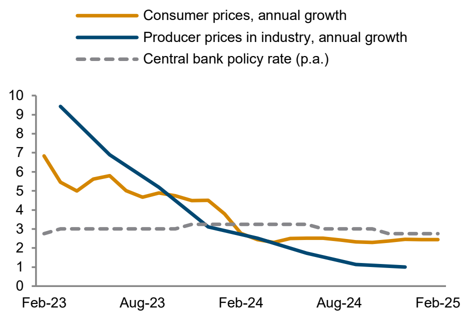
Real sector development
in %



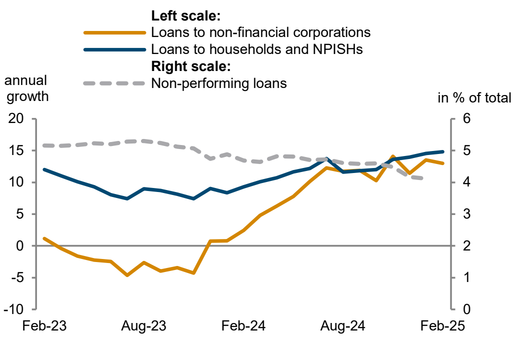
Unit labour costs in industry
annual growth rate in %



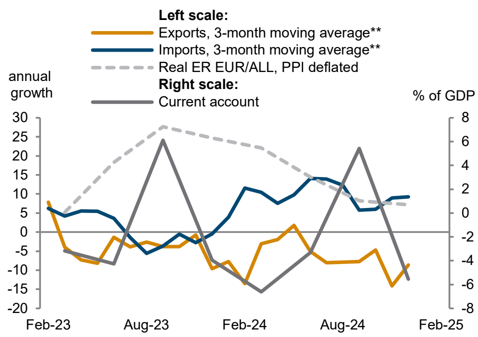
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %

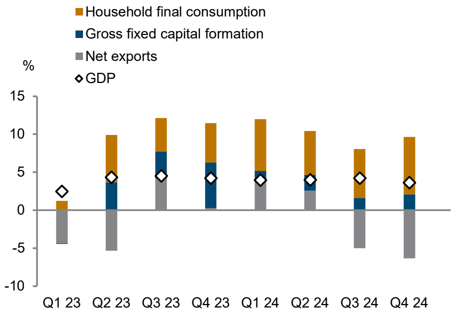


*Positive values of the productivity component on the graph reflect decline in productivity and vice versa.
**EUR based.

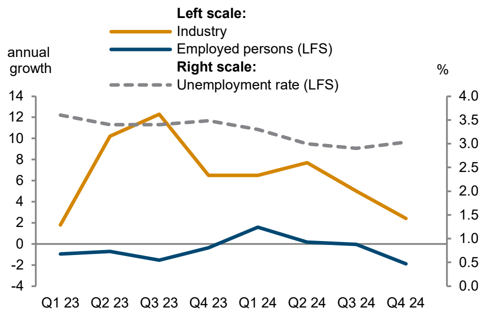
Source: wiiw Monthly Database incorporating Eurostat and national statistics.
Baseline data, country-specific definitions and methodological breaks in time series are available under:
https://data.wiiw.ac.at/monthly-database.html

Belarus

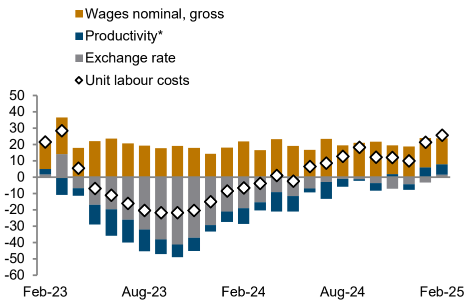
Real GDP growth and contributions
y-o-y



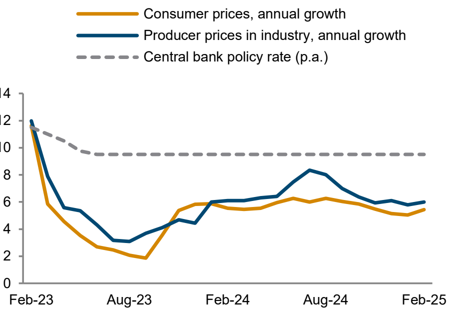
Real sector development
in %



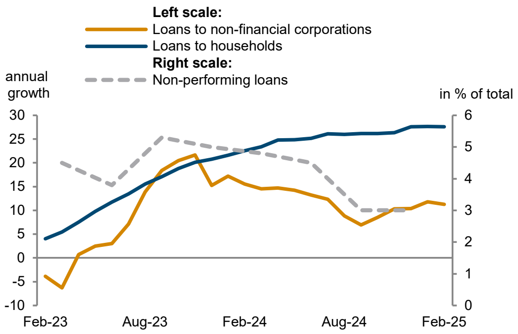
Unit labour costs in industry
annual growth rate in %



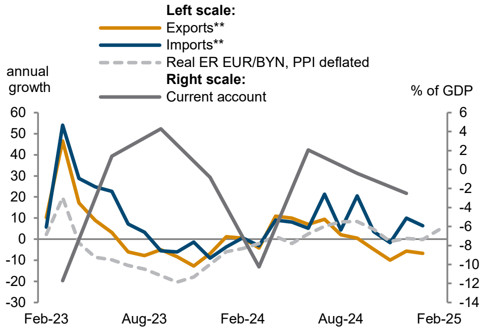
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



*Positive values of the productivity component on the graph reflect decline in productivity and vice versa.
**EUR based.

Source: wiiw Monthly Database incorporating Eurostat and national statistics.
Baseline data, country-specific definitions and methodological breaks in time series are available under:
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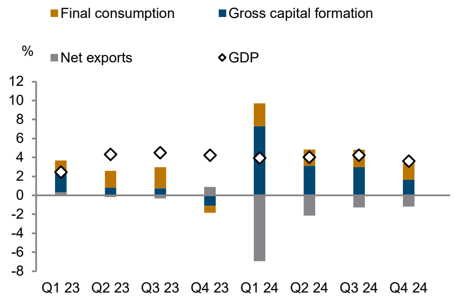
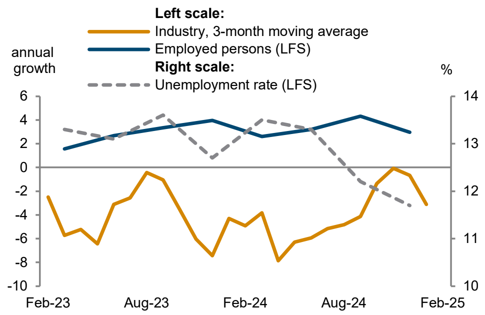
Bosnia and Herzegovina

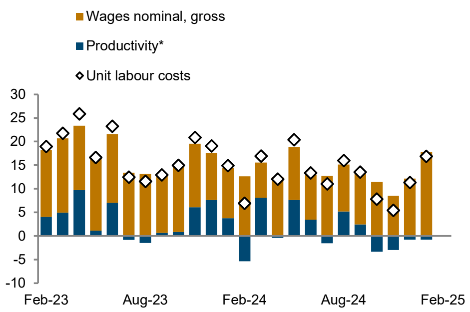
Real GDP growth and contributions
y-o-y



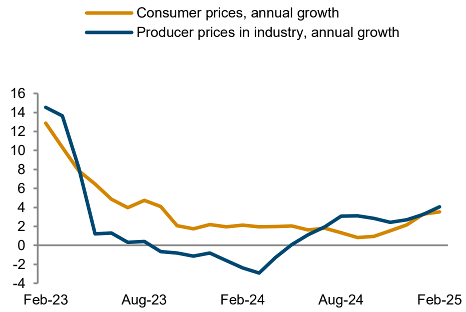
Real sector development
in %



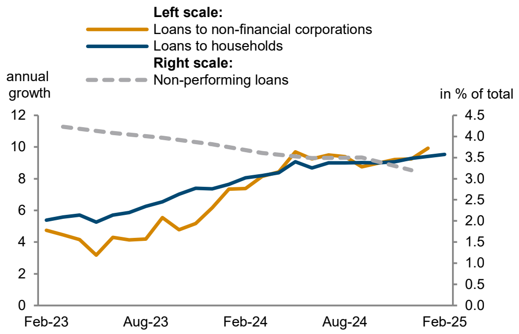
Unit labour costs in industry
annual growth rate in %



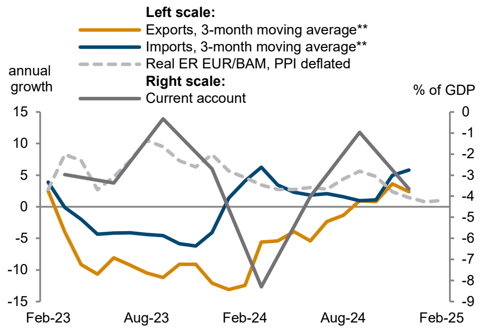
Inflation
in %



Financial indicators
in %



External sector development
in %



*Positive values of the productivity component on the graph reflect decline in productivity and vice versa.
**EUR based.

Source: wiiw Monthly Database incorporating Eurostat and national statistics.
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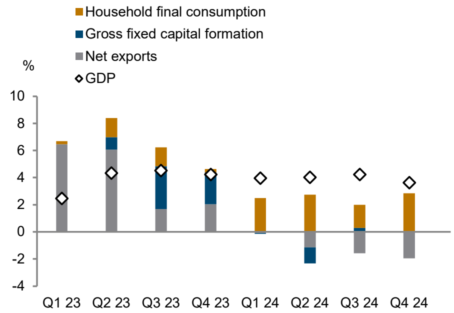
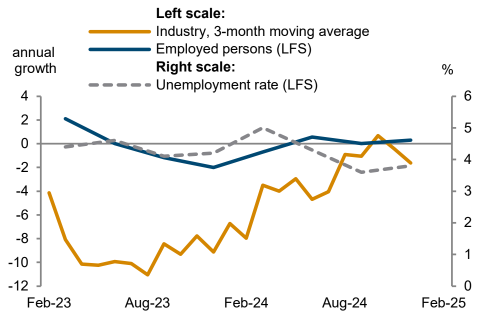
Bulgaria

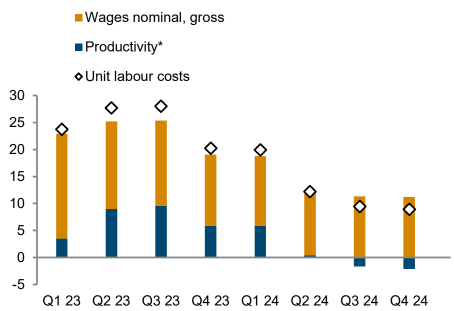
Real GDP growth and contributions
y-o-y



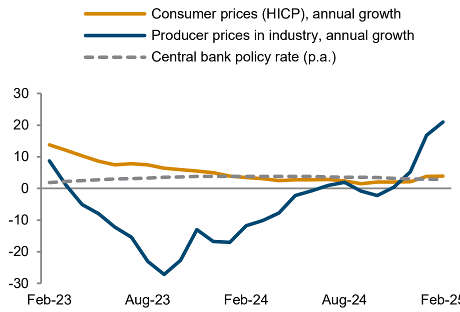
Real sector development
in %



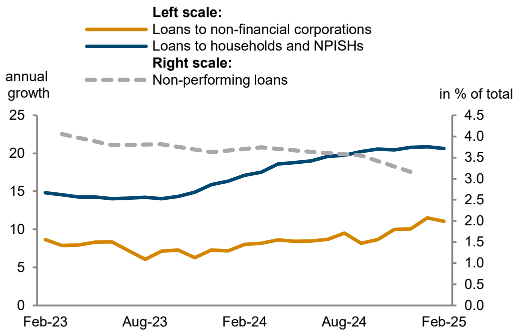
Unit labour costs in industry
annual growth rate in %



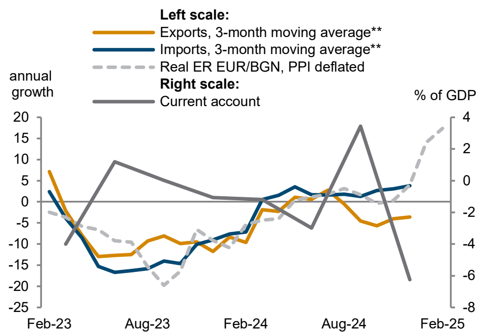
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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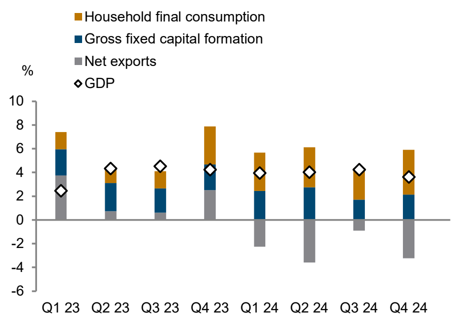
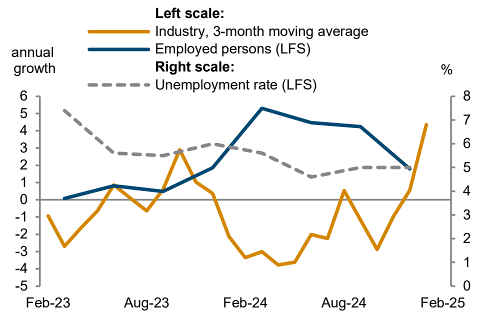
Croatia

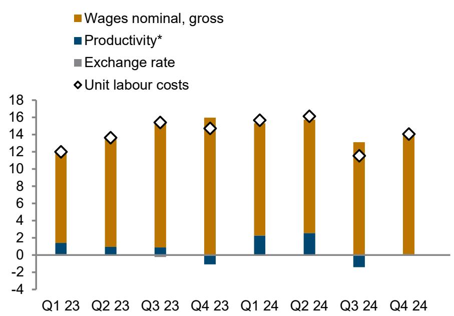
Real GDP growth and contributions
y-o-y



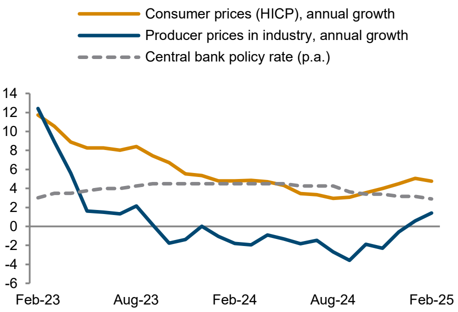
Real sector development
in %



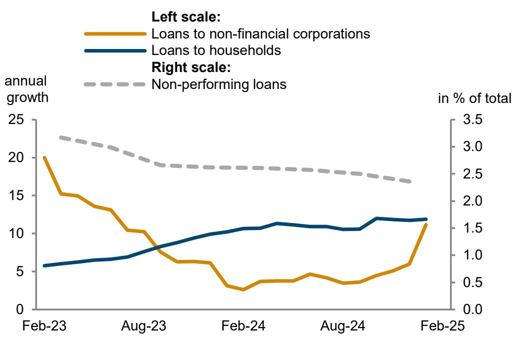
Unit labour costs in industry
annual growth rate in %



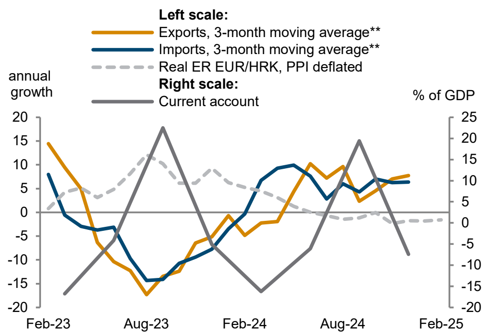
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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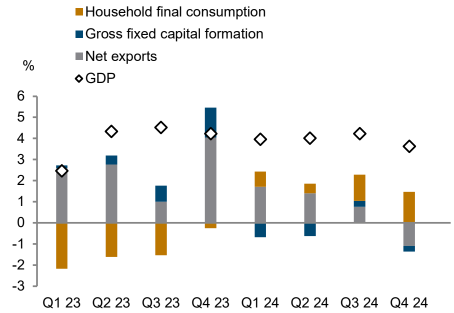
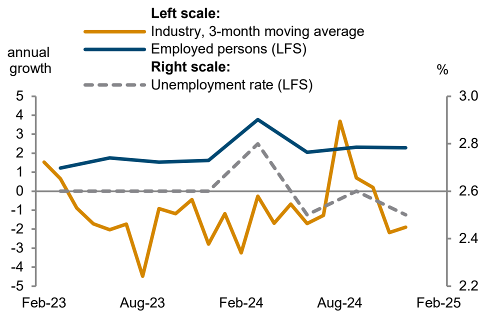
Czechia

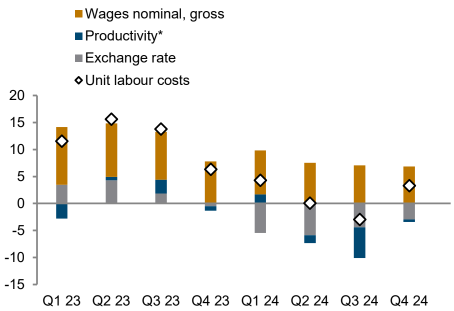
Real GDP growth and contributions
y-o-y



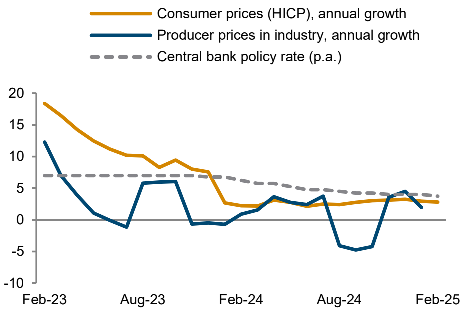
Real sector development
in %



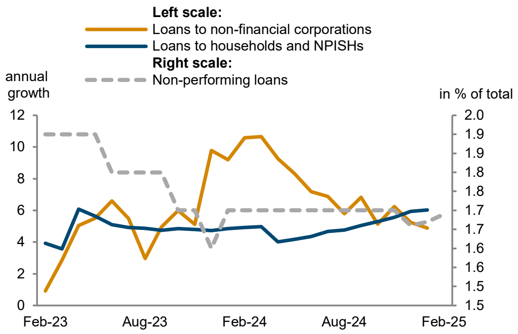
Unit labour costs in industry
annual growth rate in %



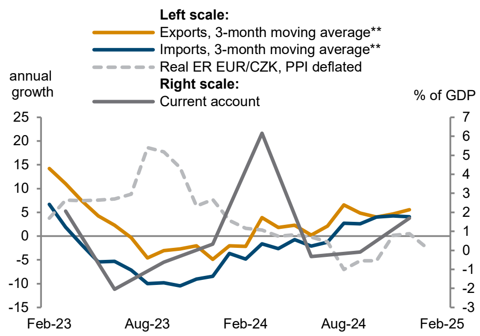
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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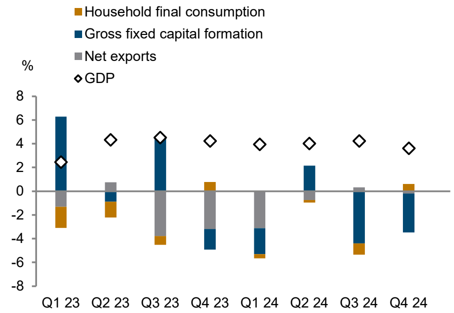
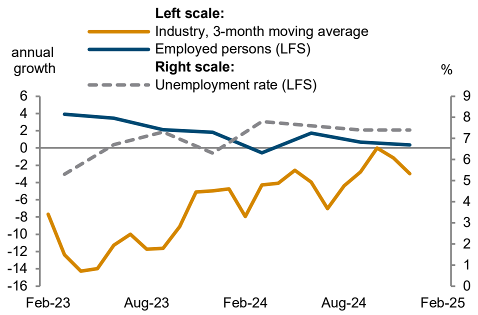
Estonia

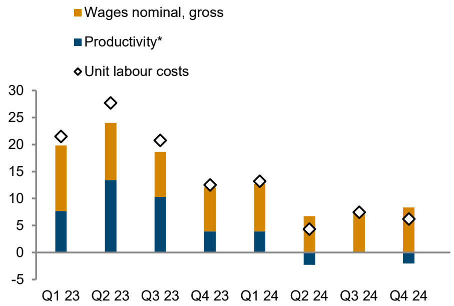
Real GDP growth and contributions
y-o-y



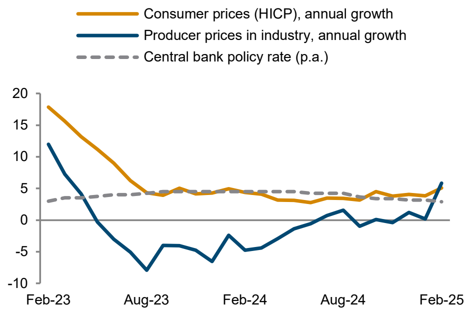
Real sector development
in %



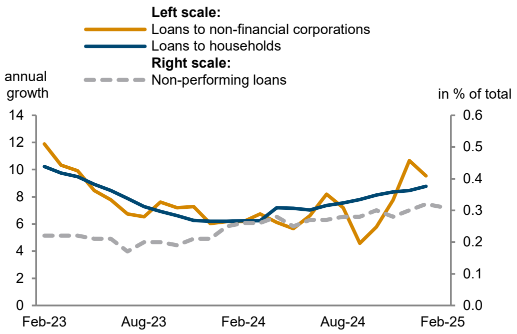
Unit labour costs in industry
annual growth rate in %



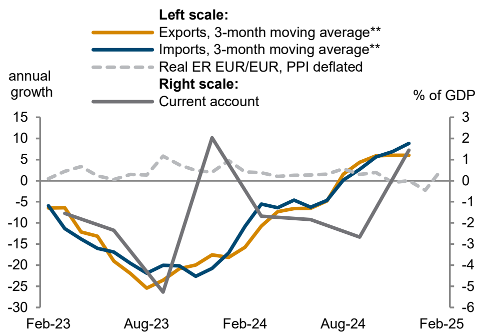
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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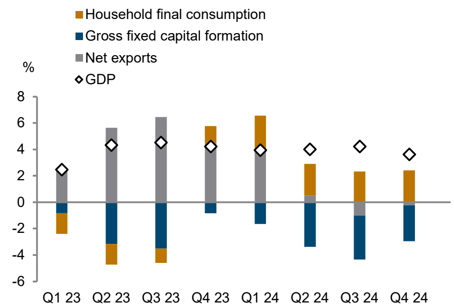
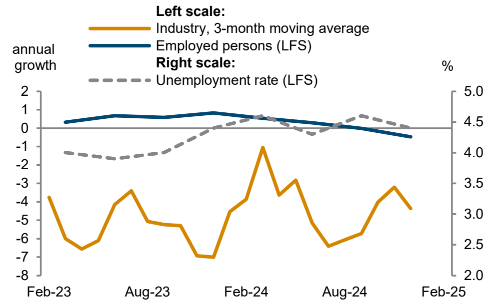
Hungary

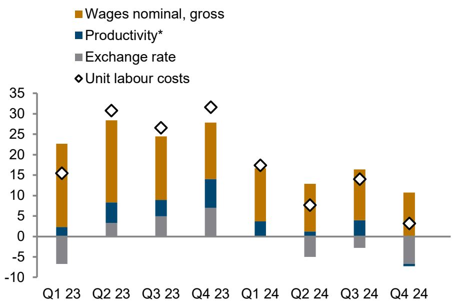
Real GDP growth and contributions
y-o-y



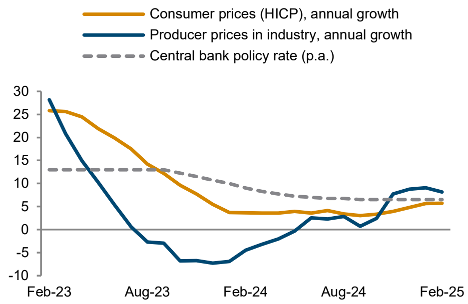
Real sector development
in %



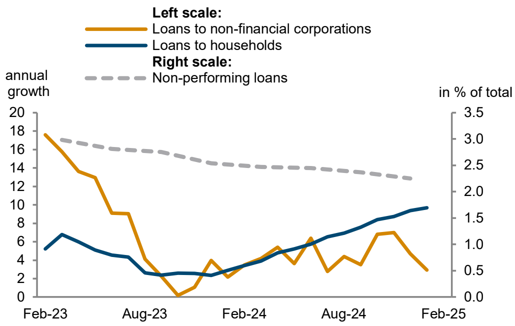
Unit labour costs in industry
annual growth rate in %



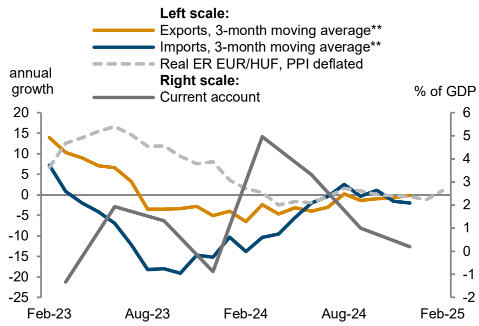
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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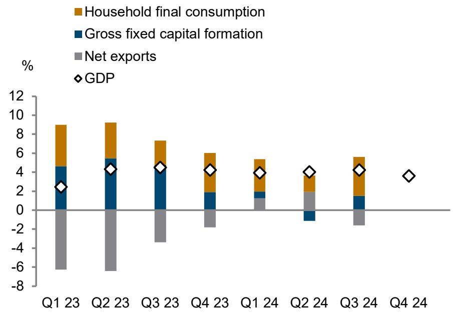
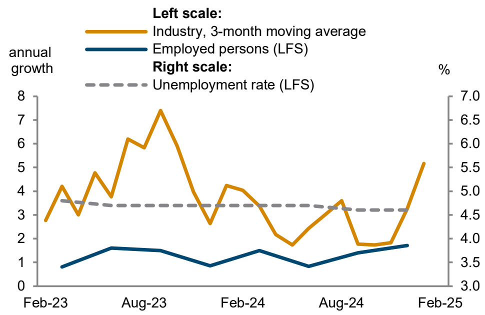
Kazakhstan

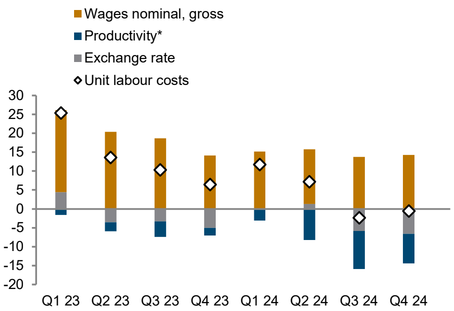
Real GDP growth and contributions
y-o-y



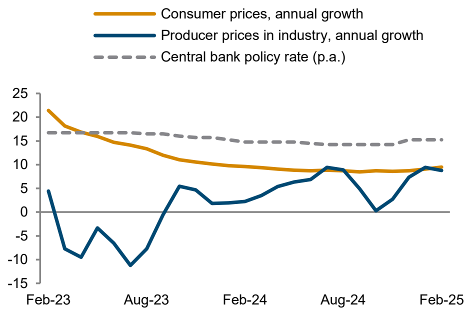
Real sector development
in %



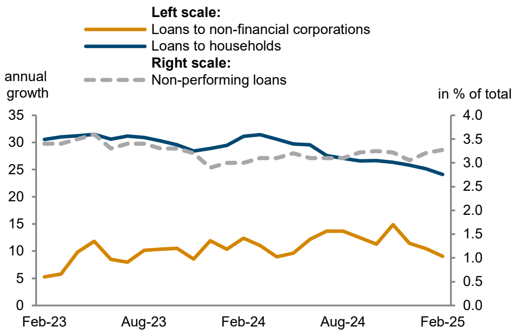
Unit labour costs in industry
annual growth rate in %



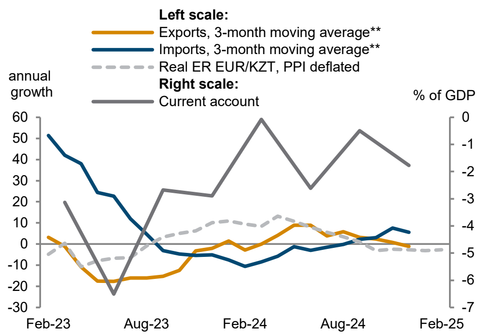
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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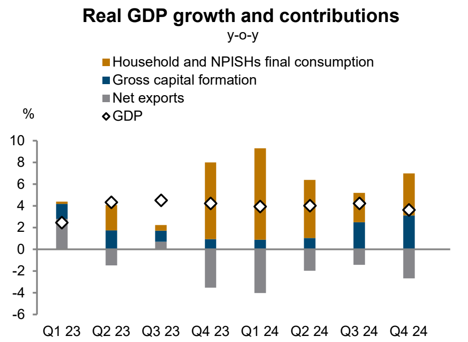
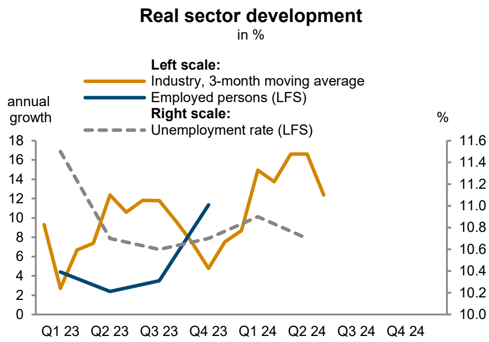
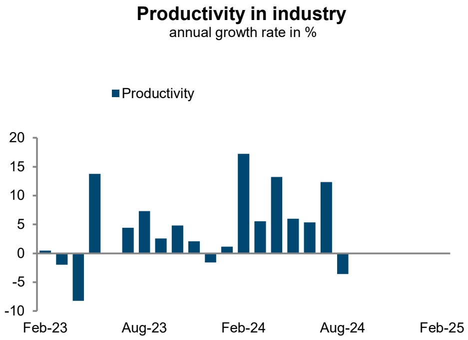
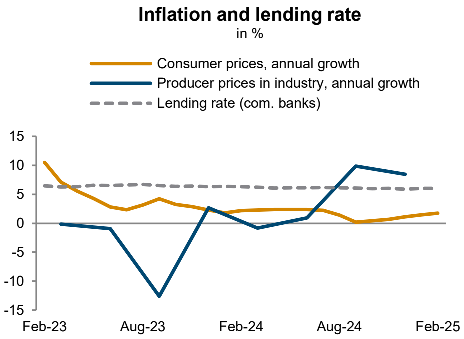
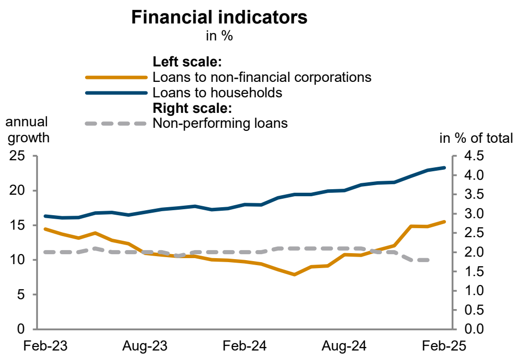
Kosovo

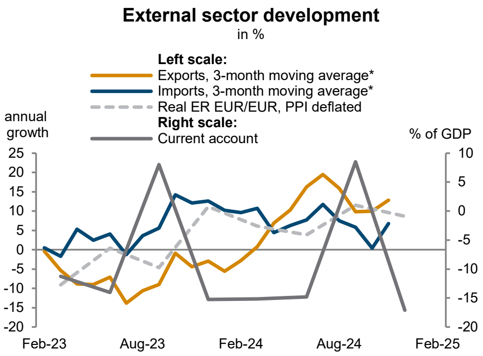












*EUR based.

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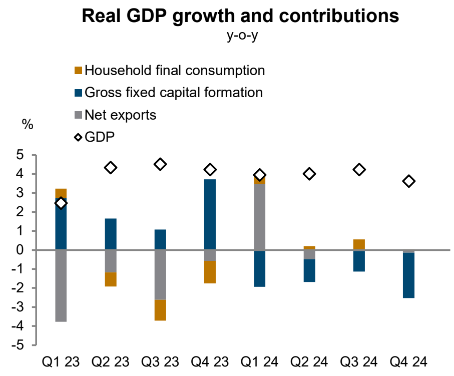
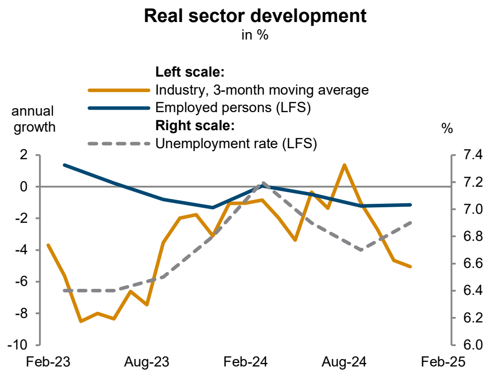
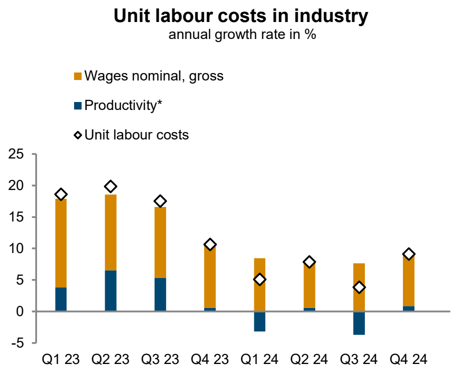
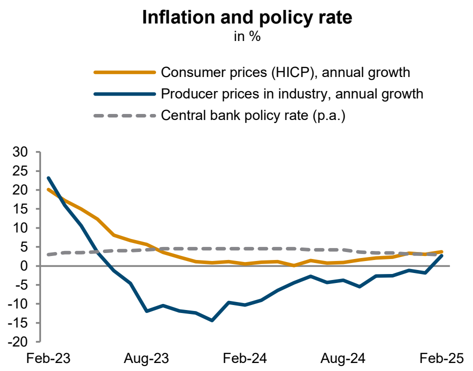
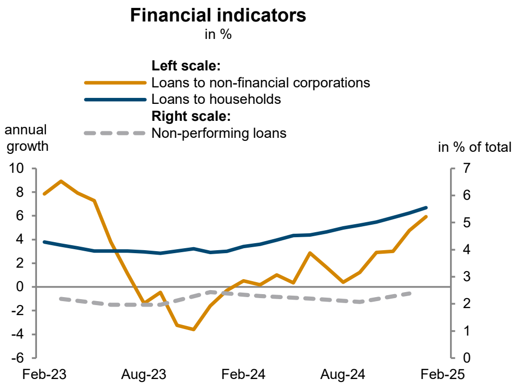
Latvia

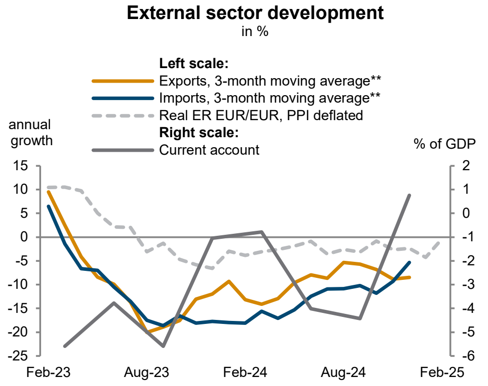












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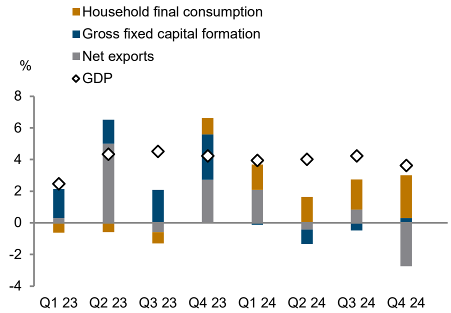
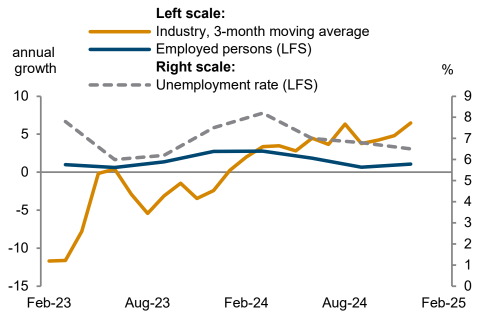
Lithuania

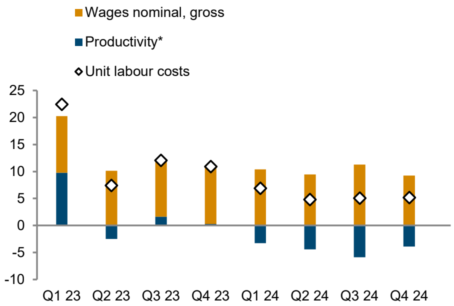
Real GDP growth and contributions
y-o-y



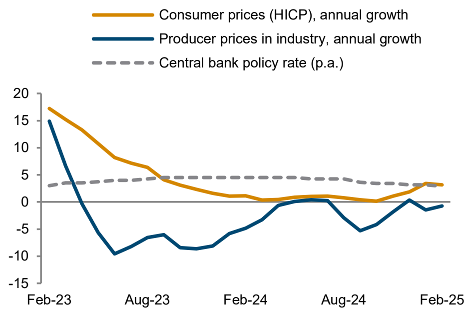
Real sector development
in %



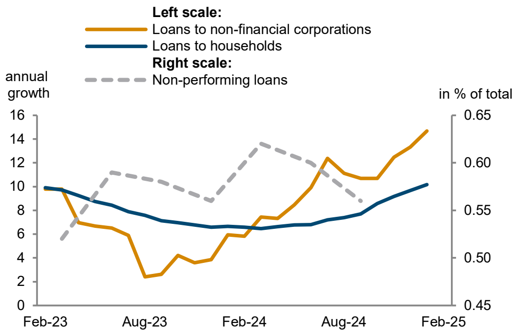
Unit labour costs in industry
annual growth rate in %



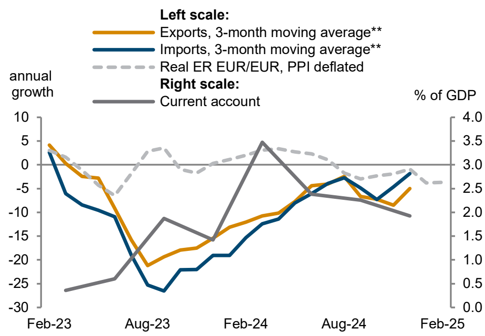
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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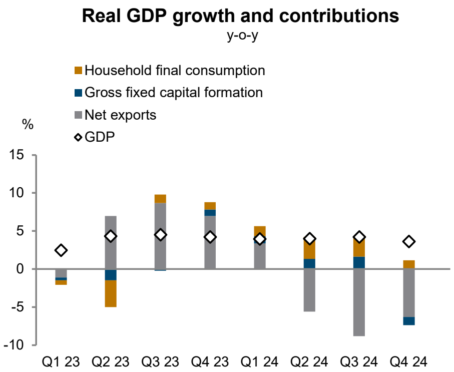
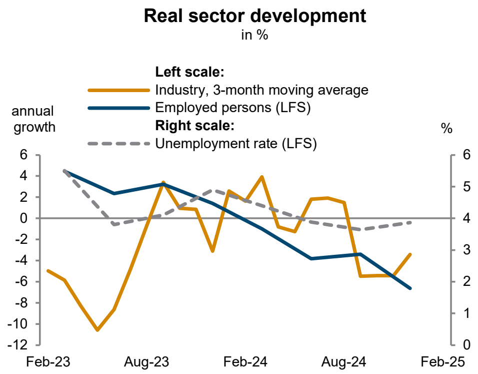
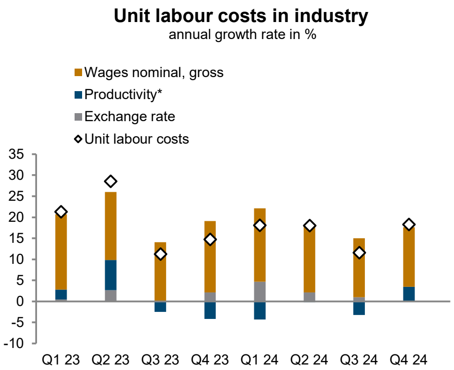
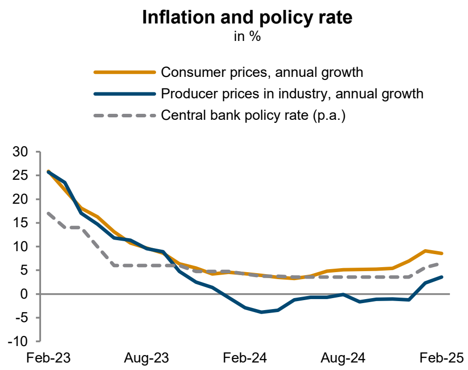
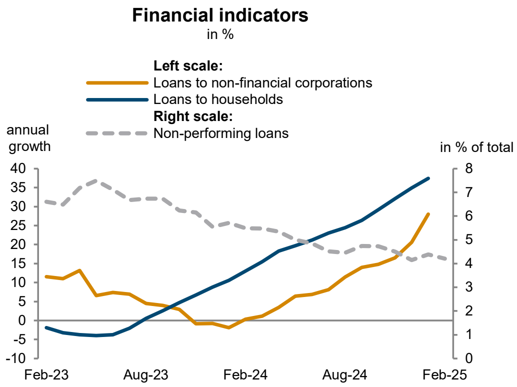
Moldova

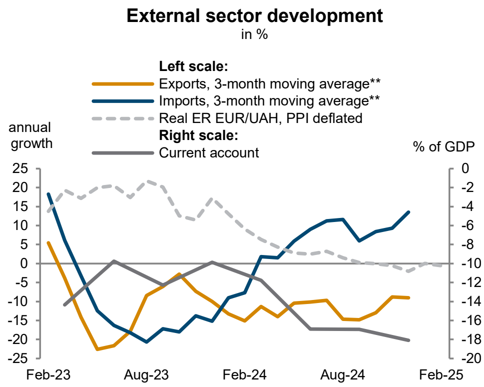












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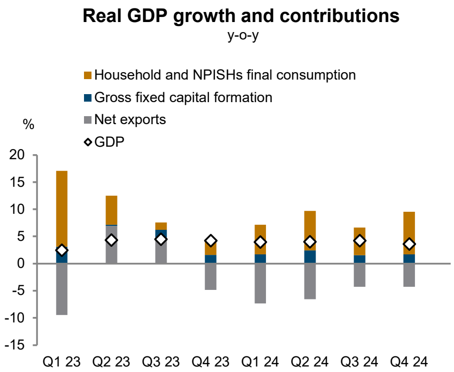
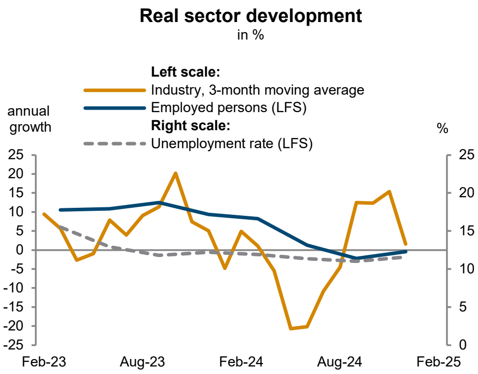
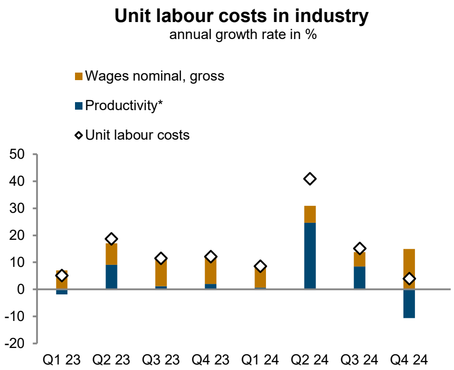
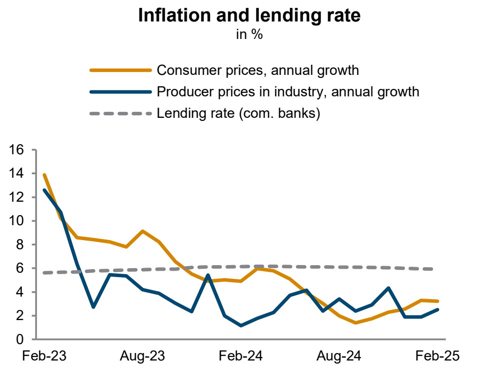
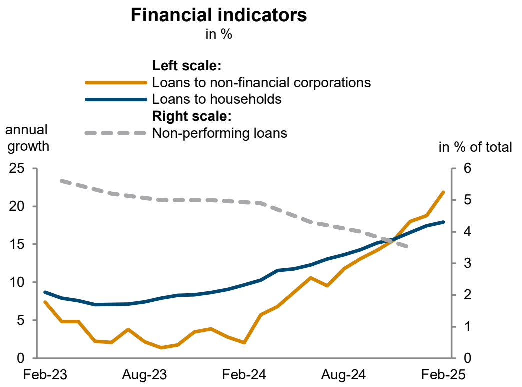
Montenegro

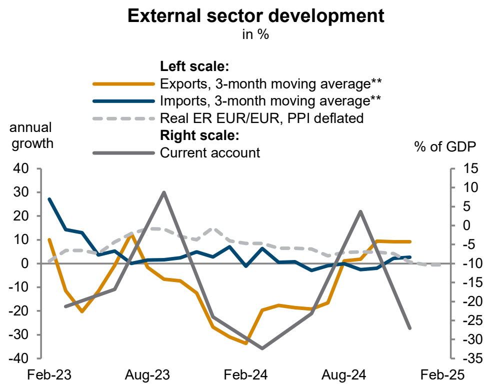












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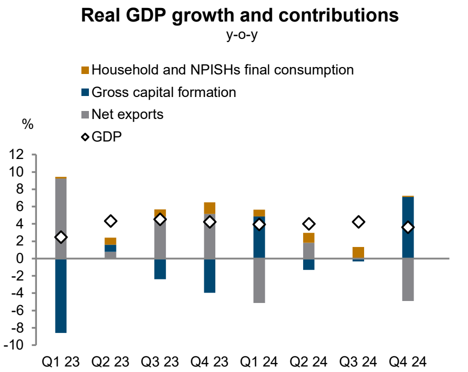
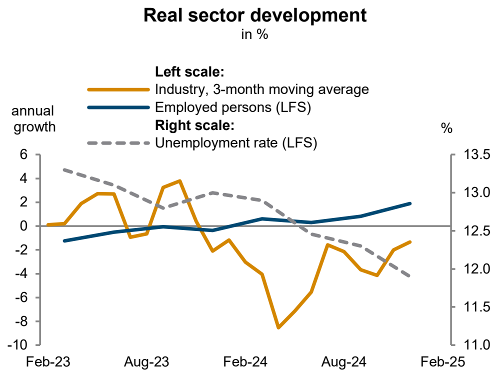
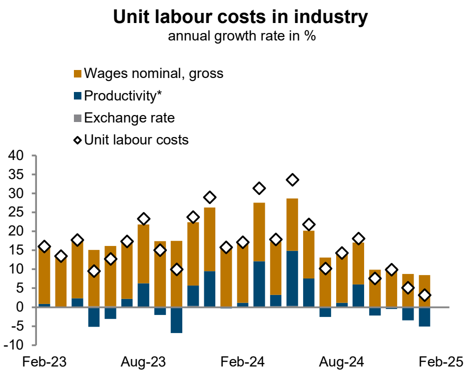
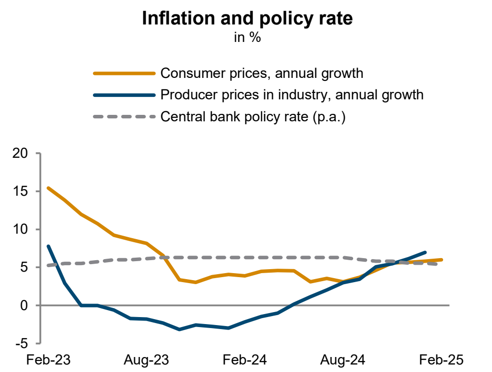
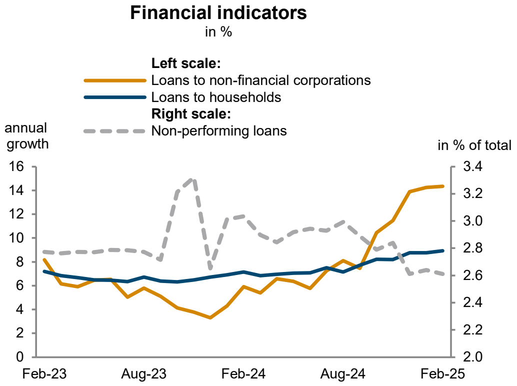
North Macedonia

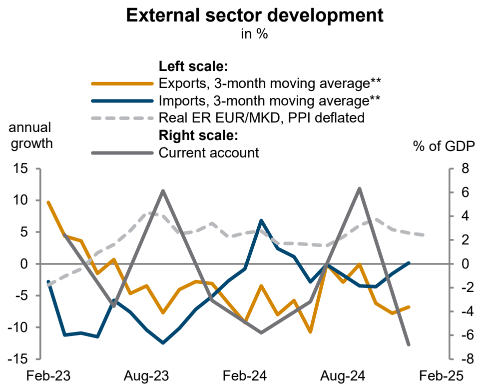












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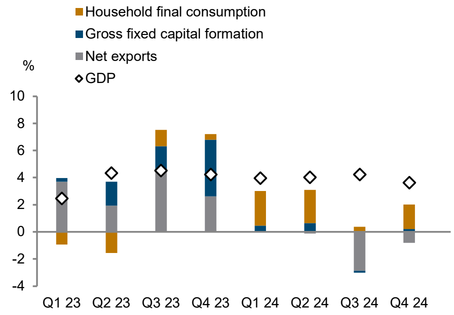
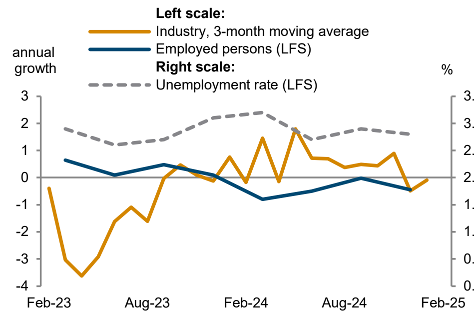
Poland

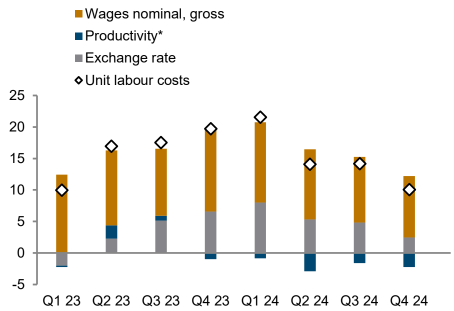
Real GDP growth and contributions
y-o-y



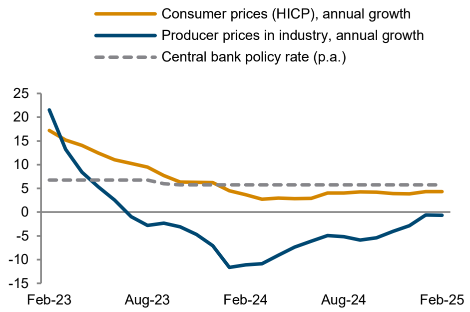
Real sector development
in %



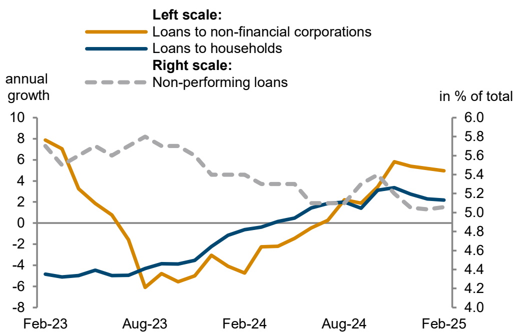
Unit labour costs in industry
annual growth rate in %



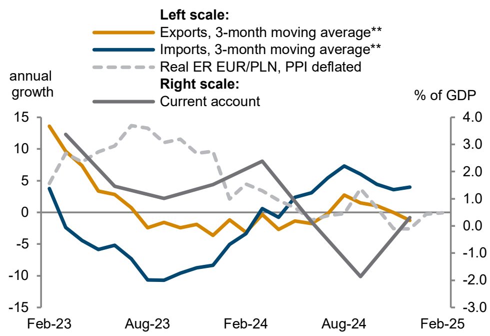
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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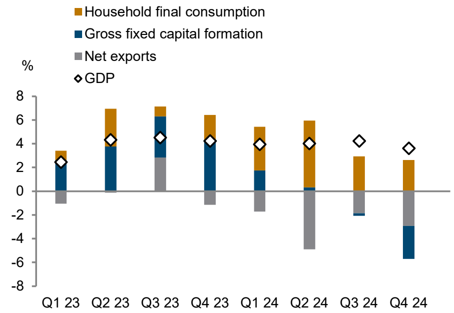
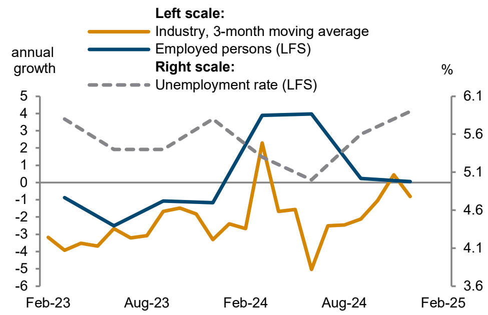
Romania

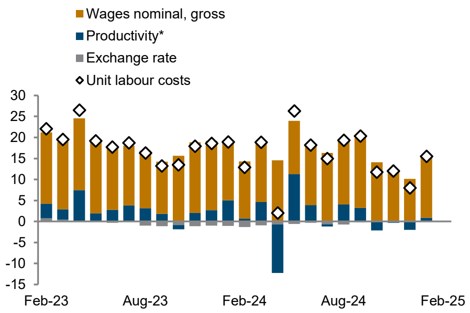
Real GDP growth and contributions
y-o-y



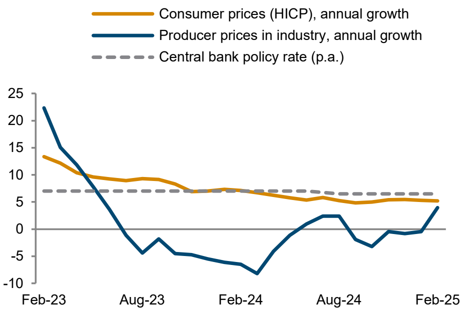
Real sector development
in %



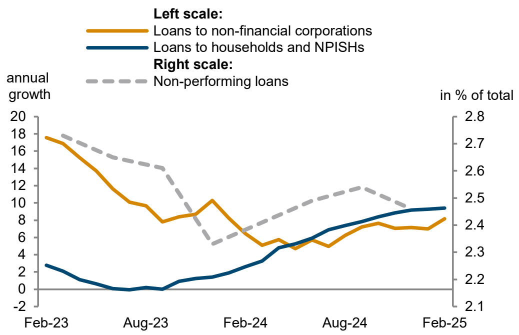
Unit labour costs in industry
annual growth rate in %



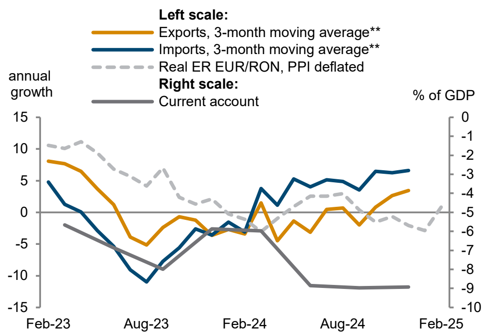
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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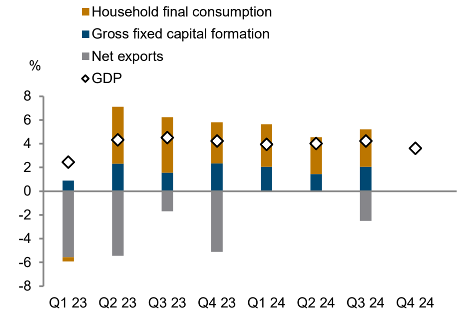
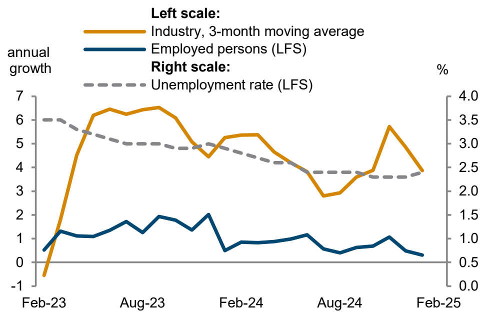
Russia

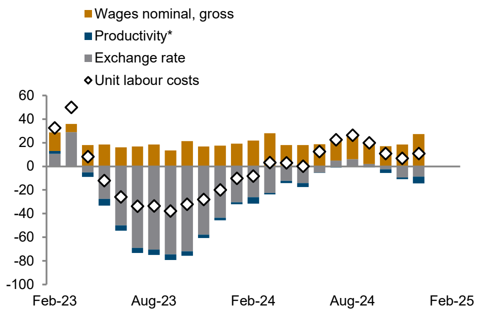
Real GDP growth and contributions
y-o-y



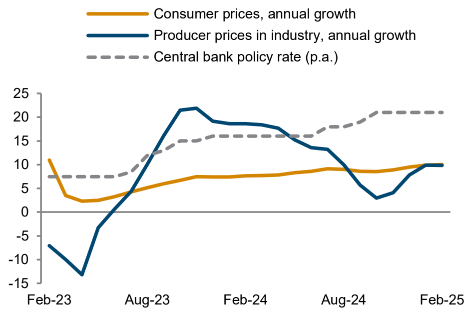
Real sector development
in %



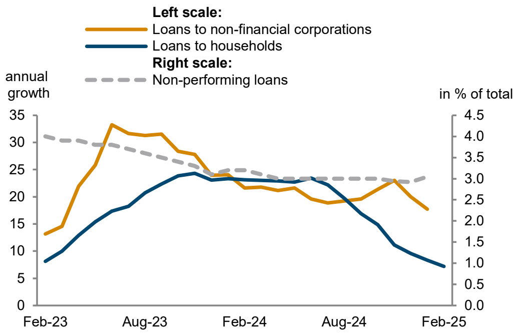
Unit labour costs in industry
annual growth rate in %



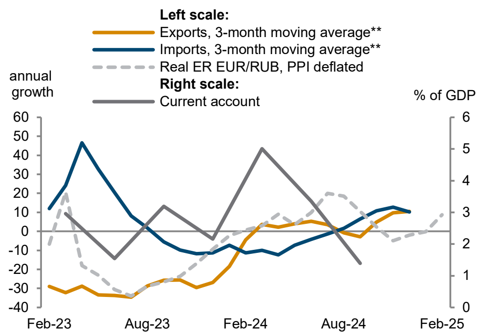
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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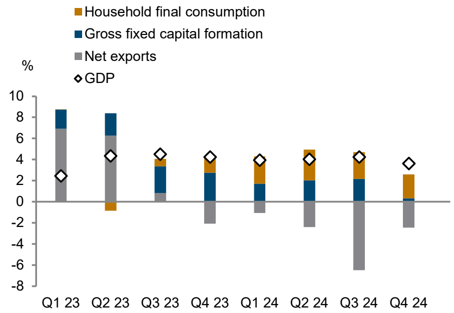
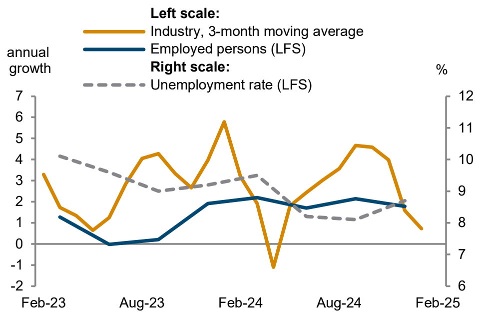
Serbia

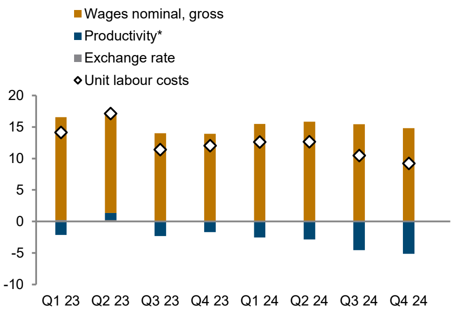
Real GDP growth and contributions
y-o-y



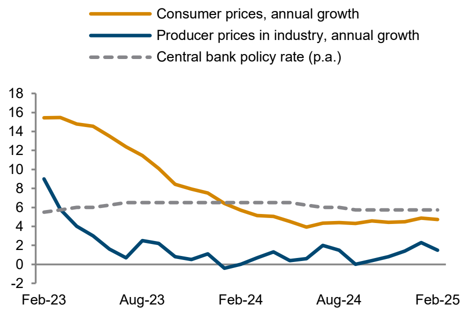
Real sector development
in %



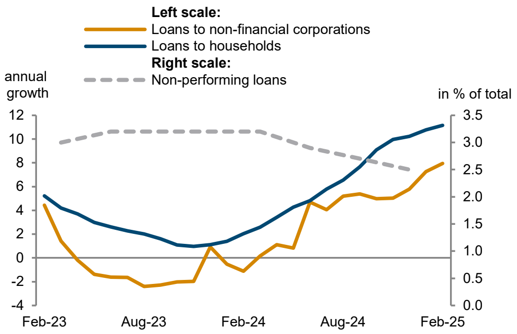
Unit labour costs in industry
annual growth rate in %



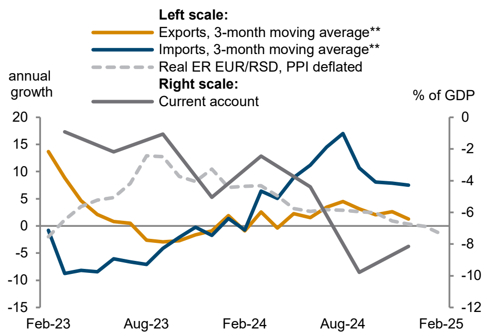
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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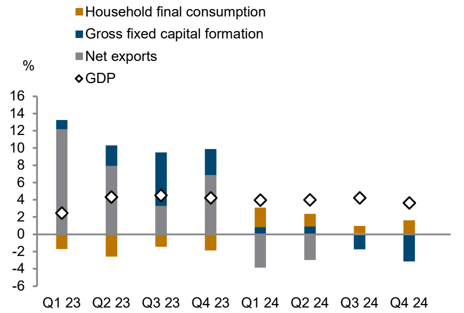
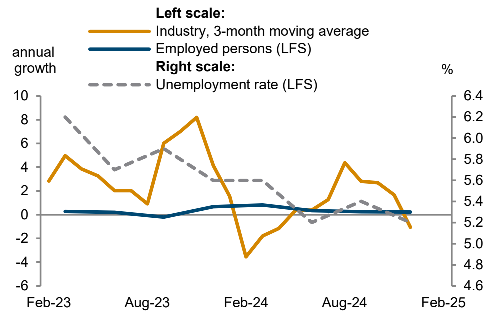
Slovakia

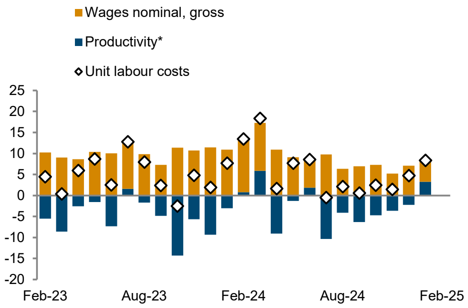
Real GDP growth and contributions
y-o-y



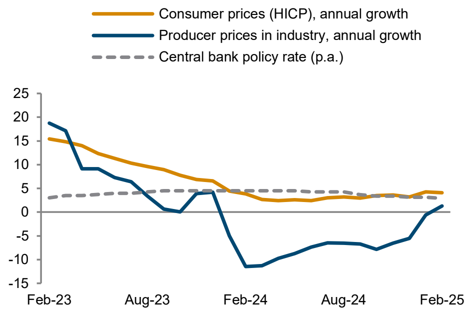
Real sector development
in %



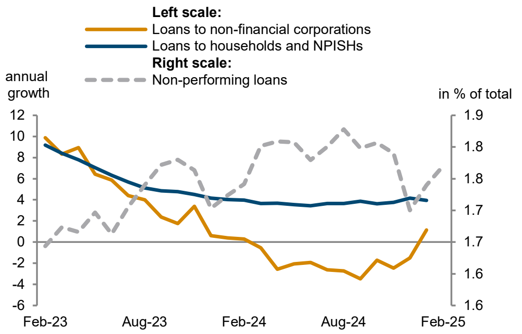
Unit labour costs in industry
annual growth rate in %



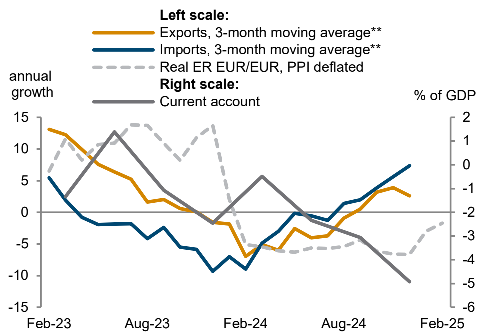
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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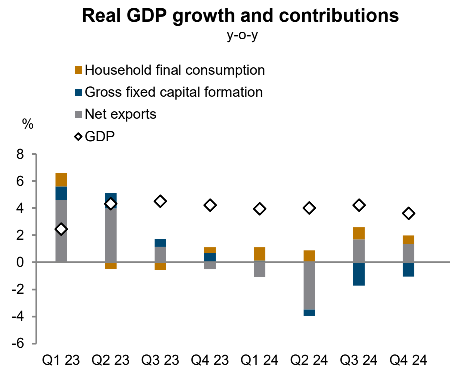
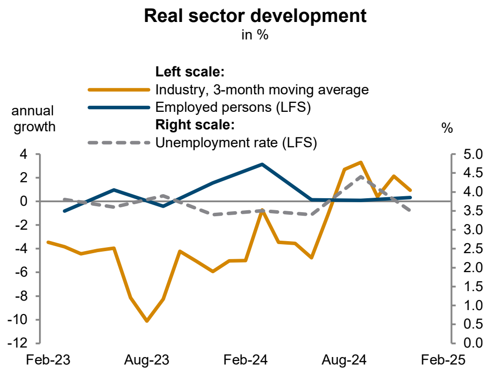
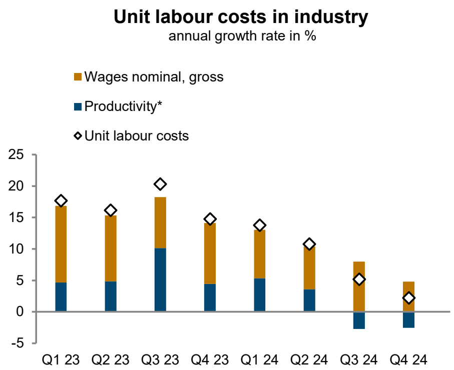
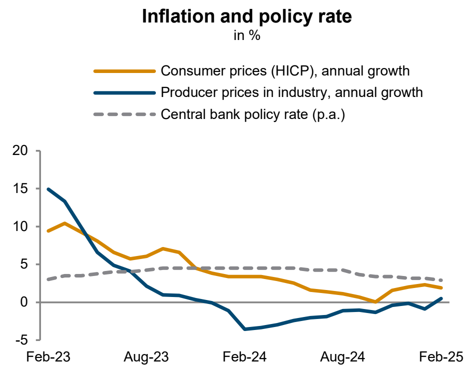
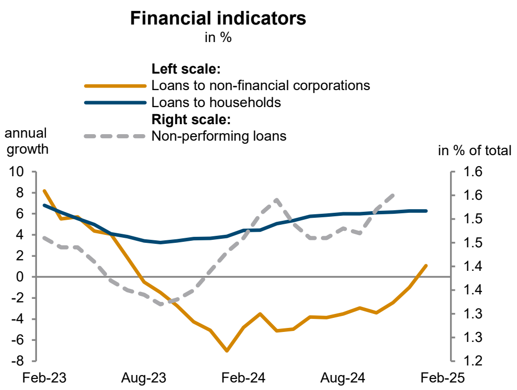
Slovenia

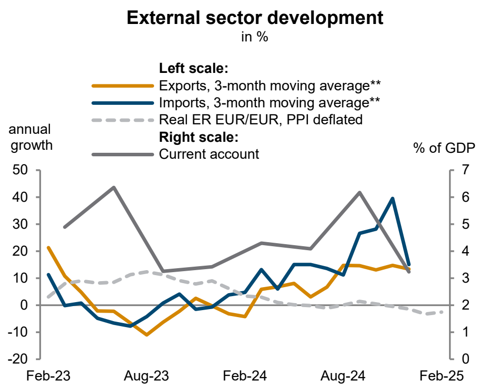












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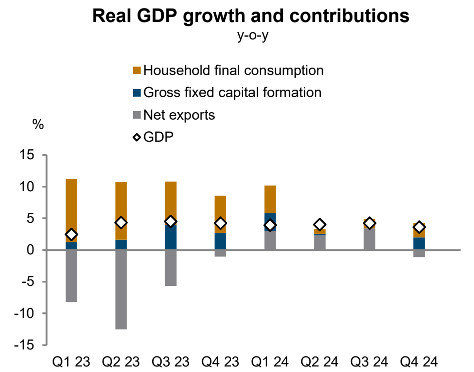
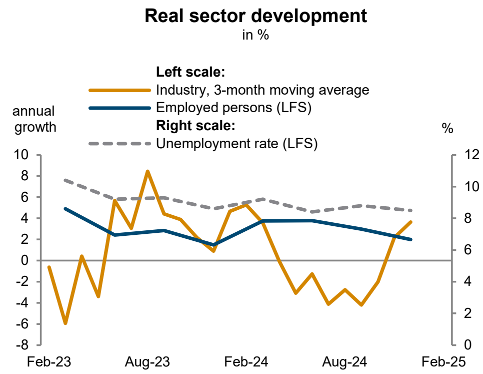
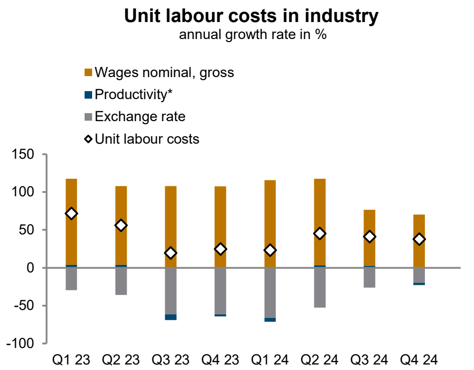
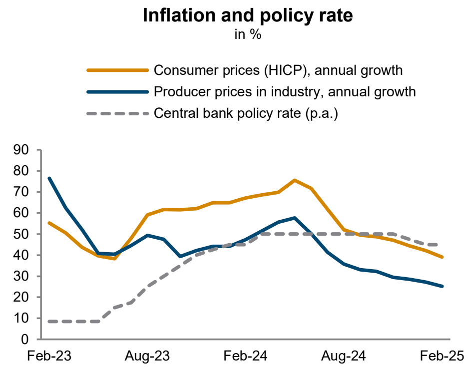
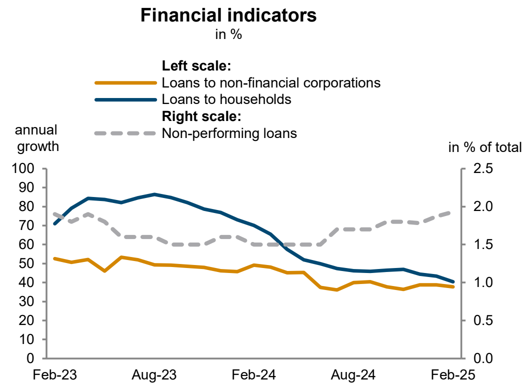
Turkey

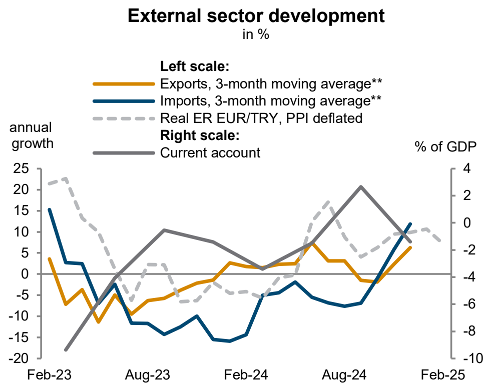












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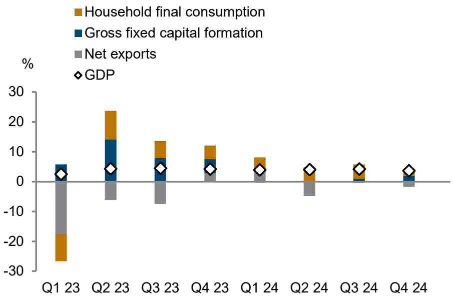
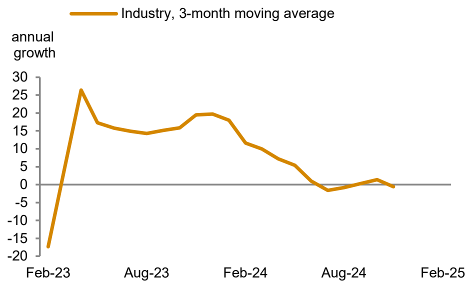
Ukraine

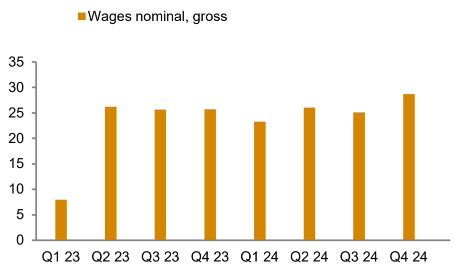
Real GDP growth and contributions
y-o-y



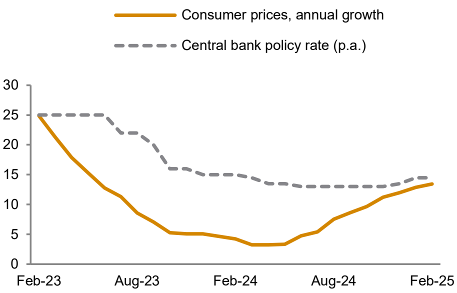
Real sector development
in %



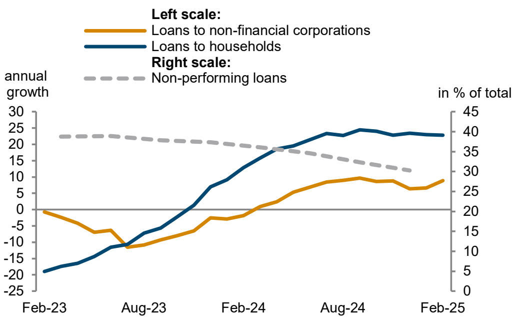
Wages in industry
annual growth rate in %



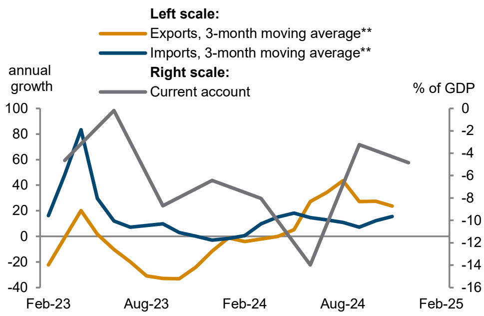
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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multi-country articles and statistical overviews

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Economics editor: Vasily Astrov

IMPRESSUM

Herausgeber, Verleger, Eigentümer und Hersteller:
Verein „Wiener Institut für Internationale Wirtschaftsvergleiche“ (wiiw),
Wien 6, Rahlgasse 3

ZVR-Zahl: 329995655

Postanschrift: A 1060 Wien, Rahlgasse 3, Tel: [+431] 533 66 10, Telefax: [+431] 533 66 10 50
Internet Homepage: www.wiiw.ac.at

Offenlegung nach § 25 Mediengesetz: Medieninhaber (Verleger): Verein "Wiener Institut für Internationale Wirtschaftsvergleiche", A 1060 Wien, Rahlgasse 3. Vereinszweck: Analyse der wirtschaftlichen Entwicklung der zentral- und osteuropäischen Länder sowie anderer Transformationswirtschaften sowohl mittels empirischer als auch theoretischer Studien und ihre Veröffentlichung; Erbringung von Beratungsleistungen für Regierungs- und Verwaltungsstellen, Firmen und Institutionen.

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