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Monthly Report

Austria in Pole Position to Benefit from Artificial Intelligence

‘Multi-speed Europe’: The Franco-German Road to Disaster

How Far from Full Employment? The European Unemployment Problem Revisited

The EU Minimum Wage Directive: A Chance for Decent Earnings in EU-CEE

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

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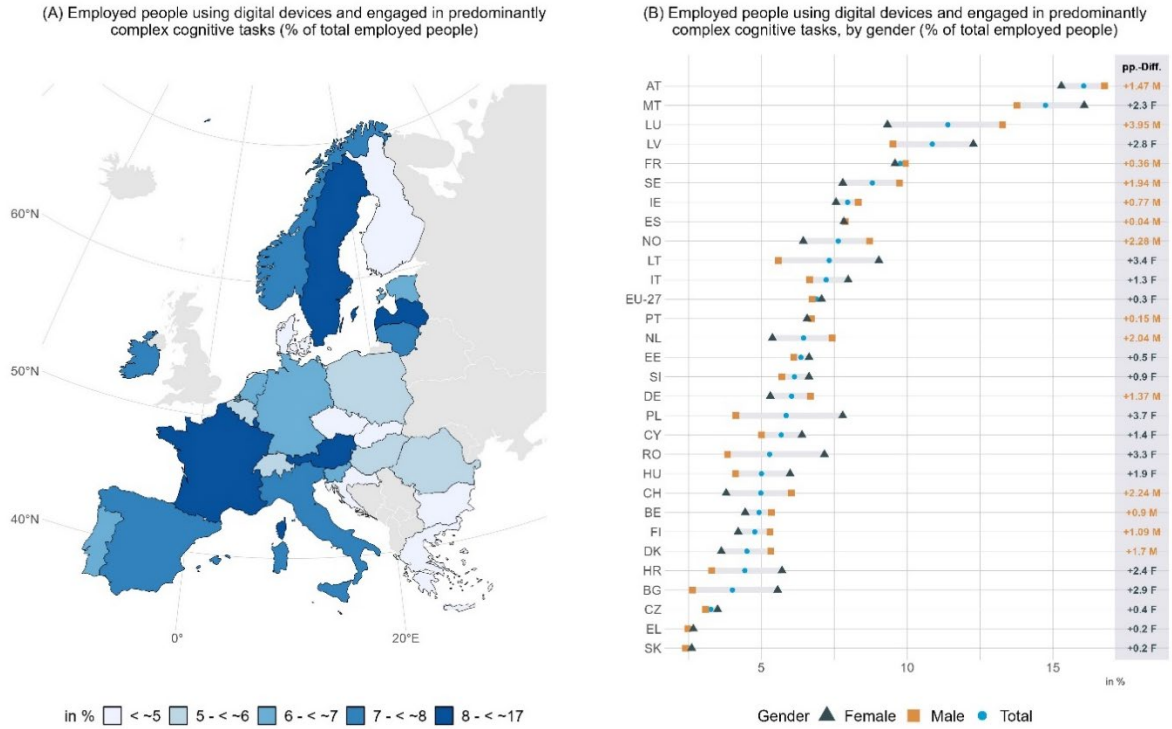
Chart of the month: Austria in pole position to benefit from artificial intelligence

BY STELLA ZILIAN

The emergence of generative artificial intelligence (AI) – such as the large language model ChatGPT – has reignited discussion of how disruptive technological changes may affect the labour market. In a recent *Financial Times* opinion piece,[1] generative AI was described as the 'frenemy' of white-collar workers – its role as a friend or foe depending on the workers' skills and the kinds of tasks they perform at work. This begs the question: who in the workforce might be in a position to benefit from AI, and what implications could there be for labour market inequalities?

Figure 1 / Use of digital devices at work, combined with the performance of complex cognitive tasks – country and gender differences, 2022



Note: Data refer to employed people aged 25-54 (prime-age workers) who work on computers, laptops, smartphones, phablets, etc. for more than 75% of their working time (excluding phone calls) and who spend at least 50% of their working time doing relatively complex calculations while working (i.e. fractions, percentages, etc.). Countries are categorised based on quintiles in panel (A). Countries in panel (B) are displayed in descending order, based on the share for 'Total'.
Source: Eurostat (lfso_22dmsc02).

[1] John Burn-Murdoch, 'Here's what we know about generative AI's impact on white-collar work', *Financial Times*, 13 November 2023, https://www.ft.com/content/b2928076-5c52-43e9-8872-08fda2aa2fcf.

To investigate this further, I determine the share of employed individuals likely to benefit from generative AI, based on what they do at work. Using data from the 2022 Labour Force Survey ad-hoc module on skill utilisation and tasks, I identified potential 'AI-friends' as those who (i) use digital devices for at least 75% of their working time and (ii) spend at least half of their working hours on complex cognitive tasks that require the manipulation and transformation of relatively complex numerical information. This definition follows the theory of routine-biased technological change, which suggests that AI could replace workers who perform routine cognitive tasks (such as data entry), but complements workers engaged in complex cognitive work. Thus, the term potential AI-friends applies to those who are likely to improve their productivity by integrating AI into their work process.

Figure 1.A presents a map that shows the proportion of potential AI-friends in each EU country (plus Norway and Switzerland), with colours representing the quintiles. Overall, the share is low in the EU27 (6.8%) – but the gap between countries in the bottom and the top quintiles is quite substantial. Countries in the bottom quintile, such as Czechia, Slovakia, Bulgaria, Greece and Croatia (but also Denmark and Finland), demonstrate a relatively limited potential for AI-friends, with less than 4.8% of employed respondents combining use of digital devices with the performance of predominantly complex cognitive tasks. These countries are therefore at risk of missing out on AI-related benefits. Conversely, Austria, Malta, Luxembourg, Latvia, France and Sweden exhibit a comparatively high potential for AI-friends, with 8-16% of employed respondents using digital devices and performing complex cognitive tasks. Thus, these countries are well positioned to reap the rewards of AI-related technological change. This asymmetrical distribution of potential AI-friends may therefore contribute to growing disparities between countries, as AI adoption increases.

If we shift the focus to within-country disparities, Figure 1.B shows the difference in the share of men and women in employment who can be considered potential AI-friends. Although the overall gender difference is marginal (0.3 percentage points), individual countries do show significant variation, reflecting country-specific labour market patterns. In most Western European countries, the share of female potential AI-friends tends to be lower than that of men. In contrast, Eastern European countries, particularly Poland, Lithuania and Romania, display a gender gap in favour of women: the percentage of employed women who use digital devices and perform complex cognitive tasks exceeds that of men by more than 3 percentage points. Consequently, the implications of AI for gender inequalities depend on country-specific segregation patterns, which are rooted in the social and historical context of each nation.

In summary, the chart of the month underscores the importance of closely monitoring the distributional consequences of increased AI integration in the workplace.

Opinion Corner*: 'Multi-speed Europe': The Franco-German road to disaster

BY JAN MUŚ[1]

The 'multi-speed Europe' expert proposal commissioned by France and Germany has outlined the institutional and procedural reforms that the EU would need to implement, in order to prepare for future enlargement. While individual elements of the proposal make perfect sense, collectively they could potentially be disastrous, given the current international climate. By excessively strengthening the leverage of 'core' member states – such as France and Germany – over the rest of the EU, their implementation could result in a deepening of the EU's internal divide between the poor and the rich.

Presented in September 2023, the Franco-German proposal on EU enlargement policy[2] comes as the EU faces the challenge of integrating new member countries: currently eight have candidate status, including Ukraine and Moldova, as well as six Western Balkan nations. It introduces significant structural reform that is aimed at preparing the European Union for enlargement by the end of this decade.

The proposal envisions an EU that would consist of four concentric circles: the core or inner circle, which would be closely integrated (reflected by the euro area and the Schengen area); the EU itself; then a broader ring of associate members, who would participate in the single market and adhere to shared principles; and finally, the outermost tier would be the European Political Community (EPC), which would foster political cooperation among its members without obliging them to adhere to EU law.

Central to the proposal is a radical overhaul of the EU's decision-making and funding structures. In particular, the Franco-German document suggests moving towards majority voting in the European Council, rather than the current unanimity. It also advocates increasing the EU budget beyond its current level of about 1% of the EU's gross national income. Additionally, the report emphasises strengthening the condition that governments must adhere to the rule of law and EU values, if they are to receive EU funding.

Some view this proposal as a radical starting point for a lengthy debate on how the EU should reform in the coming years. In my opinion, however, if implemented it would only excessively strengthen the leverage of the 'core' EU countries (such as France and Germany) over the rest of the EU, potentially leading to problems in the following areas.

Ill-conceived judgements over the 'rule of law' and attached conditionality. The increased budget of the EU would likely be spent according to plans adopted by the inner circle. Those core countries would also decide whether the junior partners had met the rule-of-law requirements. It is already challenging to balance law with politics; and deciding on the independence of the judiciary may boil down

* 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 Jan Muś is a freelance analyst

2 Available at https://www.auswaertiges-amt.de/blob/2617322/4d0e0010ffcd8c0079e21329bbbb3332/230919-rfaa-deu-fra-bericht-data.pdf

to nuances, leading to the risk of ill-conceived judgements regarding the rule of law in countries outside the inner circle. It is by no means an excuse for the controversial Polish minister of justice, Zbigniew Ziobro, who managed to antagonise the judiciary in both Poland and the EU itself, but rather a criticism of a generally naïve belief in positivism and impartiality in politics. If implemented in line with the proposal, the 'rule-of-law' mechanism could become a new tool in the hands of a few to punish some governments and reward others. Those few would decide whether the rule of law is being observed or not.

Challenges of plurality/growing discrepancies/evolving dynamics in the EU. The Franco-German management system led the European Community towards the Union, and then to the significant Eastern enlargements of 2004 and 2007. Alongside geographical expansion, the Union has undergone more profound integration. The decision-making process has become much more complex than it was in the 1990s. Gradually, discrepancies between old and new, rich and poor, politically 'mature' and 'immature' have become major obstacles to advancing European integration, and Western leaders may now be tired of some of their Central European counterparts.

Changing EU decision-making principles – such as a shift to majority voting from unanimity – would provide fresh momentum for internal integration and community development; but it could also lead to deeper divisions and further alienation of the outer circles. Given that the EU is no longer a community with a common, well-defined interest, but is rather a club of countries with disparate and often inconsistent (or even conflicting) goals, the inner circle will force other participants to follow in its steps. Developed countries of the north-west often have a different perception of current affairs (such as energy, green transformation, foreign and migration policy) from EU-CEE countries or those countries that aspire to EU membership. Creating circles and internal division within the EU will not erase these differences.

Fading soft power. The Franco-German tandem does not possess the same prestige in Central Europe as it did 20 or 30 years ago. Today's Europe, shaken by the Russian invasion of Ukraine, the Covid pandemic, rising energy costs and overall inflation, is seeking new ideas and leadership. In that sense, this era is more reminiscent of the anti-liberal 1930s than it is of the liberal ideas of the 1950s. Thus, the assumption by Western leaders that Central Europe and other regions would want to join the elite club at all costs (meaning that they would need to fulfil the conditionalities put forward by the West) may be illusory. Public opinion polls and recent election results (including in EU founding nations like the Netherlands and Italy) show growing Euroscepticism. Pushing forward with building an inner circle could undermine the already fragile foundations of *Pax Europaea*.

Potentially negative implications for candidate countries. The prospect of today's candidate countries being offered EU membership could diminish further. If the gap between the inner circle and the rest of the EU were to become any greater, the Western Balkan states, Ukraine and Moldova could find themselves in economic terms even further away from the 'EU core' than is the case today. This means that the EU could lose much of its soft power in the Western Balkan countries, which have been stuck in the 'waiting room' for over 20 years now (although Ukraine and Moldova, as new candidates, would probably remain interested in the EU for a bit longer). In this regard, the Franco-German proposal is unlikely to reinvigorate the enlargement process, but will rather contribute to its stagnation.

In all these instances, the Franco-German proposal runs a serious risk of alienating the 'semi-periphery' (Central Europe) and the 'periphery' (candidate countries) of the EU; these are, however, crucial to the core EU members, both as markets and as a source of cheap labour. If the founders of the European Community dreamt of a united Europe, the Franco-German proposal would seem poised to shatter that dream.

How far from full employment? The European unemployment problem revisited

BY MERYEM GÖKTEN

Using the Beveridge curve concept, we find that European countries last experienced full employment in the 1970s, with the subsequent decades marked by elevated unemployment. After the COVID-19 crisis, only a few EU member states (such as the Netherlands and Czechia) and the US have achieved full employment; most EU member states still have considerable labour-market slack. Among other things, our analysis highlights the contribution made by hysteresis effects, trade union density and right-wing government policies to greater labour-market slack, and suggests there is no trade-off between inflation and unemployment – whatever the classical Phillips curve suggests.

MEASURING FULL EMPLOYMENT

Policy makers monitor the labour market closely in order to determine its state – whether it is slack, excessively tight, or operating at full employment – as this influences the direction of macroeconomic policies. In slack labour markets, job opportunities are limited and there is an abundance of available workers. Conversely, overly tight labour markets have numerous job openings, but a shortage of available workers. Expansionary policies target low unemployment and foster growth, creating 'high-pressure' or 'overheated' labour markets characterised by minimal unemployment and rapid growth in jobs. By contrast, restrictive policies seek to control inflation by curbing aggregate demand, resulting in labour-market slack and increased unemployment. Although the level of unemployment that corresponds to full employment is non-observable, it is important to provide some sort of estimate, in order to inform macroeconomic policy making. In this sense, full employment estimates may also help shed light on historical labour-market developments.

There are different definitions of full employment. One that is widely used is the non-accelerating inflation rate of unemployment (NAIRU), which identifies full employment as the unemployment rate that is consistent with price stability, built on the assumption of a negative association between unemployment and inflation (known as the Phillips curve). We depart from the traditional NAIRU approach: instead, we assess labour-market slack by examining the relationship between the level of unemployment and the number of job vacancies – the so-called Beveridge curve (Beveridge, 1944). This approach reveals a significantly greater degree of labour-market slack, compared to estimates derived from the NAIRU's full-employment concept.

The difference between the two curves lies in their perspectives: the Phillips curve reflects the impact of aggregate demand on inflation and unemployment, whereas the Beveridge curve explores labour-market frictions, emphasising the role of structural factors and matching efficiency. An inward shift in the Beveridge curve signifies increased labour-market efficiency, where fewer vacancies are associated with a lower level of unemployment. Conversely, an outward shift indicates a decline in market efficiency in matching labour demand and supply.

The Beveridge curve illustrates an inverse link between job vacancies and unemployment. An economic downturn leads to an increase in the number of job seekers, but a decrease in job vacancies. Conversely, during an economic upturn, there is a rise in job vacancies, accompanied by a decline in the number of individuals seeking employment. While reducing unemployment enables more people to secure a job, this entails a trade-off, as companies may face challenges in meeting their workforce requirements.

Full employment is achieved when job supply matches demand – i.e. when the ratio of job vacancies to the number of unemployed people is equal to one, indicating that the number of job opportunities is in alignment with the number of job seekers. Michaillat and Saez (2021; 2022) introduce the concept of the 'efficient' unemployment rate, which is a geometric average of the current unemployment rate and job vacancy rate. This is what we refer to as the *Beveridge (full-employment-consistent) rate of unemployment*, or BECRU.[1] In this framework, the economy attains full employment with a zero full-employment gap, calculated as the difference between actual unemployment and the BECRU. A zero gap signifies optimal employment, whereas a positive gap indicates labour-market slack, necessitating a reduction in unemployment in order to achieve full employment. Conversely, a negative gap suggests an excessively tight labour market.

We expanded our analysis by assembling a quarterly dataset that includes data for Germany, Austria, Sweden, Finland and the UK, in addition to the existing US dataset. This extended dataset covers the period from 1970 to 2022. Additionally, we constructed an extended quarterly dataset for 28 countries – including 26 of the 27 EU states[2], the UK and the US – focusing on the period from 2000 to 2022. This dataset allows us to examine deviations from full employment across a wider set of countries during this time frame.

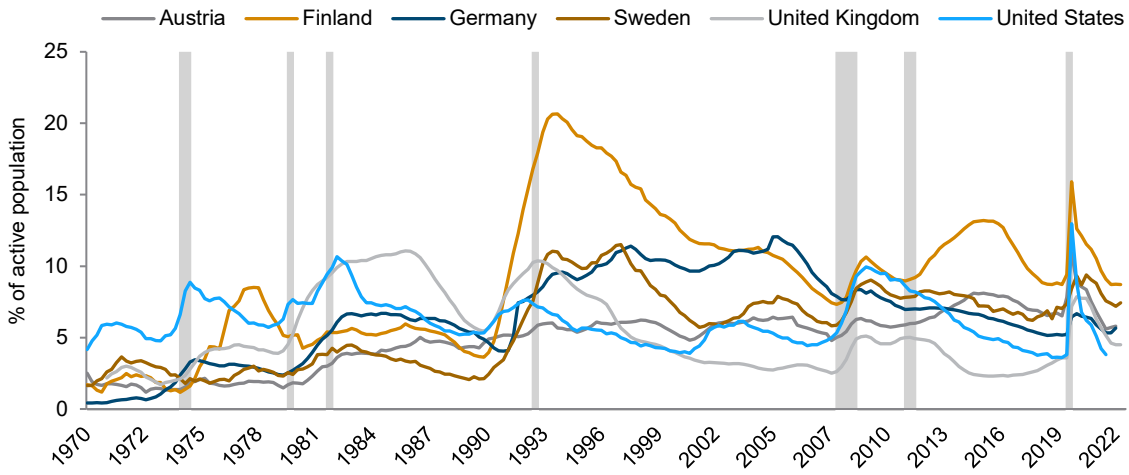
FULL-EMPLOYMENT GAPS IN SELECTED WESTERN COUNTRIES SINCE 1970

In the 1980s and 1990s, high unemployment in the European countries became a key policy challenge, as economic research struggled to explain the phenomenon (Bean, 1994; Ljungqvist and Sargent, 2008). The surge in unemployment rates in numerous European nations significantly exceeded levels observed in the US (see Figure 1). Today, only the US has unemployment rates that are lower than in the early 1970s, while the UK has experienced a slight increase from very low levels. By contrast, the EU member states, including Austria, Germany, Finland and Sweden, today have significantly higher unemployment rates than in the early 1970s. As in many other countries, their unemployment rates surged in the late 1970s; but notably, they have remained persistently high ever since. Yet the experience has not been uniform across Europe, as is illustrated in Figure 1.

[1] The Beveridge full-employment-consistent rate of unemployment (BECRU) is calculated as: $\sqrt{uv}$, where u stands for the unemployment rate (number of unemployed divided by the active population) and v stands for the job vacancy rate (number of unfilled vacancies divided by the active population).

[2] Denmark was omitted from our sample due to insufficient data availability.

Figure 1 / Unemployment rates in selected Western countries, 1970-2022



Notes: The grey areas in the figure indicate periods of recession in the aggregated OECD Europe sample. A recession is defined as two consecutive quarters of negative real GDP growth. The data for Germany are for West Germany until 1991.
Source: OECD Registered Unemployed Dataset, Michaillat and Saez (2022).

The European unemployment problem of the 1980s and 1990s is evident from the expanding gaps in full employment: in the 1970s, Germany, Austria, Sweden and Finland consistently maintained a BECRU rate of below 2.5%. All four countries witnessed full-employment episodes during that decade, with Beveridge full-employment gaps dipping below zero. This era reflected high efficiency in matching job opportunities for firms and workers[3].

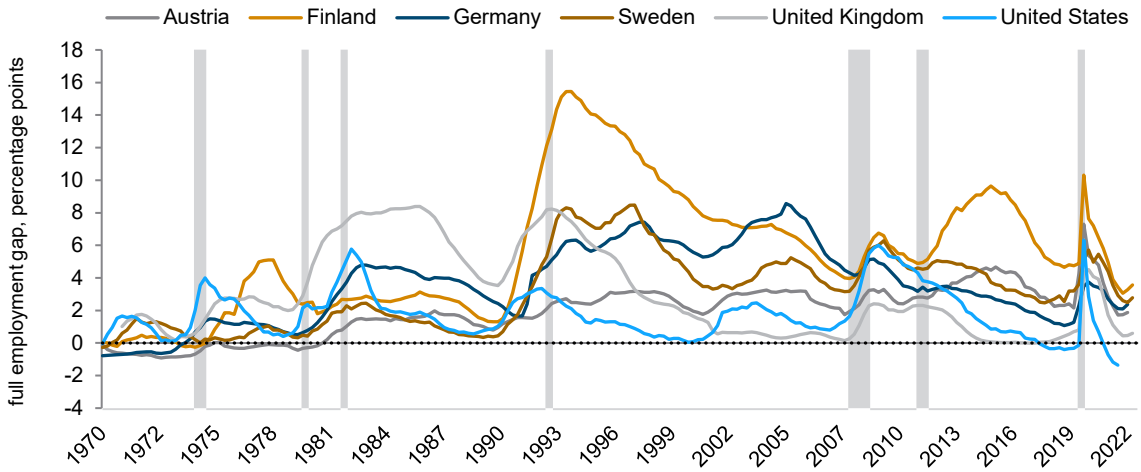
However, as the late 1980s and 1990s wore on, these countries witnessed a rise in the BECRU, reflected particularly in the outward shift of the Beveridge curve. This shift, marked by increased unemployment and higher vacancy rates, indicated a decline in matching efficiency. Unlike the US, which saw its full-employment gap peak in the early 1980s and approach zero in the late 1990s, Germany, Austria, Sweden and Finland faced widening full-employment gaps during this period. By the end of 1999, the UK had reduced its full-employment gap to below 2 percentage points, while Germany, Sweden, Finland and Austria reported gaps of 6.0, 4.7, 4.3 and 2.2 percentage points, respectively (see Figure 2). It is crucial to note that, unlike the typical pattern of the gap widening during an economic downturn and narrowing during periods of growth, the latter four countries in the 1980s and 1990s exhibited a unique pattern, where the full-employment gap did not return to the level seen at the end of the previous business cycle.

The US and the UK witnessed very different BECRU patterns over time: notably, the BECRU was higher in the US than in the European countries during the 1970s and 1980s, but it decreased in the 1990s and remained consistently below the BECRU of selected European countries (except for in the aftermath of the global financial crisis). This decline in the BECRU coincided with an inward shift of the US Beveridge curve, signalling improved matching efficiency. The UK's experience falls between the US and the European patterns, starting with a lower BECRU in the 1970s. After an increase in the 1980s and an outward shift in the UK Beveridge curve, the BECRU stabilised and even decreased slightly in the 1990s and 2010s, coinciding with an inward shift in the curve.

[3] Matching efficiency represents the market's ability to effectively match individuals with appropriate job opportunities.

The COVID-19 pandemic significantly affected full-employment gaps. Initially, in 2020, the full-employment gaps increased on account of reduced job vacancies, increased unemployment and deteriorating matching efficiency. However, as the recovery got under way, the labour markets in all six of the countries considered tightened substantially, resulting in a notable decrease in the full-employment gap. However, the US stood out as the only nation to achieve full employment, with the Beveridge full-employment gap entering negative territory. It is essential to note that even before the pandemic, the US labour market had already been excessively tight during the preceding economic upswing.

Figure 2 / Beveridge full-employment gap for selected Western countries, 1970-2022



Notes: The grey areas in the figure indicate periods of recession in the aggregated OECD Europe sample. A recession is defined as two consecutive quarters of negative real GDP growth. The data for Germany are for West Germany until 1991. The Beveridge full-employment gap (g) is calculated as $g = u - BECRU$.
Source: OECD Registered Unemployed and Job Vacancies Dataset, Michaillat and Saez (2022); own calculations.

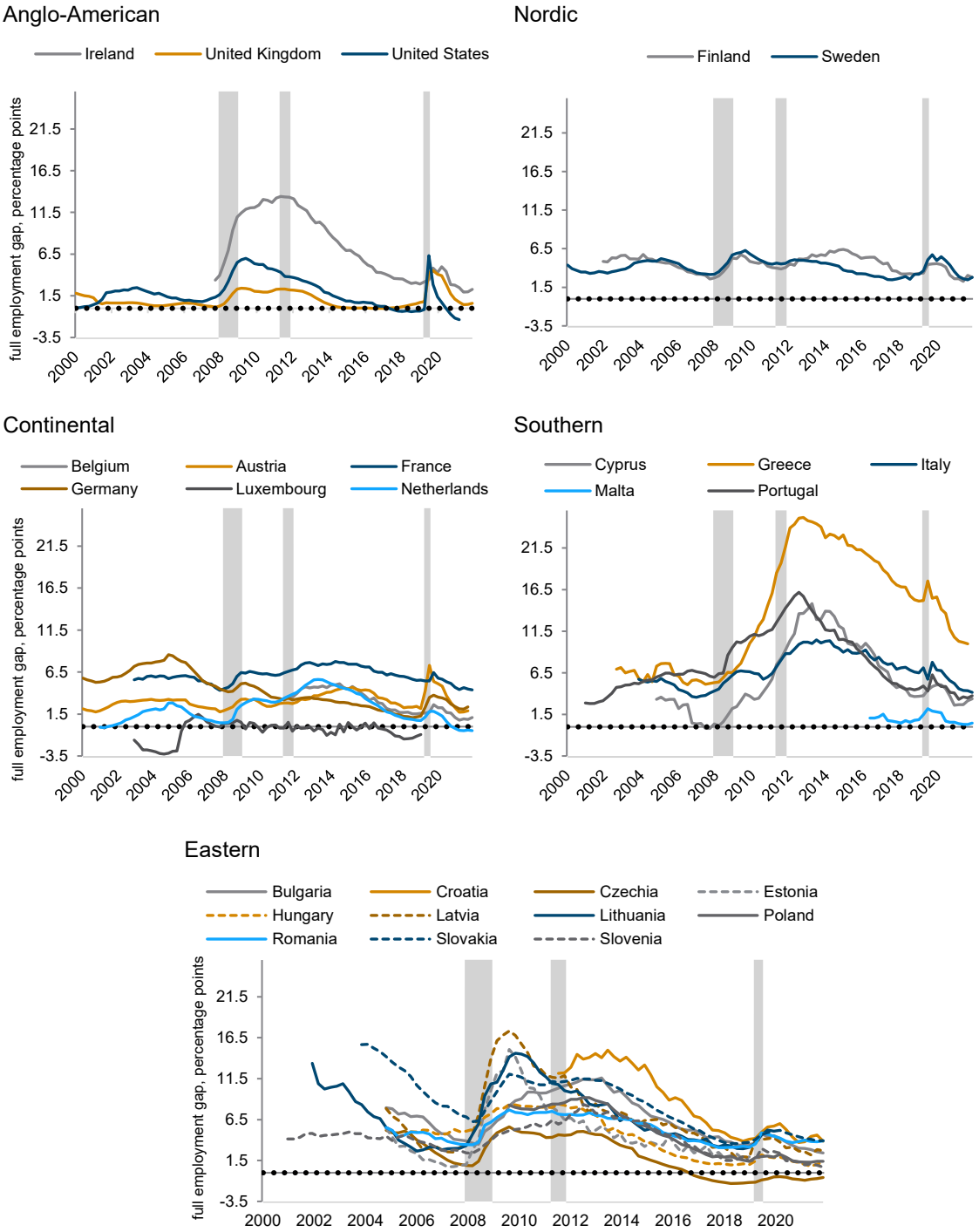
FULL-EMPLOYMENT GAPS IN 26 EU COUNTRIES, THE UK AND THE US SINCE 2000

In addition to estimates for the above six countries, we present estimates of the full-employment gap for the period 2000-2022 for an extended country sample of 26 EU countries (Denmark not included), the UK and the US. We categorise countries into five different groups: Continental, Anglo-American, Nordic, Southern and Eastern. Although a lack of available data means that we are not able to analyse the European unemployment issue during the 1980s and 1990s for the extended country sample, our analysis does offer insights into recent developments in labour markets.

We find that, in general, an economic downturn led to a widening of the unemployment gap, while a recovery narrowed it; nevertheless, disparities persisted across the EU regions. Specifically, following the 2008-2009 financial crisis, all country groups saw an increase in the unemployment gap, with the Continental and Nordic EU countries exhibiting a less pronounced rise than Eastern and Southern EU countries (see Figure 3). Southern EU countries witnessed a substantial departure from full employment during the 2011-2013 euro crisis. Pre-COVID-19 data indicate a general trend toward reduced labour-market slack across the EU. As the post-COVID recovery commenced, labour markets tightened in most of the countries under consideration (albeit to varying degrees). Notably, during the post-pandemic

recovery, Czechia and the Netherlands were the only EU countries to join the US in achieving a full-employment-consistent rate of unemployment.

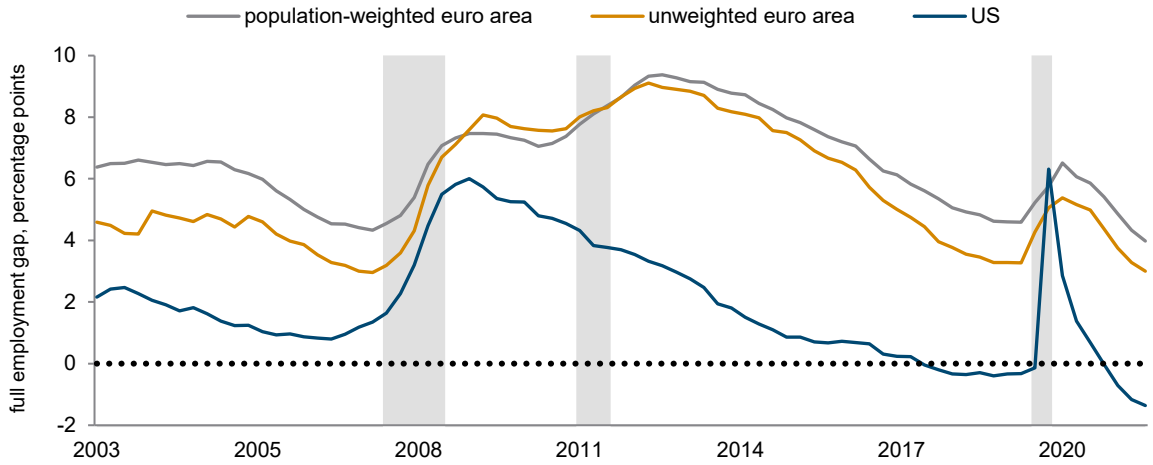
Figure 3 / Beveridge full-employment gap for the extended sample of 28 countries, 2000-2022



Notes: The grey areas in the figure indicate periods of recession in the aggregated OECD Europe sample. A recession is defined as two consecutive quarters of negative real GDP growth. The data for Germany are for West Germany until 1991. The Beveridge full-employment gap (g) is calculated as $g = u - BECRU$. The classification of EU countries into Continental, Nordic, Southern and Eastern countries builds on Arts and Gelissen (2002).
Source: Eurostat, ISTAT, DARES, Michaillat and Saez (2022); own calculations.

As a result of these divergent developments, in 2022 the euro area exhibited significantly greater labour-market slack than the US: the euro area's 4% full-employment gap stood in sharp contrast to the US's negative gap (Figure 4). This implies that the euro area's labour market is not experiencing overheating. This observation is in line with recent research by the International Monetary Fund (Dao et al., 2023), which attributes the recent increase in core inflation in the euro area to substantial supply-side shocks (related in particular to energy price hikes), rather than to economic overheating. Conversely, there is evidence indicating that the labour market in the US is excessively tight.

Figure 4 / Beveridge full-employment gaps for the euro area and the US, 2000-2022



Notes: The grey areas in the figure indicate periods of recession in the aggregated OECD Europe sample. A recession is defined as two consecutive quarters of negative real GDP growth. The euro area data show an average (either unweighted or population-weighted) for the 20 member countries of the euro area. The Beveridge full-employment gap (g) is calculated as $g = u - BECRU$.
Source: Eurostat, ISTAT, DARES, Michaillat and Saez (2022); own calculations.

FACTORS AFFECTING FULL-EMPLOYMENT GAPS

We also explore the determinants of full-employment gaps, considering various factors known to play a role in this context. We establish hypotheses based on theoretical insights, outlining our expectations regarding how these factors – such as labour-market institutions, macroeconomic elements, political forces and structural factors – interact with full-employment gaps.

The hysteresis effect highlights the persistent nature of the full-employment gap. Our results suggest that elevated unemployment rates can persist even after the initial causes have diminished – for instance, when skills that will be required for jobs that emerge in the recovery phase are lost over time. We utilise long-term unemployment and lagged full-employment gaps as a proxy for hysteresis, which allows us to examine the relationship between past and present full-employment gaps. Our results highlight structural unemployment (i.e. structural mismatch in the labour market, whereby the skills of job applicants do not match the requirements of advertised job vacancies) as a driver of contemporary wider full-employment gaps, supporting the notion that hysteresis may explain the prolonged high unemployment rates observed in Europe since the 1980s.

The impact of trade unions on unemployment is complex, and possibly widens the full-employment gap via insider-outsider dynamics. Traditionally, high unemployment rates are often attributed to inflexible labour-market institutions, such as trade unions. However, the impact of trade unions is far more complex and depends on factors like wage flexibility and labour demand. For instance, a decline in labour union influence may reduce the priority given to full-employment policies. Conversely, powerful trade unions that advocate for higher wages and benefits for their insider members may inadvertently damage the interests of outsiders, such as the unemployed or non-union members. This latter phenomenon – often referred to as the insider-outsider theory (Lindbeck and Snower, 2001) – can contribute to a widening of the full-employment gap. Our findings indicate that labour-market institutions significantly affect full-employment gaps only when they are considered alongside other country-specific structural factors, rather than in isolation. When accounting for other things, such as structural and macroeconomic factors, increased trade union density is found to correlate positively with full-employment gaps. This finding is in line with the insider-outsider theory.

Investment does not reduce full-employment gaps, and there is no trade-off between full-employment gaps and inflation. Our investigation into the relationship between macroeconomic factors (such as investment and inflation) and full-employment gaps challenges the conventional wisdom of a negative relationship between unemployment and inflation (Phillips curve). Quite the reverse: we find a positive and statistically significant coefficient for inflation, indicating that full-employment gaps and inflation tend to go hand in hand. Additionally, our results contradict the theoretical expectation that employment gaps should narrow as investment grows: we observe no significant association between investment and full-employment gaps.

Left-leaning governments tend to seek to reduce full-employment gaps, especially in social-democratic welfare states. Utilising a left-right orientation variable based on government inclination, we find that more left-leaning governments are associated with a reduction in full-employment gaps; this underscores the greater priority that they assign to full-employment policies, compared to right-leaning administrations. In addition, our analysis – which takes account of various confounding factors – reveals differences between social-democratic and liberal welfare states, with the former displaying smaller full-employment gaps on average. However, these disparities are less pronounced compared to conservative welfare regimes.[4]

Strengthened demand, aided by active population and total factor productivity (TFP) growth, reduces full-employment gaps, while economic globalisation plays a less influential role. In our analysis of structural factors – economic globalisation, TFP growth and population dynamics – in relation to full-employment gap, we consistently find that increased TFP growth is associated with a reduction in the gap. Despite the significance of economic globalisation in fostering international competition and job offshoring, our analysis does not reveal any substantial link with full-employment gaps. Conversely, higher active population growth is significantly associated with smaller full-employment gaps, probably

[4] The classification of countries into welfare state types is based on the typology introduced by Arts and Gelissen (2002). According to their framework, there are three distinct models of welfare states: conservative, liberal and social-democratic. In accordance with this typology, our analysis categorises Austria and Germany as conservative welfare states, reflecting their alignment with conservative economic policies that prioritise fiscal discipline or price stability over full employment. The United States and the United Kingdom are designated as liberal welfare states, indicative of a tendency toward individualism and less emphasis on social contributions. Similarly, Sweden and Finland are classified as social-democratic welfare states, in line with their dedication to policies that promote full employment.

because it contributes to economic growth and higher demand for goods and services (and despite the fact that it also increases job competition).

CONCLUSION

In summary, our analysis highlights ongoing challenges in achieving full employment across EU member states since the early 1970s. Only a few of them, such as the Netherlands and Czechia, have attained full employment since the COVID-19 crisis. In addition, our estimates based on the Beveridge full-employment concept challenge traditional estimates, emphasising the euro area's current significant labour-market slack compared to the US. Examining factors that potentially affect full-employment gaps, our analysis underscores the persistence of full-employment gaps, highlights the positive and significant impact of trade unions on the size of those gaps, provides evidence for the absence of an inflation-unemployment trade-off, and illustrates the limited influence of investment. Left-leaning governments, especially in social-democratic welfare states, tend to reduce employment gaps. Strengthened demand, fuelled by an active population and TFP growth, emerges as pivotal in reducing full-employment gaps, while economic globalisation plays a comparatively minor role.

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The EU minimum wage directive: A chance for decent earnings in EU-CEE

BY SEBASTIAN LEITNER

Collective bargaining in EU-CEE has been under pressure over the past two decades, with coverage rates much lower nowadays than in Western and Northern European countries. Moreover, in-work poverty and wage dispersion have been on the rise. The EU Minimum Wage Directive, adopted in late 2022, is an important step forward in addressing these problems, by promoting collective bargaining and increasing statutory minimum wages. However, its success will ultimately depend on the willingness of national governments to accept unions and employer organisations as equal partners and to respect their autonomy in wage setting.

THE EU MOMENTUM TOWARDS MORE SOCIAL COHESION

With its proposal for a European Pillar of Social Rights back in 2017 (European Commission, 2017), the Commission promised to strengthen the social dimension of the EU. This major initiative was seen as something of a turnaround for the Commission, following a lengthy period of neglect of social matters: economic issues – particularly the goal of building and deepening the EU single market – dominated the EU playing field. Following the financial crisis of 2008/2009, there was even strong pressure imposed on workers' rights and bargaining power, when the Troika demanded that governments facing fiscal problems should weaken collective agreements and the social rights of citizens, and trim back the influence of social partnership. However, these kinds of monetary and fiscal policies failed to deliver macroeconomic recovery in the EU, instead bringing about a protracted stagnation and a decline of welfare for many EU citizens. One of the results of this has been an upswing in various countries of parties that oppose the idea of EU cohesion.

Thus, the EU Commission and pro-EU oriented stakeholders finally came to the conclusion that it was high time to change the economic paradigm from liberalism to institutionally embedded capitalism. Moreover, the Commission had to deliver policies that would guarantee more EU-wide cohesion and protection of welfare for all EU citizens (Keune and Pochet, 2023; Müller and Schulten, 2022).

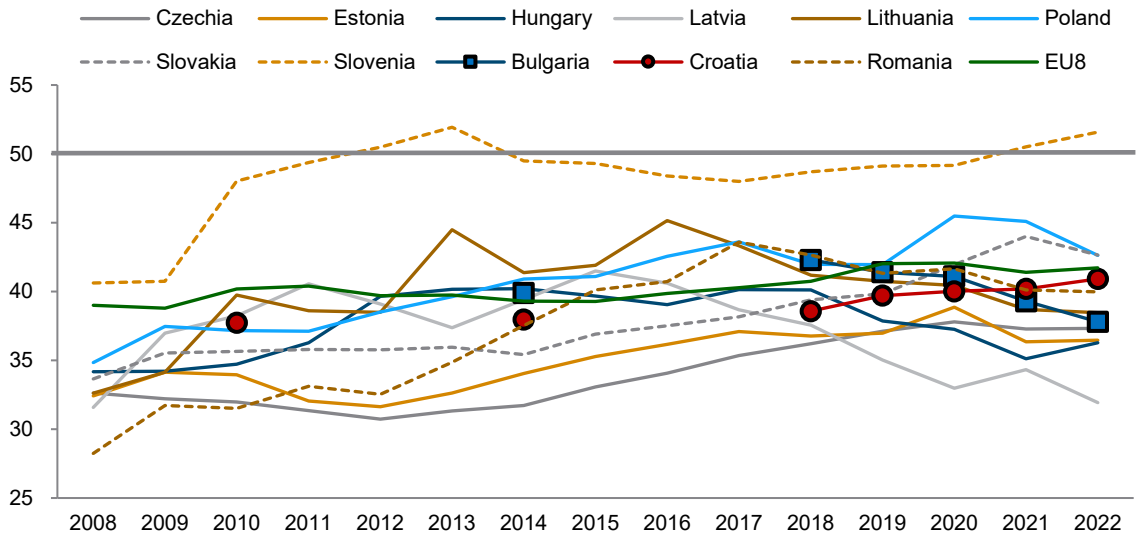
The Social Pillar comprises 20 principles that are designed to provide equal opportunities and access to the labour market, ensure fair working conditions and foster social protection and inclusion for all EU citizens. In these various fields, the Commission promised to deliver concrete actions to regulate minimum standards and promote social progress.

THE BACKGROUND OF THE MINIMUM WAGE DIRECTIVE

One of the 20 principles of the Social Pillar covers the field of wages. It seeks decent salaries for workers in all EU countries. One of the actions this principle prompted the Commission to do, was to formulate the EU Directive on adequate minimum wages, which was finally adopted in October 2022 (European Commission, 2022).

Following the financial crisis of 2008/2009, it was not only the general risk of social exclusion that increased in many countries, but also – and in particular – in-work poverty, i.e. having a job does not necessarily protect workers from material deprivation. In countries like Czechia, Estonia, Latvia, Slovenia, Bulgaria and Hungary (but also Germany), in 2018 the net income of a single full-time minimum wage earner was below the at-risk-of-poverty threshold (European Commission, 2020). One of the dangers that follow in the wake of in-work poverty, as highlighted by the EU Commission, is that it can reinforce outward migration from poorer regions, which could exacerbate the shortage of skilled workers and population decline in general.

Figure 1 / Ratio of statutory minimum wage to mean wage in %, full-time workers, 2008-2022



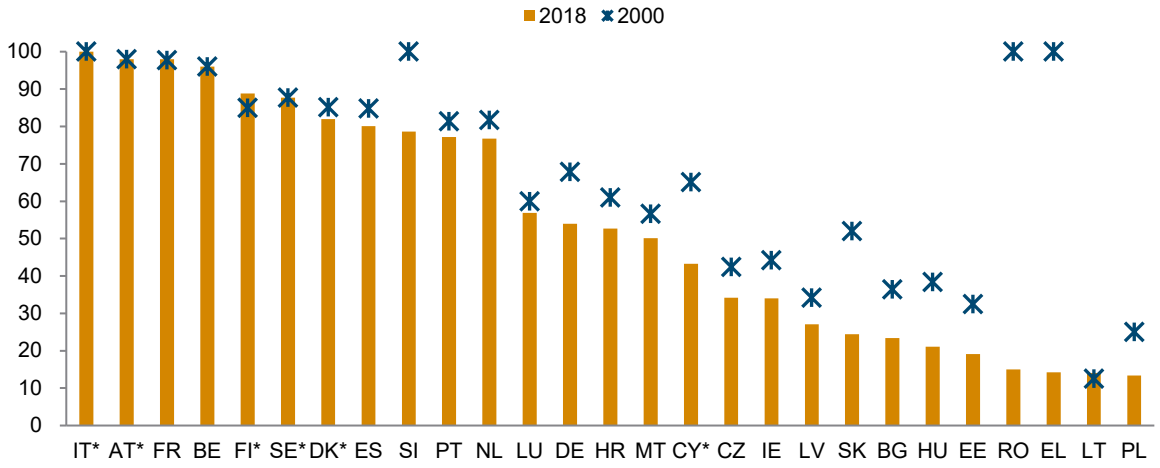
Note: EU8: BE, FR, EL, ES, IE, LU, NL, PT. The 50% benchmark corresponds to the internationally used definition of an adequate minimum wage.
Source: OECD.Stat. (5.12.2023).

While at the time of the financial crisis in 2008, most of the EU-CEE countries had a statutory minimum wage that was relatively low compared to the mean wage – below 35%, except for in Slovenia (see Figure 1) – one can observe a gradual improvement over time. Nevertheless, in many countries – particularly during the most recent period of high inflation – that ratio has again been declining (and thus the income levels of minimum wage earners).

In the Minimum Wage Directive, the EU Commission also addresses the problems of non-coverage and non-compliance with minimum wage rules. This leads to a situation where even an adequate level of the minimum wage does not guarantee that all workers receive decent earnings. Gaps in coverage can result from the legal exemption of specific groups (quite often more vulnerable groups, such as young,

migrant, low-skilled workers, etc.) from application of the national minimum wage rules. In countries where the minimum wage rate is determined solely by collective agreement, gaps can result from non-coverage of specific sectors, groups of workers or small and medium-sized enterprises. For example, in Italy about 20% of employees have no minimum wage protection. Furthermore, non-compliance is a serious phenomenon in several countries. Apart from the problem of lower wages, non-compliance is often a result of low-skilled employees having to work unrecorded and unpaid overtime. Eurofound (2023b) estimates that EU-wide in 2018 almost 7% of all employees earned less than the minimum wage rate in force in their country. The highest non-compliance rates are to be found in Hungary (13%), Spain (11%), Germany (9.5%), Italy (9.3%) and Lithuania (8.5%). Relatively low non-compliance rates (of 3% or below) are estimated for Slovakia, Czechia, Latvia, Croatia and Poland, for instance, but also for Greece, Belgium, Finland and the Netherlands.

Figure 2 / Coverage rate by collective agreement in %, 2000 and 2018



Note: Countries where the minimum wage is determined only by collective agreement are marked with *.
Source: OECD/AIAS ICTWSS Database (Version 1.1., September 2023).

Something else that is detrimental to the development of salaries (not only of low-wage earners)[1] is the decline throughout Europe over the past two decades in the proportion of workers covered by collective agreements. (see Figure 2). Whereas in most Northern and Western European countries (except Germany) the decrease has been fairly small, in almost all the Central and Eastern European EU member states there has been a sharp decline, particularly following the financial crisis of 2008/2009. Nowadays collective agreement coverage rates in EU-CEE are much lower than in the rest of the EU.

[1] Low-wage earners are classified by the European Commission as workers earning less than two thirds of the hourly median wage, based on the Eurostat Structural Earnings Survey.

THE MAIN ELEMENTS OF THE DIRECTIVE

The Minimum Wage Directive has three major goals. First, governments should provide for an adequate minimum wage – i.e. one that allows a decent standard of living. Second, governments should enhance the effective access of workers to minimum wage protection. And third, an increase should be encouraged in the share of employees covered by a collective agreement.

As an adequate level for a minimum gross wage, the Commission highlights the internationally used benchmarks of 50% of the national mean wage and 60% of the national median wage and underscores the importance of ensuring that the minimum wage covers the cost of living. Governments that use a statutory minimum wage in their country should establish procedures – or refine existing ones – in order to involve the social partners in setting and continuously updating the minimum wage.

In order to enhance minimum wage protection for all workers, the directive envisages that governments should provide effective and adequate controls and that labour inspectorates should undertake field inspections. Governments should also guide and help those authorities to develop the necessary capabilities.

Figure 3 / Collective bargaining coverage rate versus share of low-wage earners, 2018

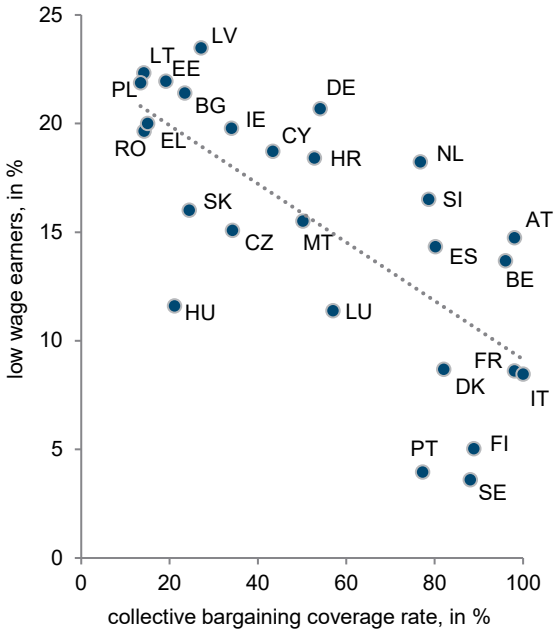


Table 1 / Regression results for cross-section data, 2018

Dependent variable: Share of low-wage earners		
Regression models	**[1]**	**[2]**
Independent variables		
Collective bargaining coverage rate	-0.135***	-0.166***
	(0.026)	(0.034)
Minimum/mean wage		-0.174
		(0.179)
Share of part-time workers		0.209**
		(0.099)
Share of fixed-term contracts		-0.044
		(0.067)
Share of female workers		-0.076
		(0.219)
Constant	22.609***	32.980**
	(1.643)	(12.773)
.		
R-squared	0.509	0.612
Adjusted R-squared	0.490	0.520

Note: Standard errors in parentheses,
*** p<0.01, ** p<0.05, * p<0.1

Note: Low-wage earners: Workers earning less than two thirds of the median wage, based on Eurostat Structural Earnings Survey, 2018 (latest data available).
Source: OECD/AIAS ICTWSS Database (Version 1.1., September 2023), Eurostat database, EU Commission (2020, p.4) for AT, CY, DK, FI, SE.

The importance of high collective agreement coverage rates to reduce the share of low-wage earners is obvious (see Figure 3). Applying a cross-section econometric approach (Table 1) we find that the share of low-wage earners is associated – statistically significantly and negatively – with coverage rates, but

not with the ratio of minimum wages to mean wages. Other factors that were expected to influence the share of low-wage earners – i.e. the share of female workers and fixed-term employment contracts – were found to be insignificant. Only a higher share of part-time employees was positively associated with the share of low-wage earners. Higher collective bargaining coverage rates are thus essential to reduce wage inequality and the extent of the low-pay sector.

The Minimum Wage Directive stipulates that, in order to increase coverage rates, all countries with rates of below 80% should develop specific actions to strengthen the capacities of the social partners and foster collective bargaining – not only at the company level, but also particularly at the sectoral and the cross-industry level. An appropriate action plan is to be adopted following consultation with the national social partners and is to be reported on to the Commission by the end of 2025 at the latest. The plan should set out a clear timeline and concrete measures to progressively raise the rate of collective bargaining coverage.

The Commission has announced that it will support the process of (re)establishing collective bargaining and tripartite social dialogue in the member states in many ways over the coming years. Financial support for the capacity building of social partners is provided by the European Social Fund Plus (ESF+). In particular, this should support social partners in setting up more centralised bargaining structures. However, success depends very much on developments on the national playing field – and particularly on whether the capacity building of unions and employer organisations is supported by the government in question. Collective bargaining and tripartite social dialogue could gain momentum if governments accept unions and employer organisations as equal partners in wage setting and social dialogue. The effective enhancement of coverage rates will be a particular challenge in the EU-CEE countries.

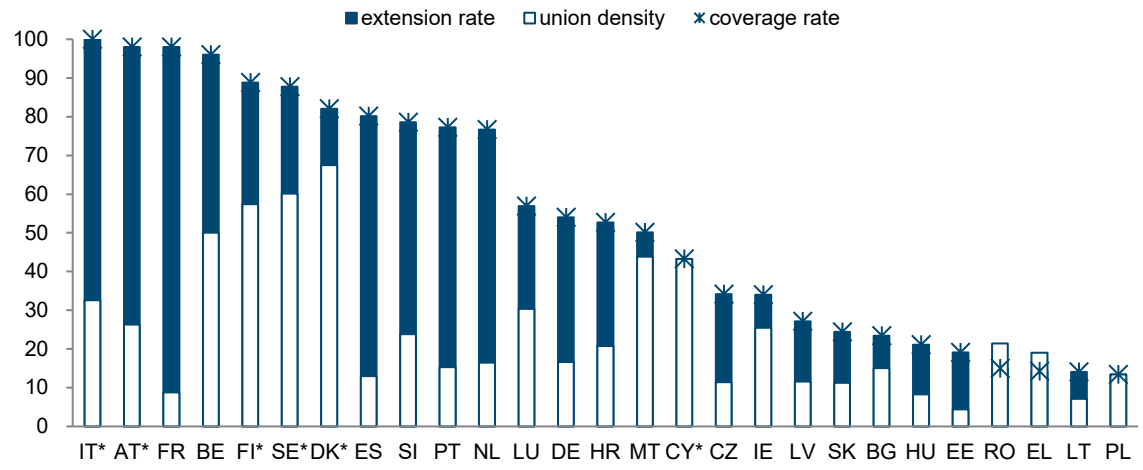
MEASURES TO FOSTER HIGHER COLLECTIVE BARGAINING COVERAGE

As regards the content of the action plans that the member states have to deliver, the directive prescribes no specific content, leaving it up to the national governments to deliver measures in line with national practices, and thus also respecting the social partners' autonomy. However, in its impact assessment, the EU Commission names some provisions that could effectively support an increase in collective bargaining coverage rates: representativeness and extension rules, duration of collective agreements and peace clauses (European Commission, 2020, pp. 177f).

Representativeness and extension rules: The representativeness criteria of social partners are often defined by law. They determine how many of the enterprises in an industry or workers in a company or industry must be members of the employer organisation or union for these social partners to be recognised as representative of the companies and workers. Only representative social partners can enter into meaningful collective bargaining. Governments need to formulate these regulations on representativeness in such a way as to facilitate collective agreement bargaining at a more centralised level (see also Hassel, 2022). Furthermore, regulations on extension are important in order to increase coverage by collective agreement. When representative social partners have reached a collective agreement, the reach of the latter is extended from the signatory parties to all workers in a sector of a region or countrywide. Without effective extension rules, we would see much lower collective bargaining coverage rates in most EU countries (Hijzen and Martins, 2016).

An indication can be given by comparing union density and collective bargaining coverage rates (Figure 4). In many countries with higher collective bargaining coverage rates, these are achieved thanks not only to higher union density rates, but also to widespread use of extension rules. Thus, in most EU-CEE countries, more generous regulations covering representativeness and extension could easily increase collective bargaining coverage rates.

Figure 4 / Union density, extension rate and collective bargaining coverage rate in %, 2018



Note: Countries, where the minimum wage is determined solely by collective agreement are marked with *.
Source: OECD/AIAS ICTWSS Database (Version 1.1., September 2023).

Duration of collective agreements: If the duration period of a collective agreement is long (or even indefinite), that benefits workers, since it keeps them covered even if no renegotiations take place. Ultimately it fosters stability and social peace, since the security of wages and working conditions is preserved.

Peace clauses: In order to make collective agreements effective, enforcement is required. This can be encouraged by peace clauses – i.e. agreements that have been reached at a higher level of bargaining (the national or sectoral level) must also be enforced at lower levels (sectoral or company level). Mediation and arbitration bodies can further help smooth negotiations.

In its Minimum Wage Directive, the EU Commission stresses moreover the importance of public procurement at the national level, in order to foster effective implementation of minimum wage protection and the increase in collective bargaining coverage. It underlines the need to demand compliance in the awarding and performance of public procurement and concession contracts.

Further measures that would help attain the goals of the Minimum Wage Directive include the elements of monitoring and data collection. The EU Commission will implement a system of reporting, in order to support the process towards higher collective bargaining coverage rates and decent minimum wages (European Commission, 2022).

EXPECTED EFFECTS OF DECENT LEVELS OF MINIMUM WAGES

In many EU-CEE countries, a large share of workers earns the statutory minimum wage. In Slovenia, Bulgaria, Romania and Poland, this affects more than 10%; in Hungary, Latvia, Lithuania, Slovakia and Croatia, it still applies to between 5% and 10% (Eurostat, 2023). Thus, an adequate level of the minimum wage (and enforced compliance) is of the utmost significance for those workers and their families, if they are to make ends meet and avoid in-work poverty.

For a long time the view on minimum wages was rather critical on the part of many, particularly liberal policy makers. A decent level of the minimum wage was seen as a danger to the viability of small and medium-sized enterprises and to the prospects of low-skilled workers in remote areas finding and retaining employment. Empirical research found, however, that the welfare effects of the minimum wage far outweigh any possible negative employment effects. Overall, the literature detects on average only very slightly negative or non-existent employment effects (Card and Krueger, 2016; Dube, 2019; Eurofound, 2023a). The results are not that consistent when it comes to low-skilled and young workers; but for that group, too, job losses seem to be small (e.g. Cengiz et al., 2019). In its impact analysis of the Minimum Wage Directive, the EU Commission performed microsimulations, in order to assess any possible negative employment effects. It is estimated that lifting the minimum wage floor to 60% of the median wage would result in a small negative employment effect of 0.6% or below in most EU-CEE countries. In those countries that in 2018 had the lowest minimum-to-mean-wage ratios or a high share of minimum wage earners (Romania, Poland, Estonia and Bulgaria), the effects could be greater (European Commission, 2020, pp. 182ff).

CONCLUSIONS

The EU Minimum Wage Directive, adopted in late 2022, is an important step forward in addressing the problem of in-work poverty by increasing the statutory minimum wage. In many EU-CEE countries, a large share of workers earns the statutory minimum wage: in Slovenia, Bulgaria, Romania and Poland that applies to more than 10%; in Hungary, Latvia, Lithuania, Slovakia and Croatia, the figure is still 5-10%. Thus, an adequate level of the minimum wage (and enforced compliance) is of the utmost significance for those workers and their families in terms of making ends meet and avoiding in-work poverty. Moreover, the Minimum Wage Directive of the EU addresses the promotion of collective bargaining, in order to reduce wage dispersion and increase welfare for low-wage earners.

The Minimum Wage Directive does not, however, stipulate a specific level for the minimum wage or rules on how to define such a level. It does demand that individual governments implement specific procedures for setting and updating the statutory minimum wage. Any country where collective agreements cover less than 80% of the workforce must deliver an action plan to promote collective bargaining. However, it is left up to each individual government to decide what it considers to be appropriate measures. Thus, the success of the Minimum Wage Directive in increasing coverage rates by collective agreement and raising the level of the minimum wage will depend on the willingness of individual EU-CEE governments to accept social partners on a level playing field, and thus share power with those partners in terms of determining wages and working conditions.

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Monthly and quarterly statistics for Central, East and Southeast Europe

We have added data for Moldova in our wiiw Monthly Database, which now covers all 23 CESEE countries in the focus of regular wiiw analysis.

The monthly and quarterly statistics cover **23 countries** of the CESEE region. The graphical form of presenting statistical data is intended to facilitate the **analysis of short-term macroeconomic developments**. The set of indicators captures trends in the real and monetary sectors of the economy, in the labour market, as well as in the financial and external sectors.

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

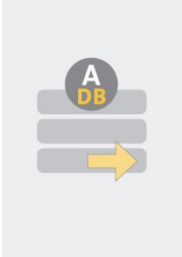
%	per cent
ER	exchange rate
GDP	Gross Domestic Product
HICP	Harmonised Index of Consumer Prices (for new EU member states)
LFS	Labour Force Survey
NPISHs	Non-profit institutions serving households
p.a.	per annum
PPI	Producer Price Index
reg.	registered
y-o-y	year on year

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.

Online database access



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If you have not yet registered, you can do so here: https://wiiw.ac.at/register.html.

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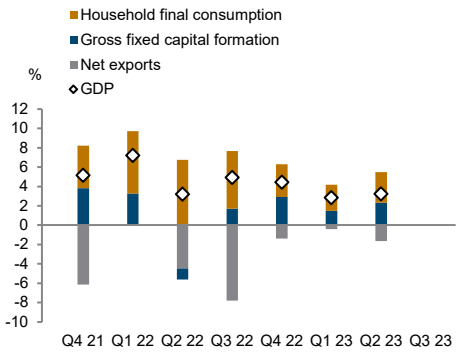
We offer an additional service package that allows you to access all databases – a wiiw Membership, at a price of € 2,700. Your usual package will, of course, remain available as well.

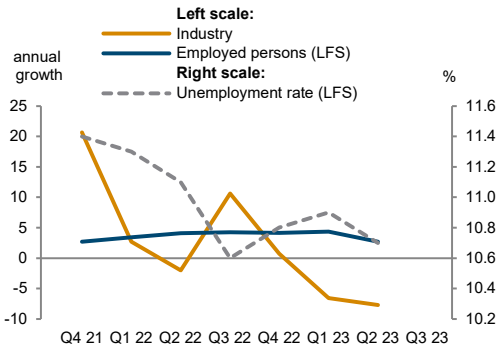
For more information on database access for Members and on Membership conditions, please contact Ms. Monika Potocnik (potocnik@wiiw.ac.at), phone: (+43-1) 533 66 10.

Albania

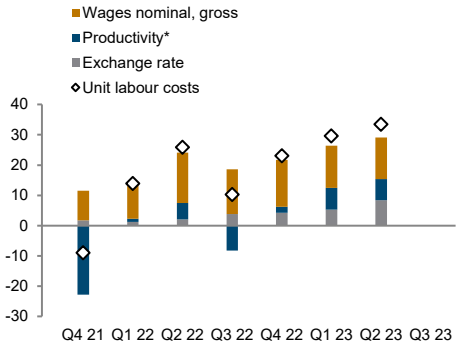
Real GDP growth and contributions
y-o-y



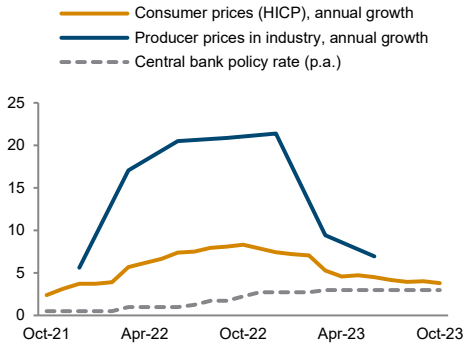
Real sector development
in %



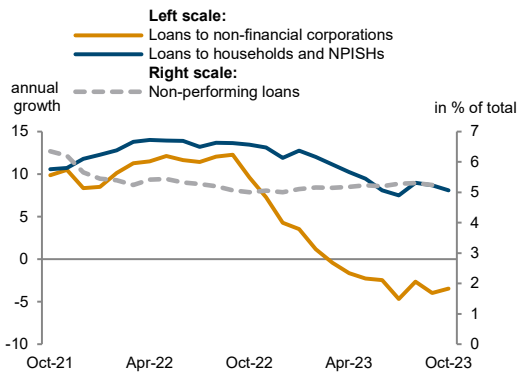
Unit labour costs in industry
annual growth rate in %



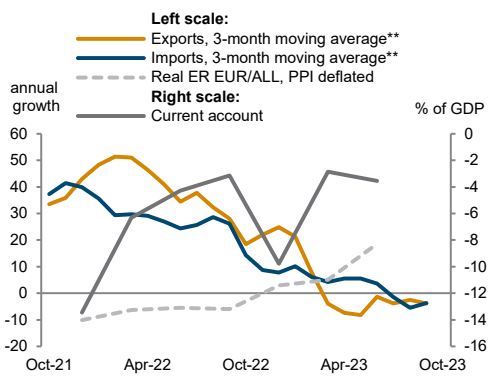
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %

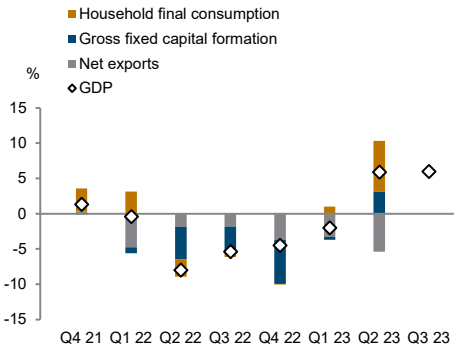


*Positive values of the productivity component on the graph reflect decline in productivity and vice versa.
**EUR based.

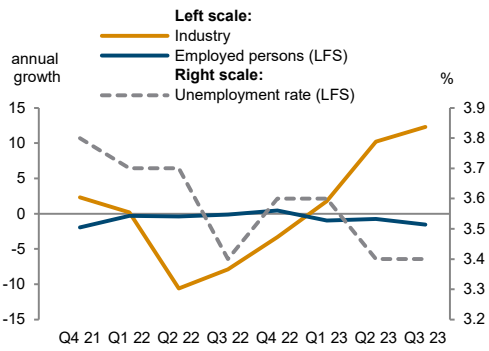
Source: wiiw Monthly Database incorporating Eurostat and national statistics.
Baseline data, country-specific definitions and methodological breaks in time series are available under:
https://data.wiiw.ac.at/monthly-database.html

Belarus

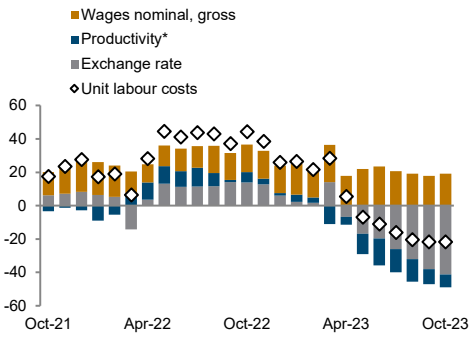
Real GDP growth and contributions
y-o-y



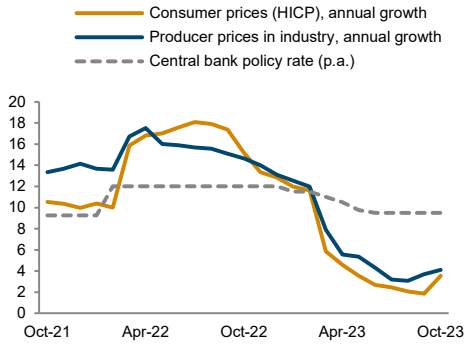
Real sector development
in %



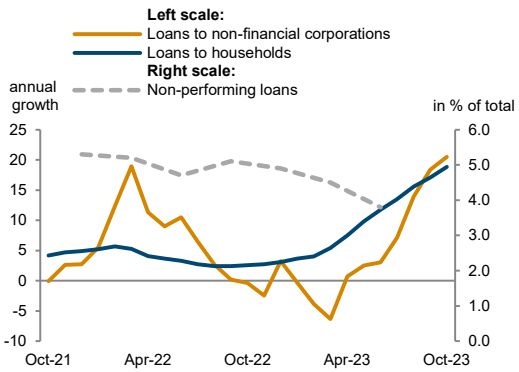
Unit labour costs in industry
annual growth rate in %



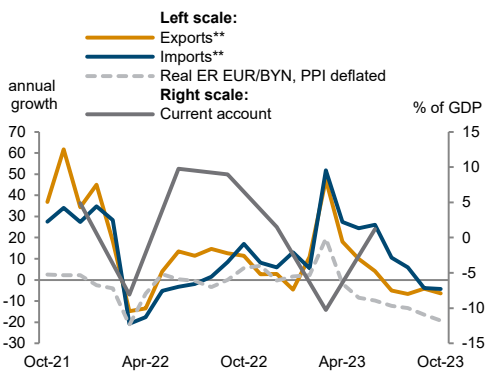
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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**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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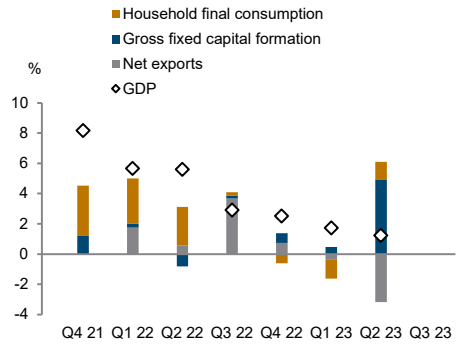
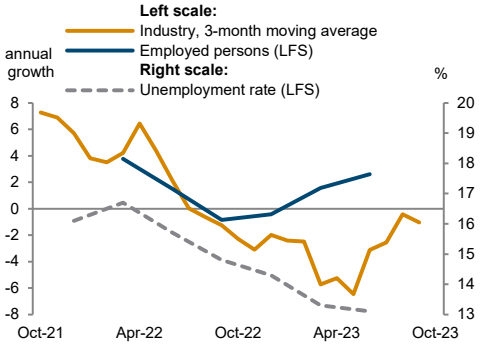
Bosnia and Herzegovina

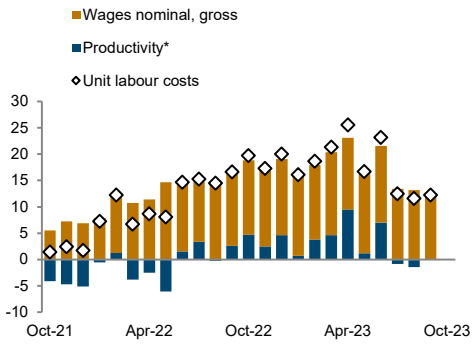
Real GDP growth and contributions
y-o-y



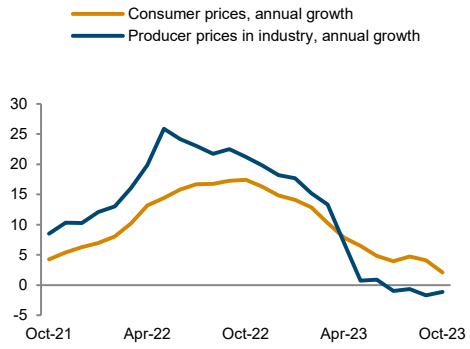
Real sector development
in %



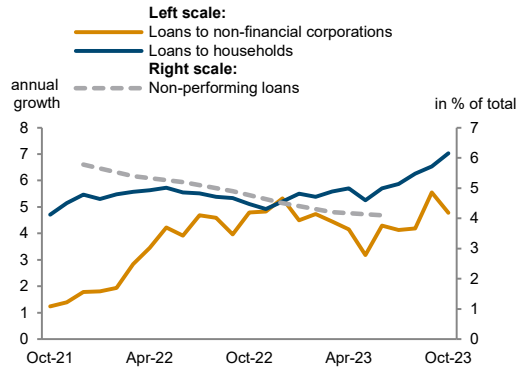
Unit labour costs in industry
annual growth rate in %



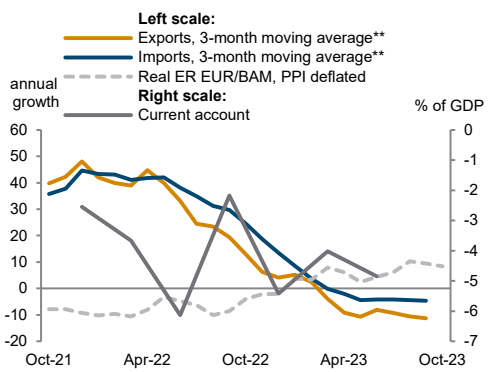
Inflation
in %



Financial indicators
in %



External sector development
in %



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**EUR based.

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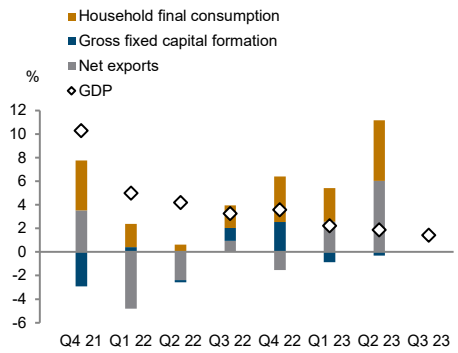
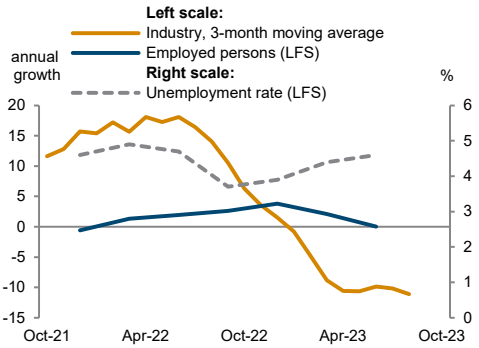
Bulgaria

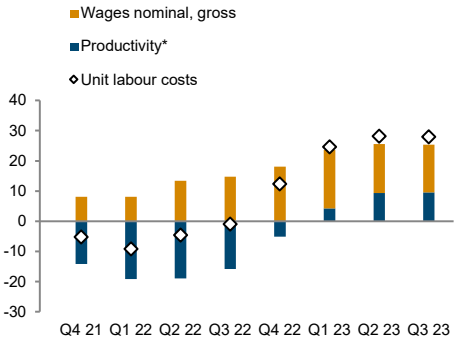
Real GDP growth and contributions
y-o-y



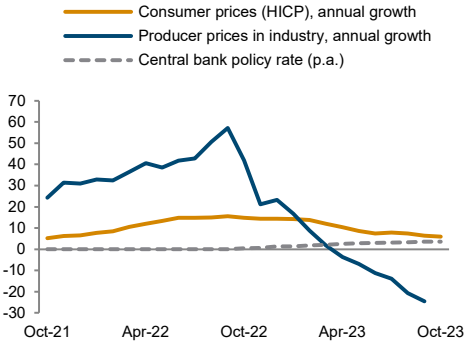
Real sector development
in %



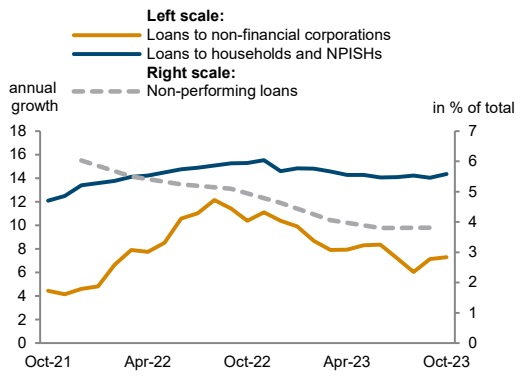
Unit labour costs in industry
annual growth rate in %



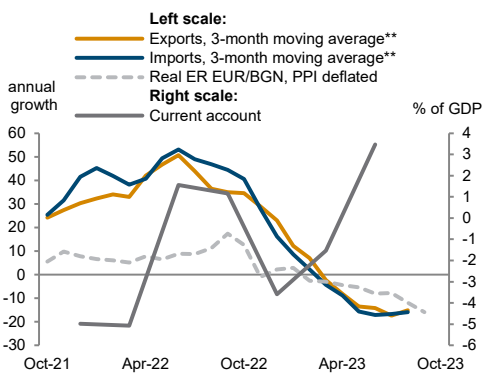
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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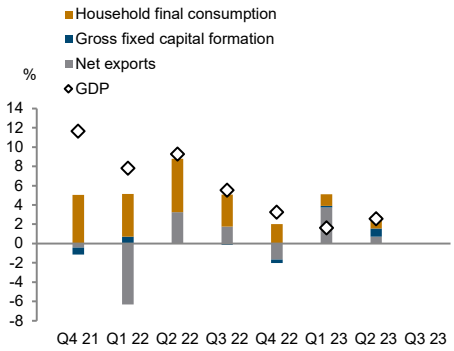
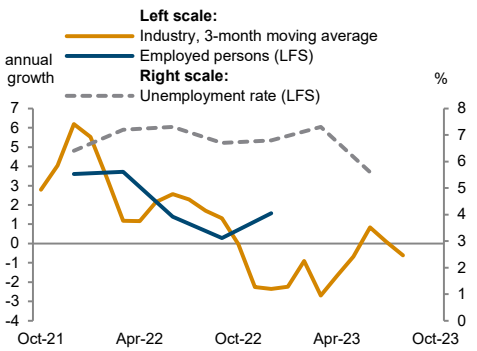
Croatia

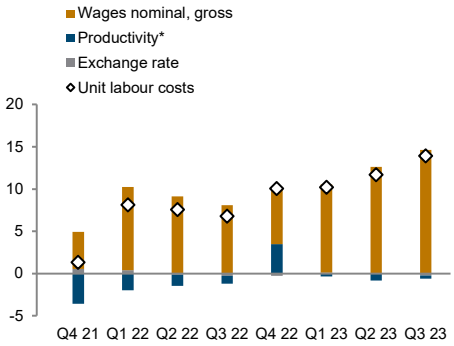
Real GDP growth and contributions
y-o-y



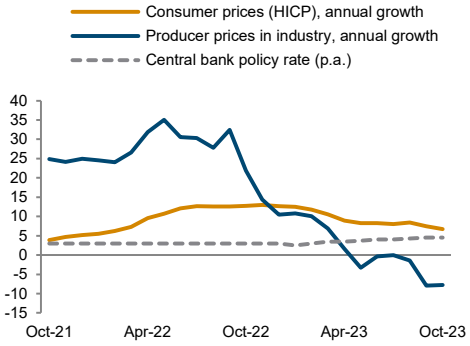
Real sector development
in %



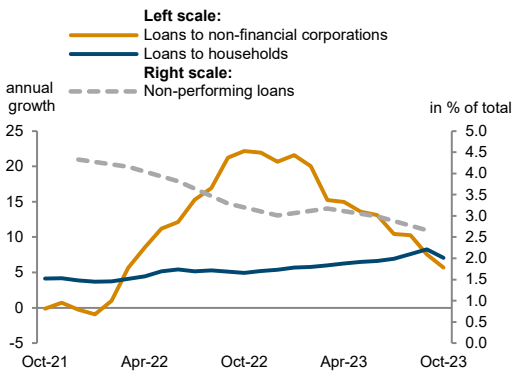
Unit labour costs in industry
annual growth rate in %



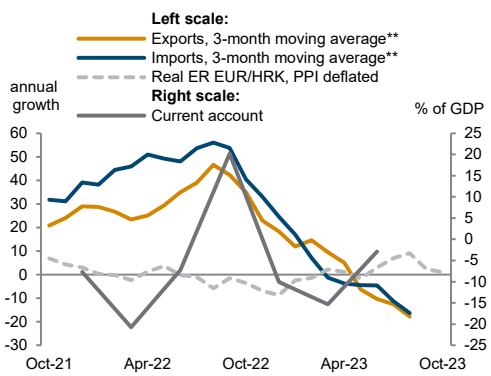
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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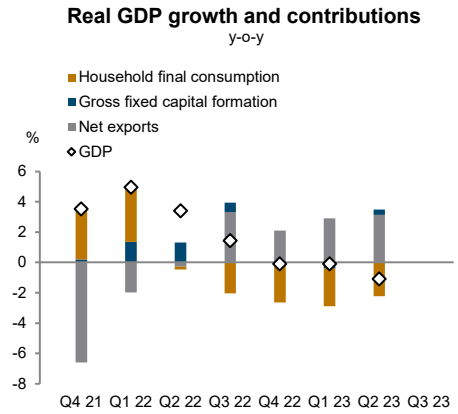
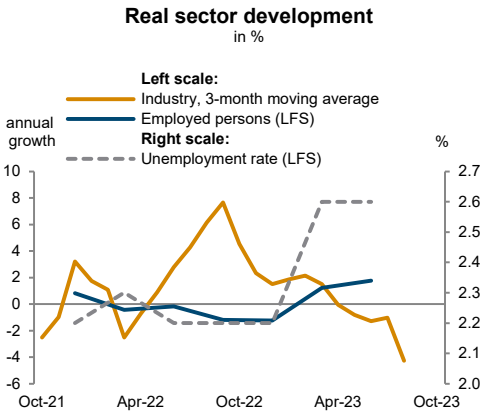
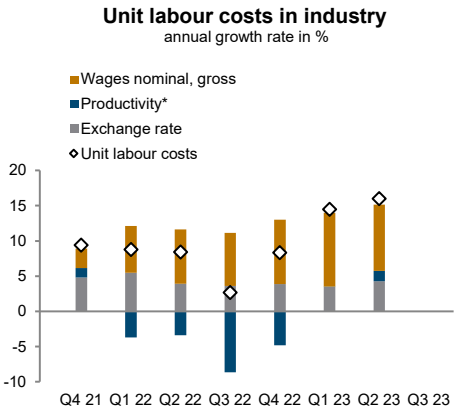
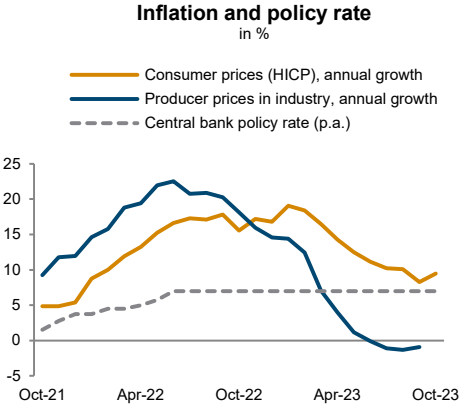
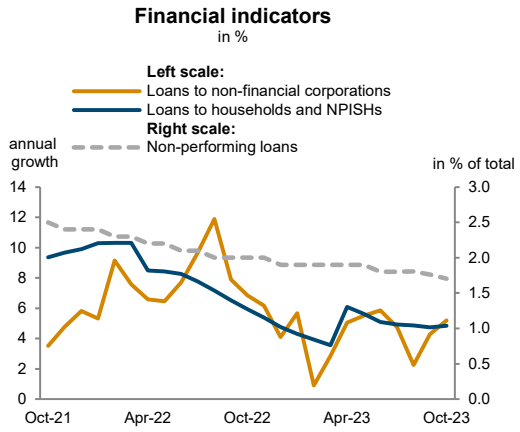
Czechia

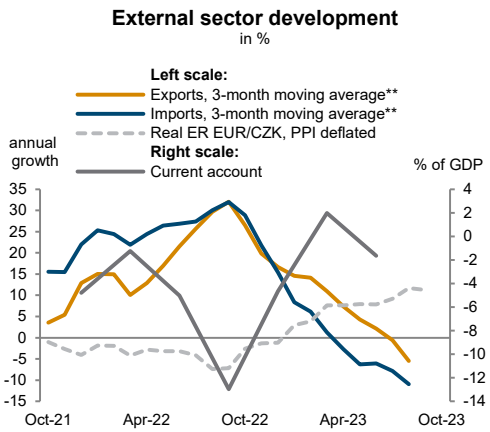












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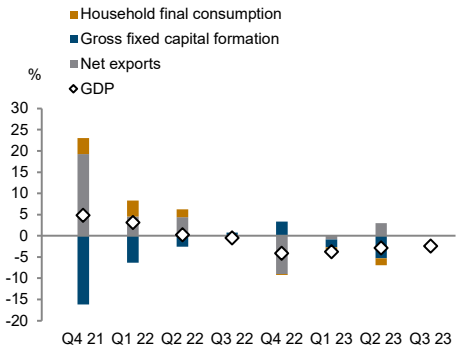
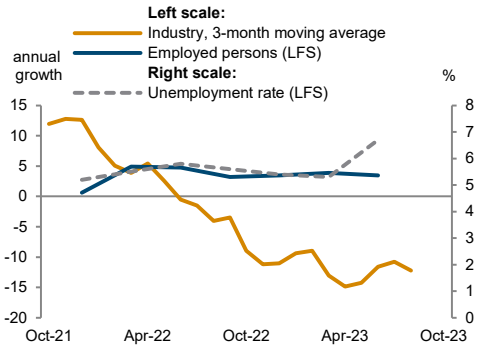
Estonia

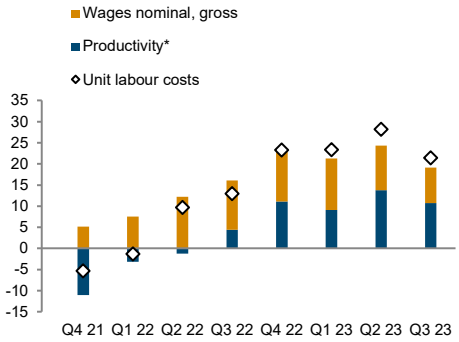
Real GDP growth and contributions
y-o-y



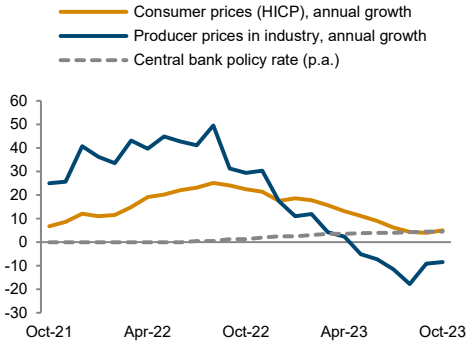
Real sector development
in %



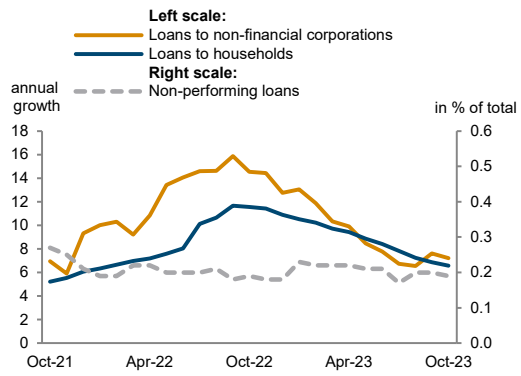
Unit labour costs in industry
annual growth rate in %



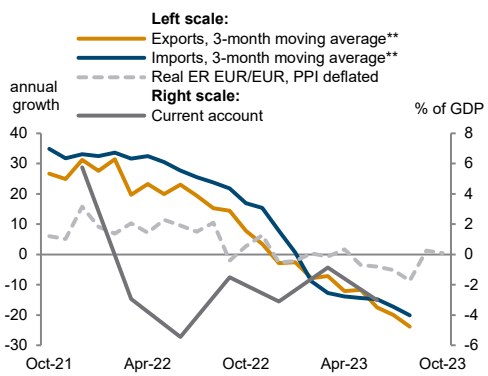
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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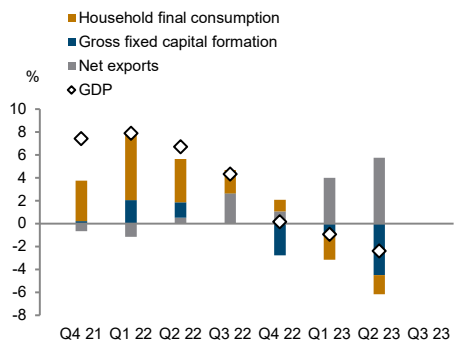
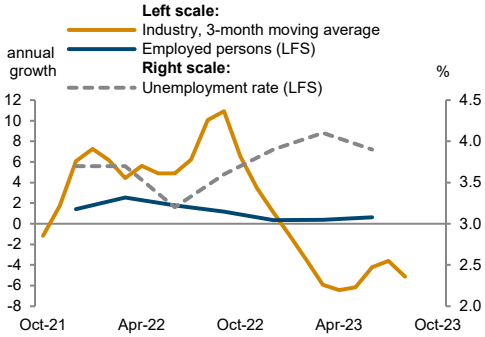
Hungary

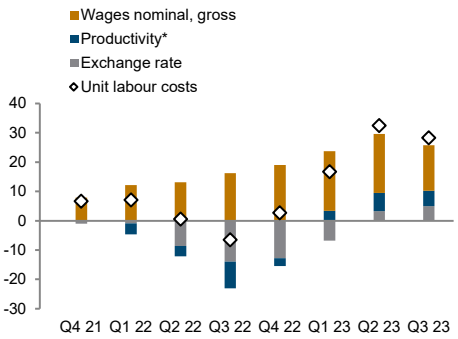
Real GDP growth and contributions
y-o-y



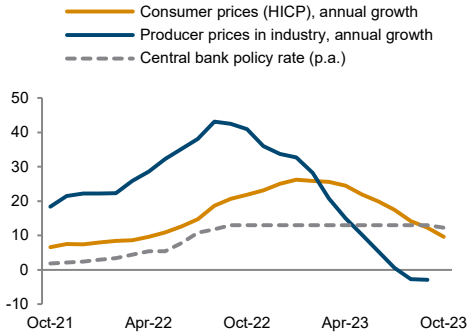
Real sector development
in %



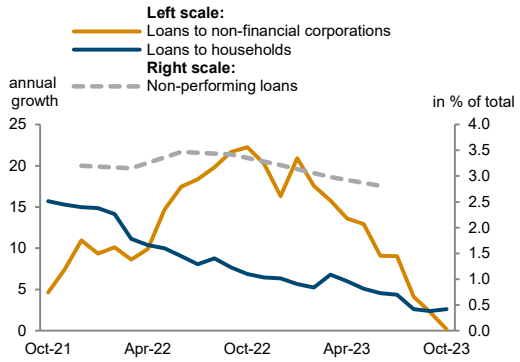
Unit labour costs in industry
annual growth rate in %



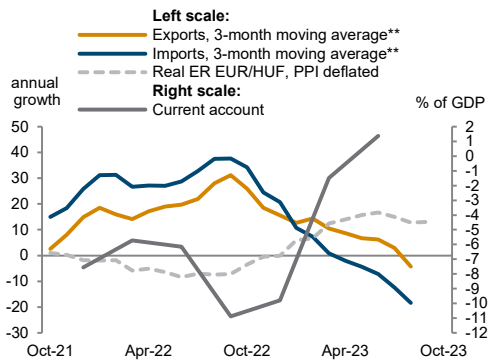
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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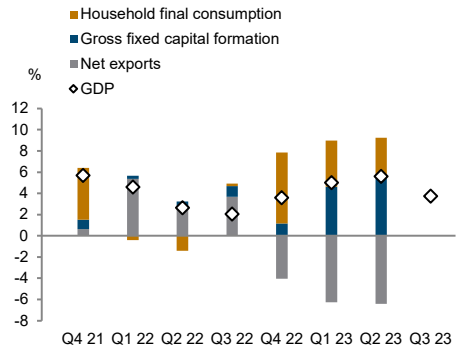
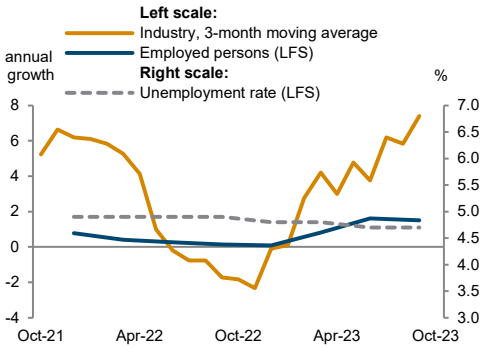
Kazakhstan

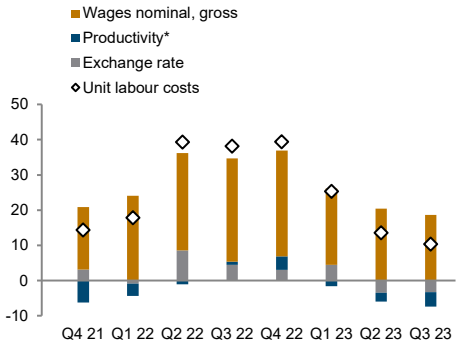
Real GDP growth and contributions
y-o-y



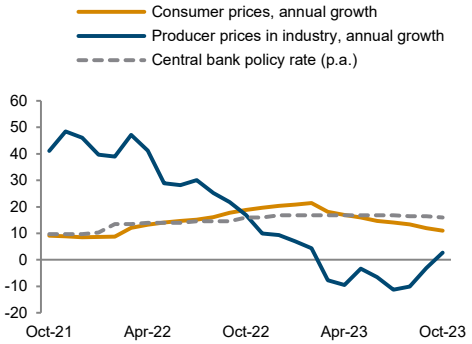
Real sector development
in %



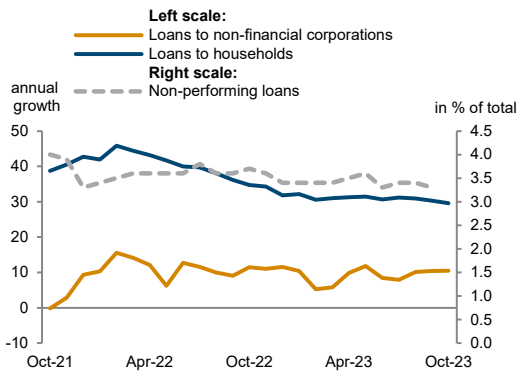
Unit labour costs in industry
annual growth rate in %



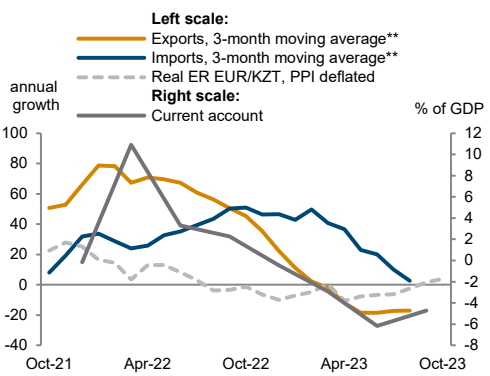
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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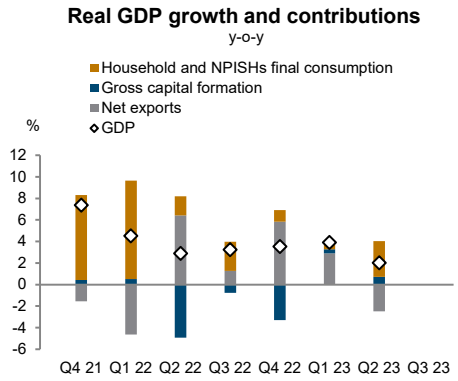
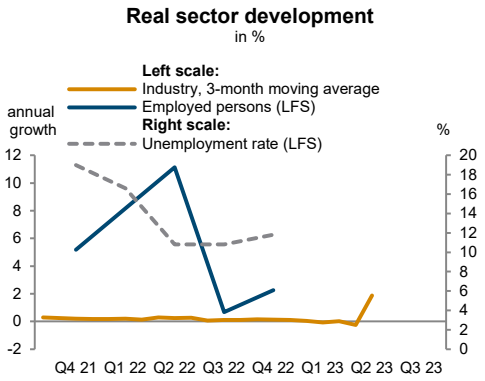
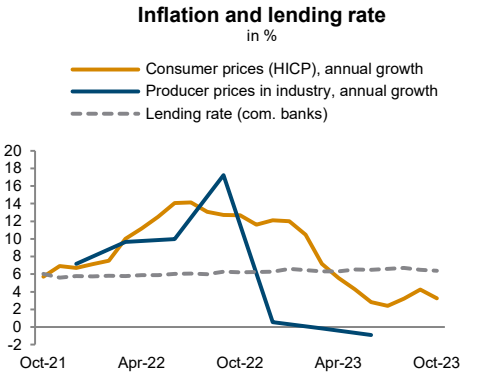
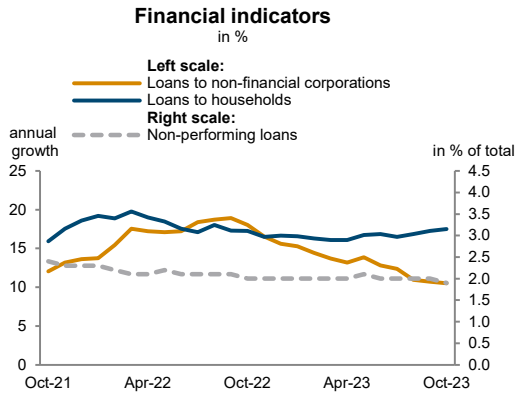
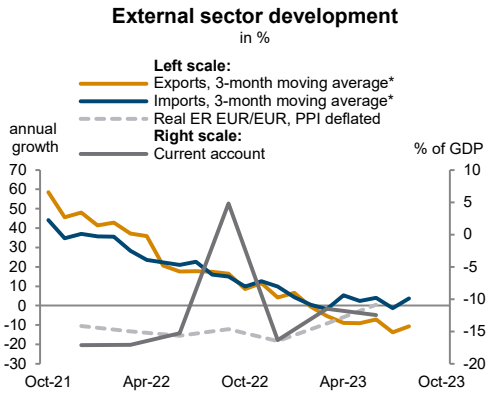
Kosovo











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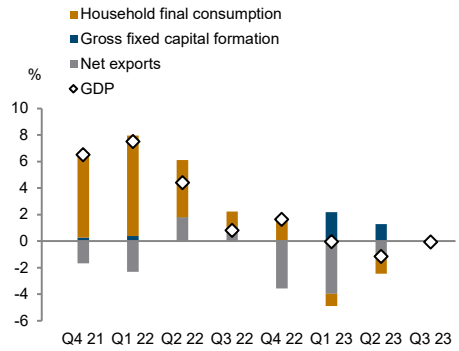
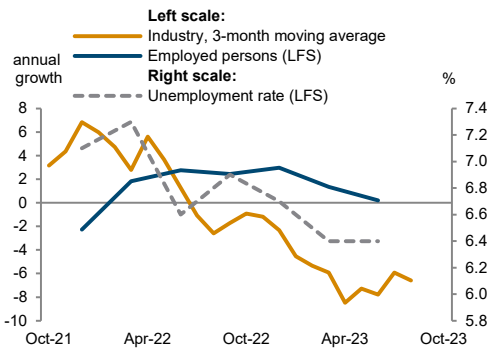
Latvia

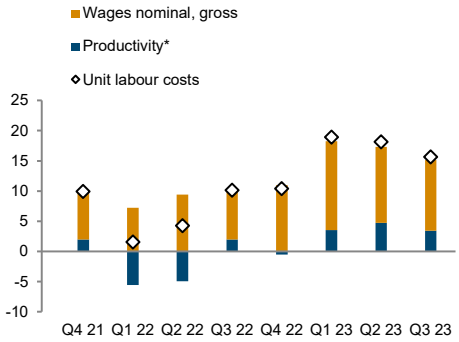
Real GDP growth and contributions
y-o-y



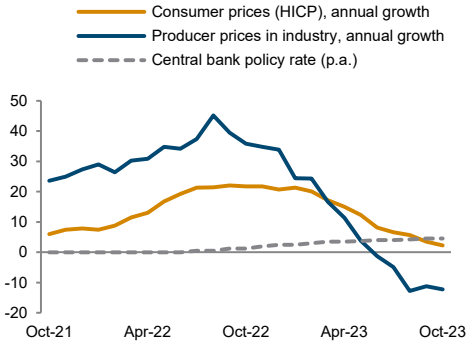
Real sector development
in %



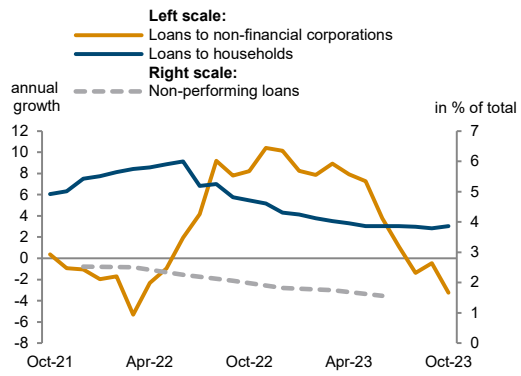
Unit labour costs in industry
annual growth rate in %



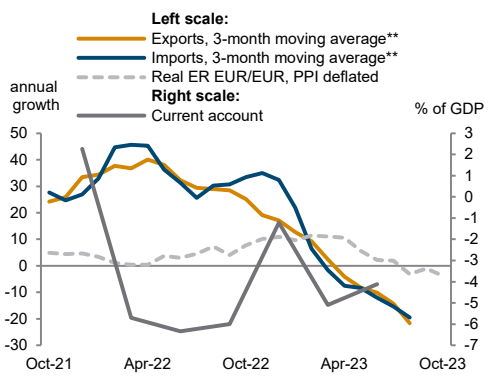
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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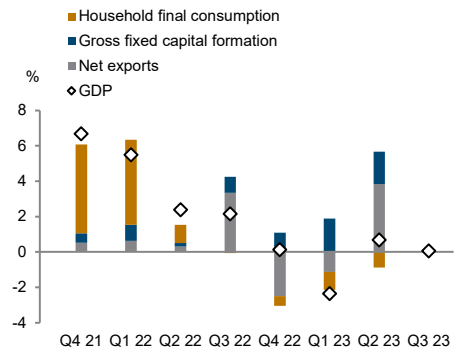
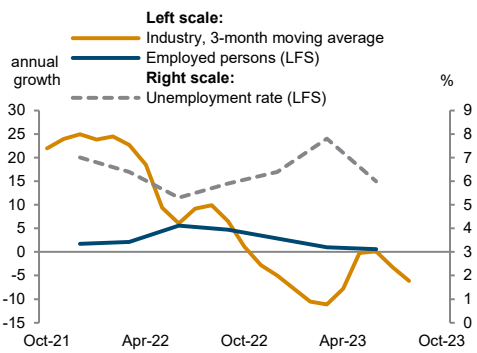
Lithuania

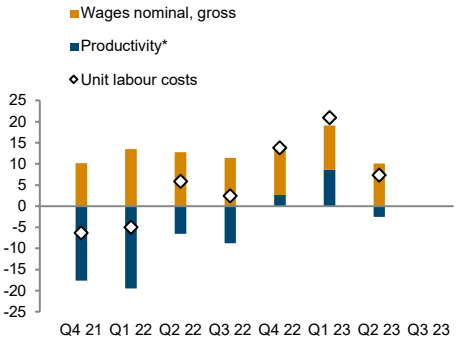
Real GDP growth and contributions
y-o-y



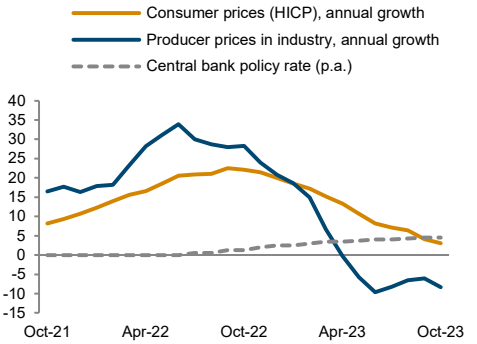
Real sector development
in %



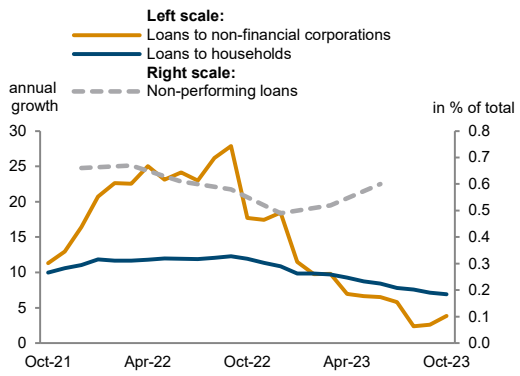
Unit labour costs in industry
annual growth rate in %



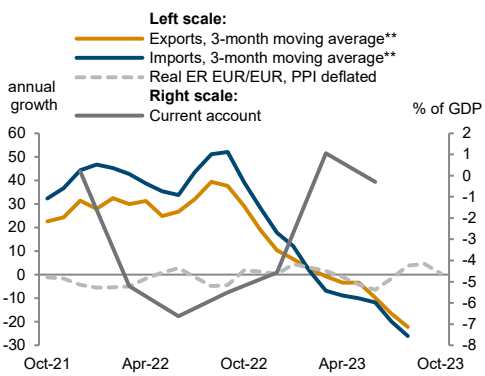
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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**EUR based.

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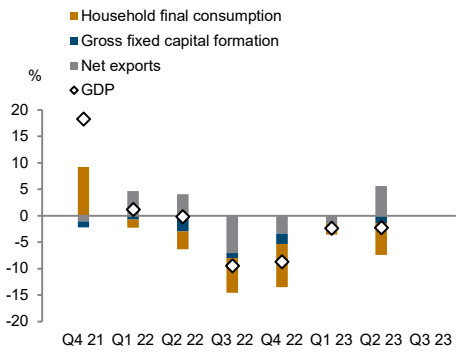
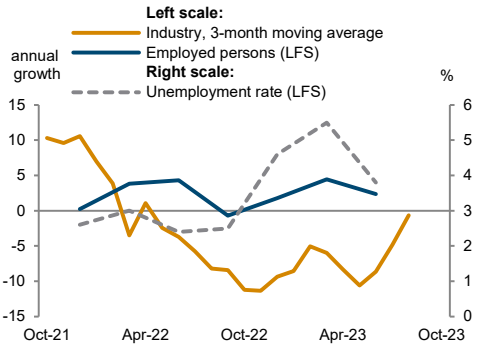
Moldova

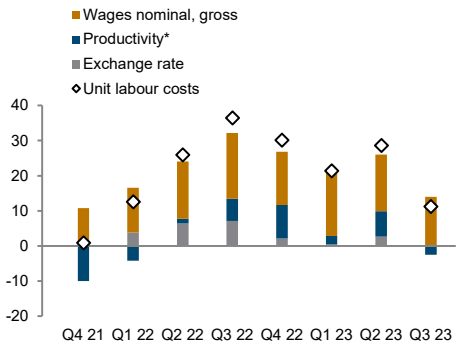
Real GDP growth and contributions
y-o-y



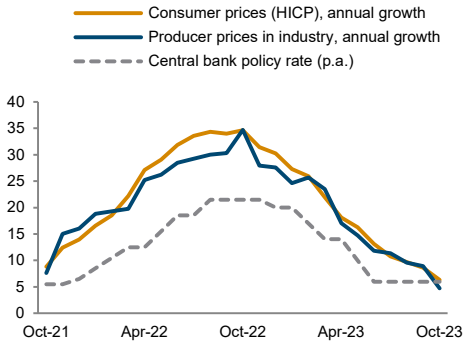
Real sector development
in %



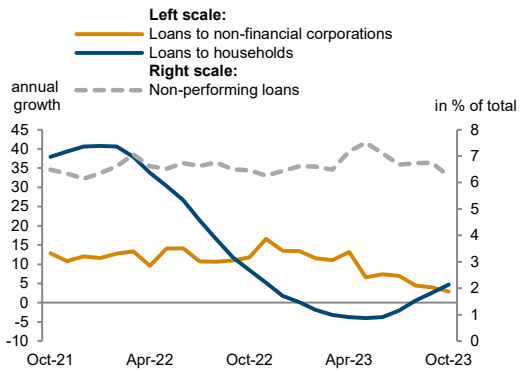
Unit labour costs in industry
annual growth rate in %



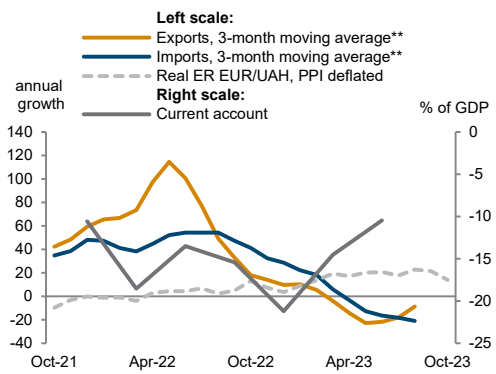
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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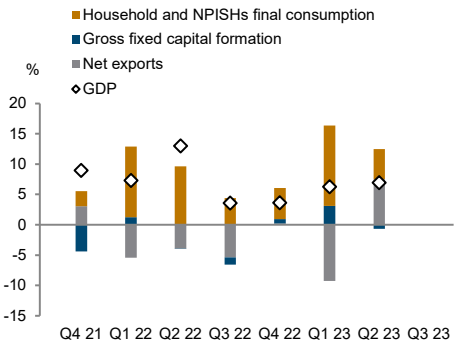
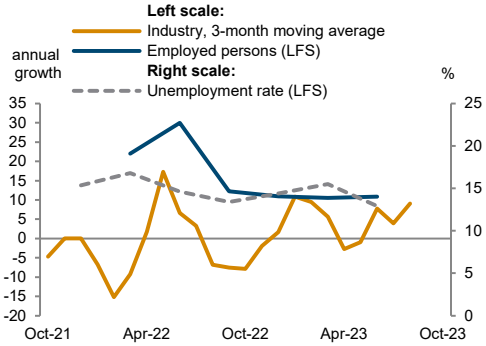
Montenegro

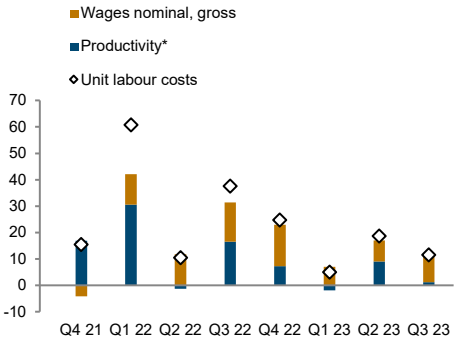
Real GDP growth and contributions
y-o-y



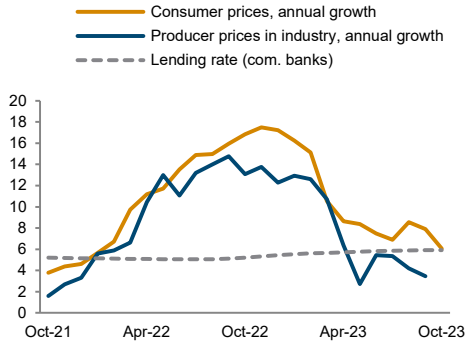
Real sector development
in %



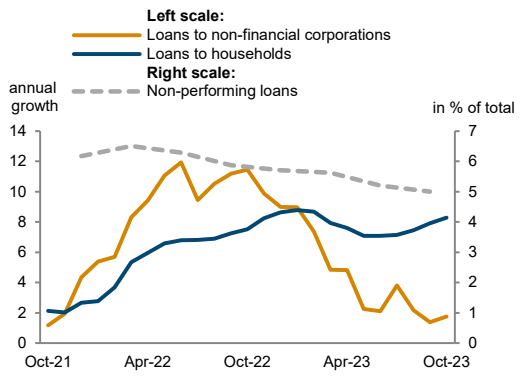
Unit labour costs in industry
annual growth rate in %



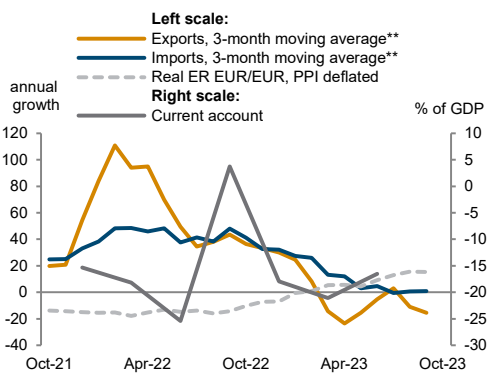
Inflation and lending rate
in %



Financial indicators
in %



External sector development
in %



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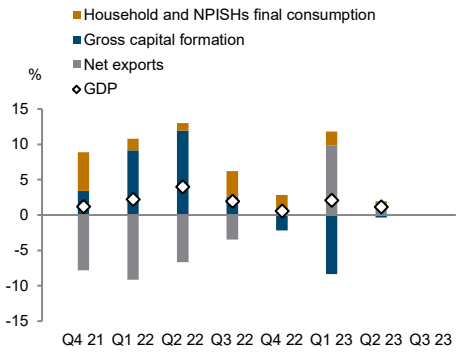
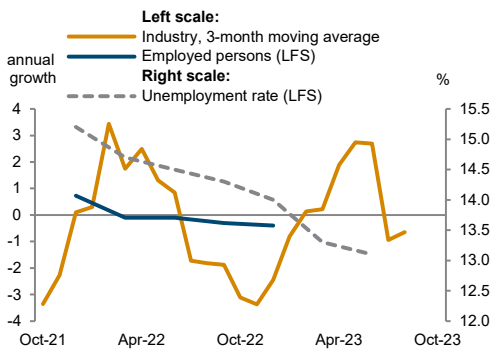
North Macedonia

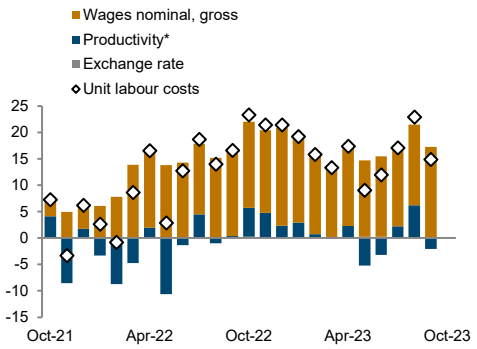
Real GDP growth and contributions
y-o-y



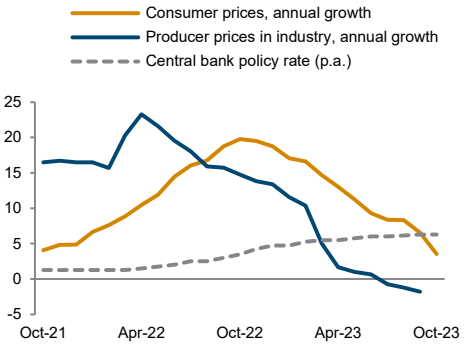
Real sector development
in %



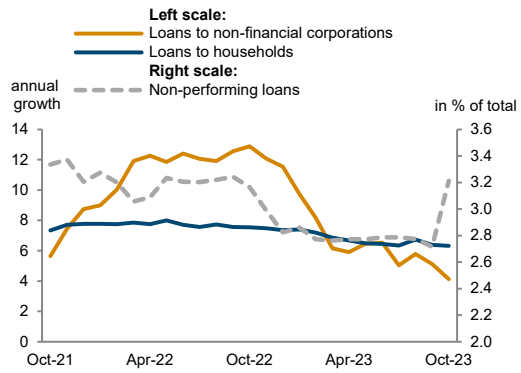
Unit labour costs in industry
annual growth rate in %



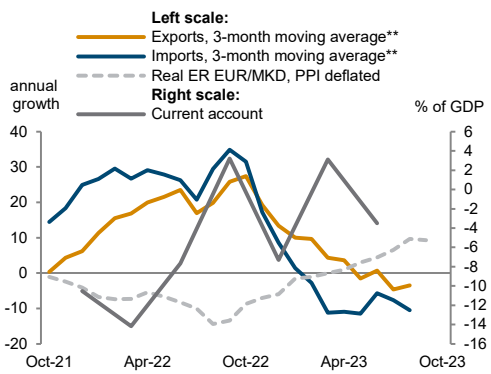
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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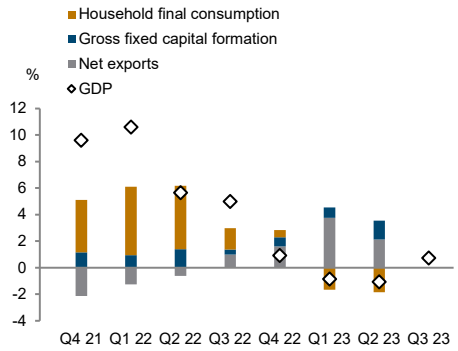
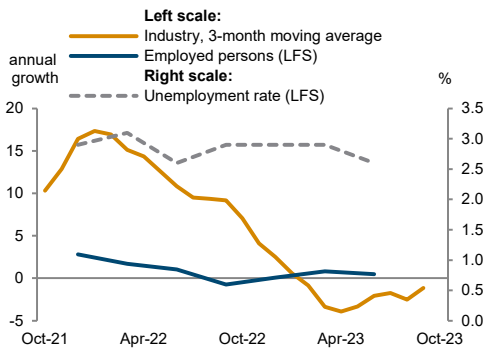
Poland

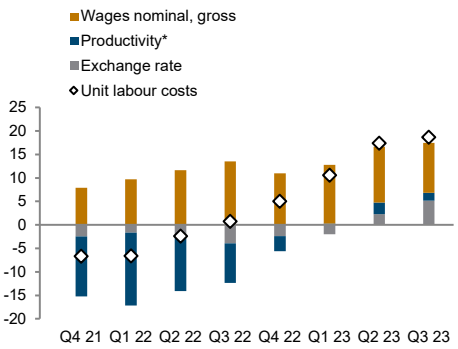
Real GDP growth and contributions
y-o-y



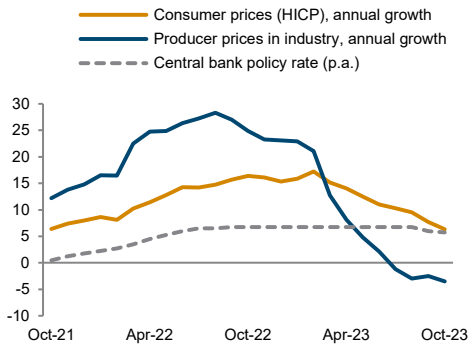
Real sector development
in %



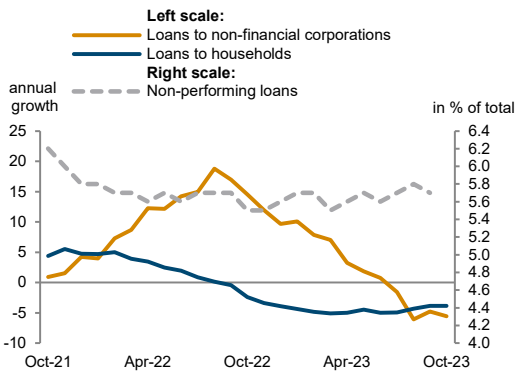
Unit labour costs in industry
annual growth rate in %



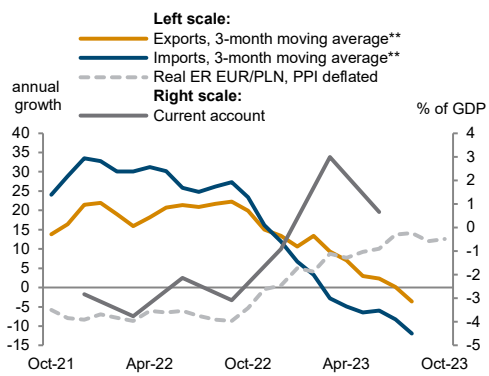
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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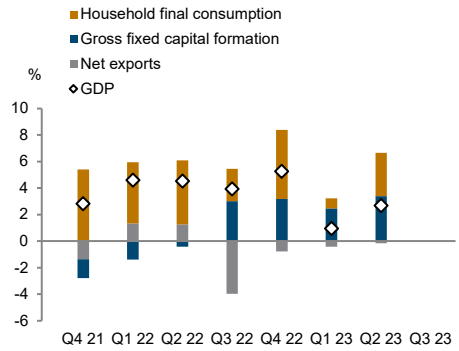
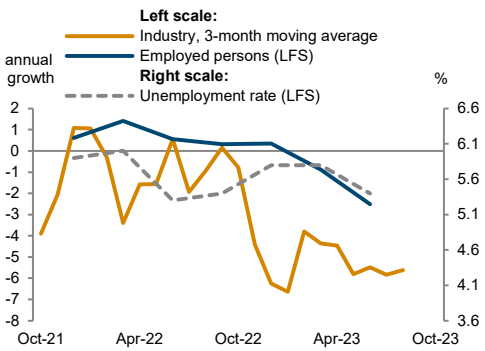
Romania

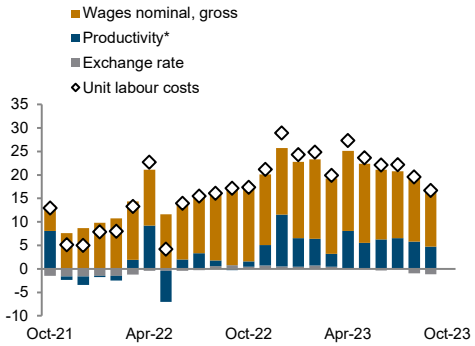
Real GDP growth and contributions
y-o-y



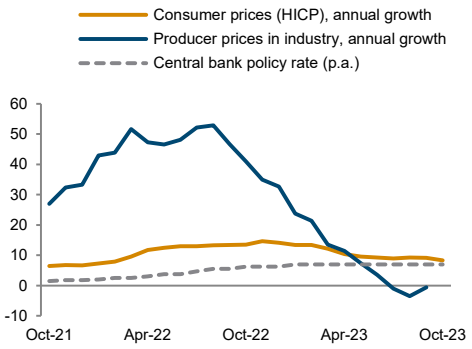
Real sector development
in %



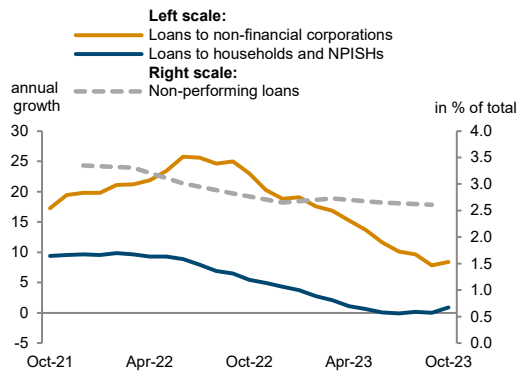
Unit labour costs in industry
annual growth rate in %



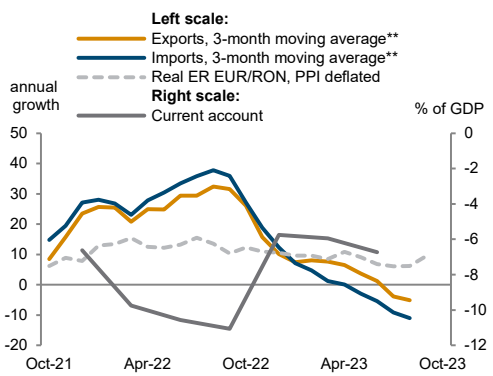
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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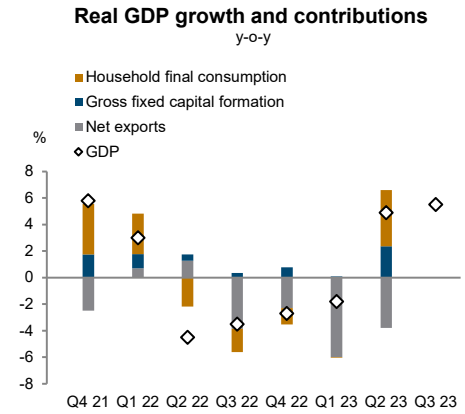
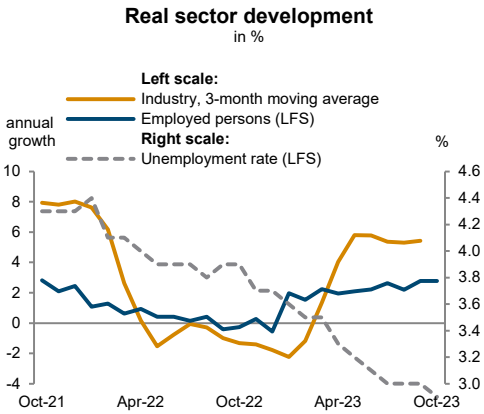
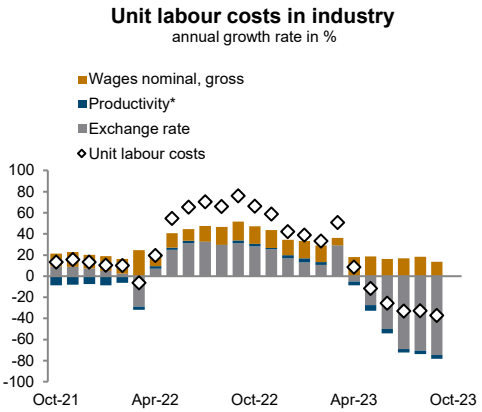
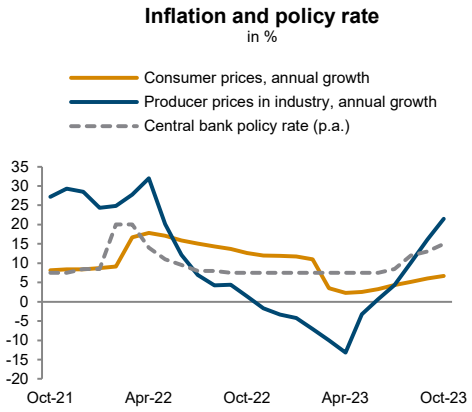
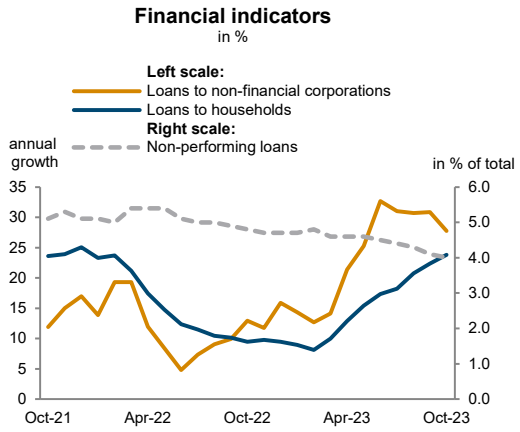
Russia

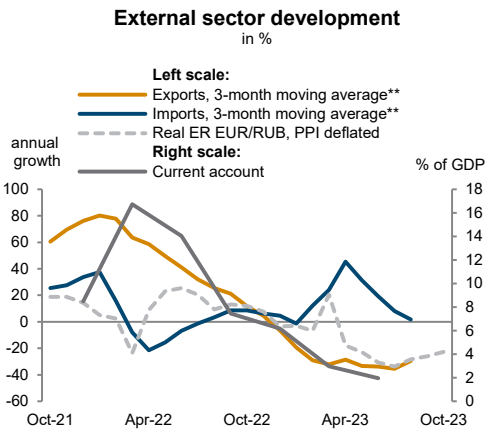












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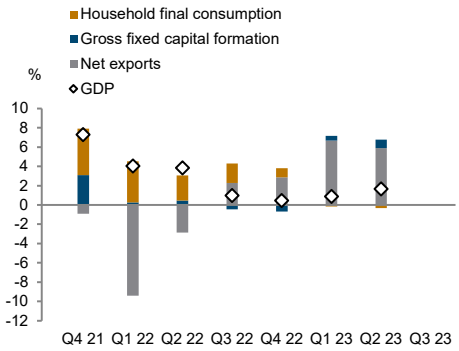
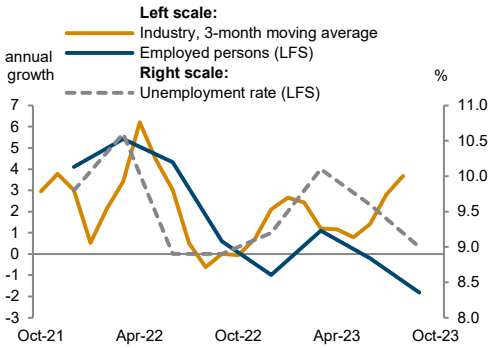
Serbia

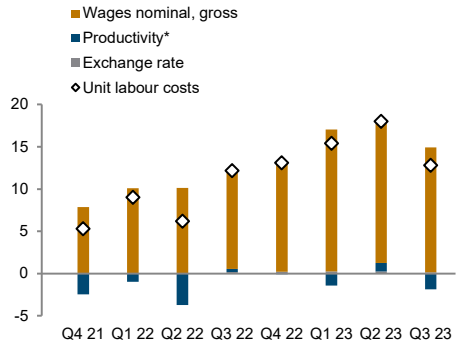
Real GDP growth and contributions
y-o-y



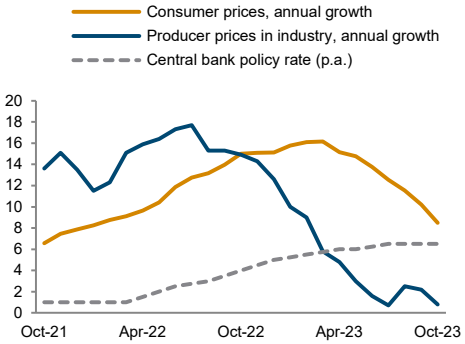
Real sector development
in %



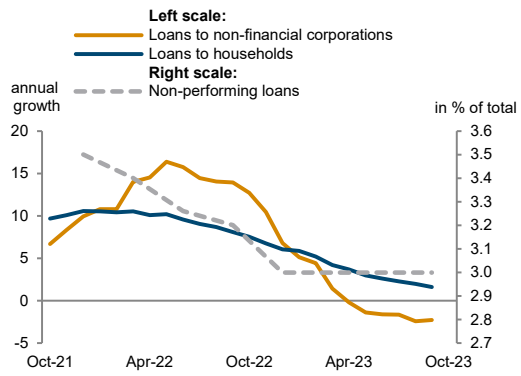
Unit labour costs in industry
annual growth rate in %



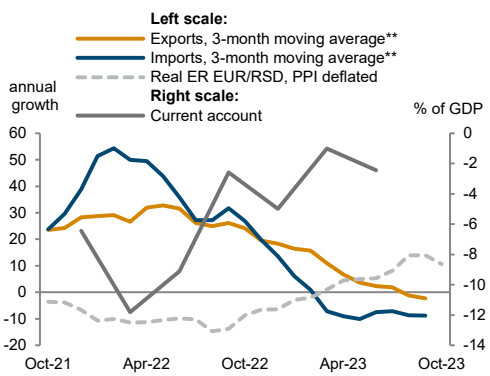
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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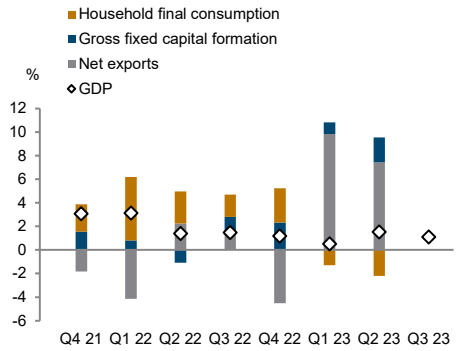
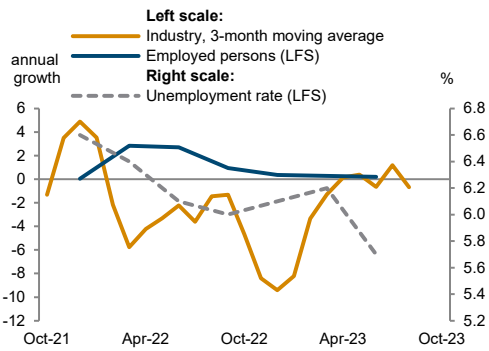
Slovakia

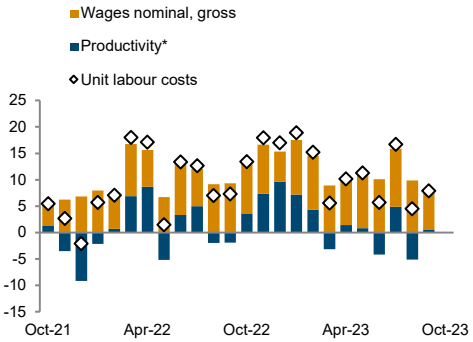
Real GDP growth and contributions
y-o-y



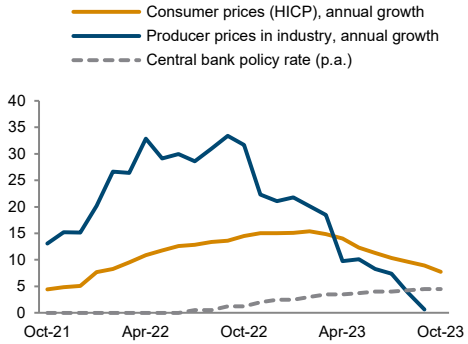
Real sector development
in %



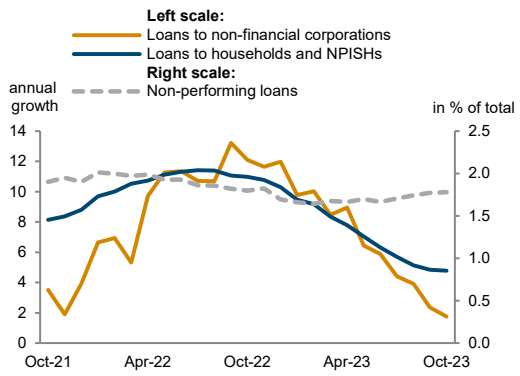
Unit labour costs in industry
annual growth rate in %



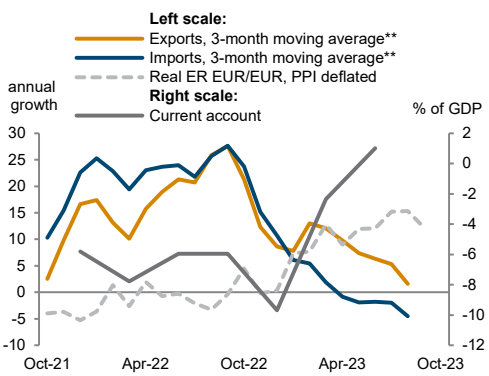
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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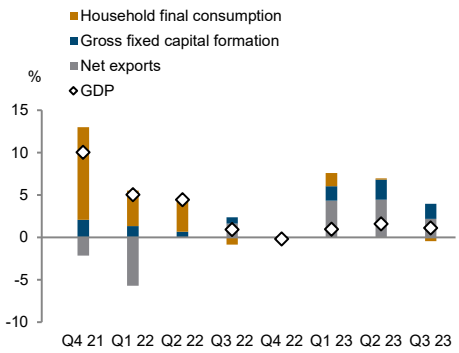
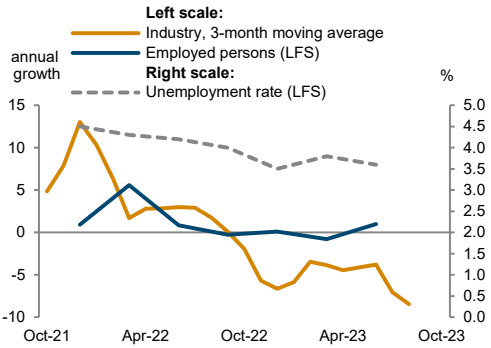
Slovenia

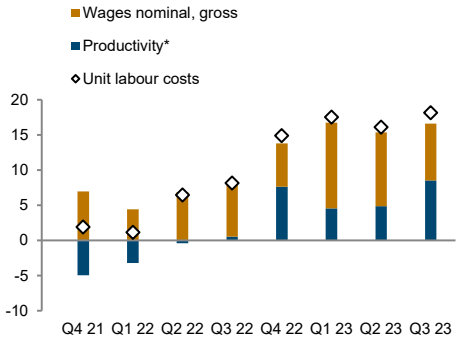
Real GDP growth and contributions
y-o-y



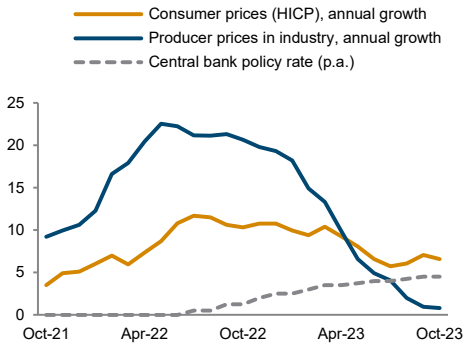
Real sector development
in %



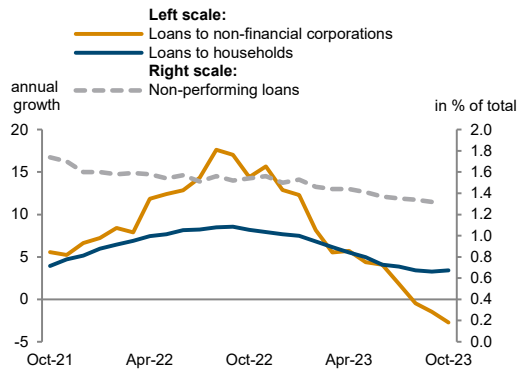
Unit labour costs in industry
annual growth rate in %



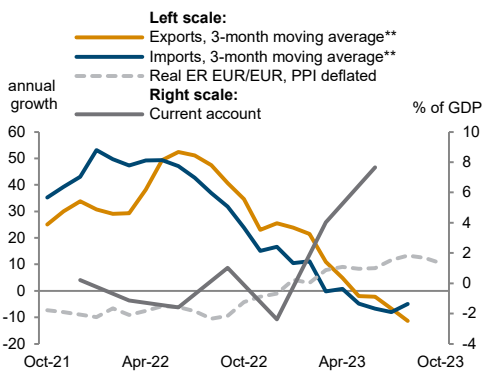
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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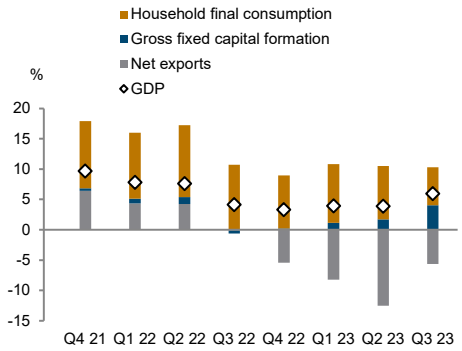
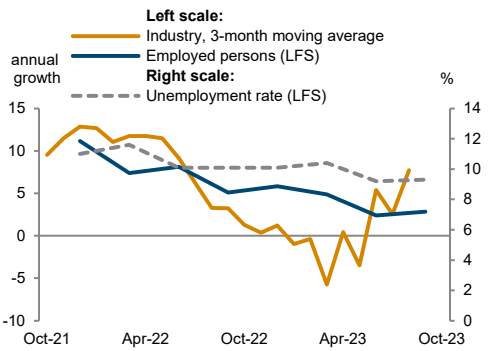
Turkey

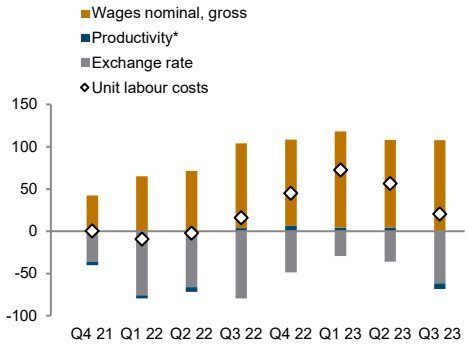
Real GDP growth and contributions
y-o-y



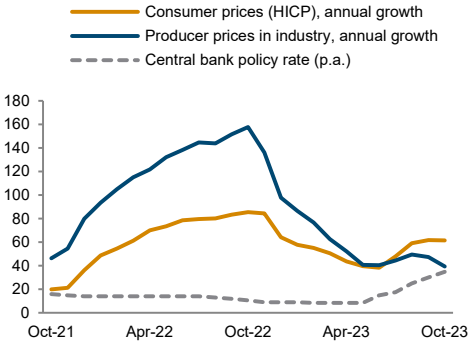
Real sector development
in %



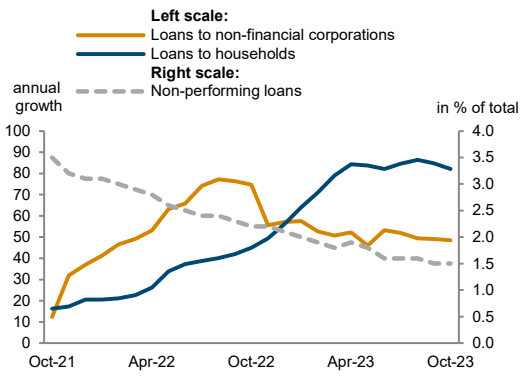
Unit labour costs in industry
annual growth rate in %



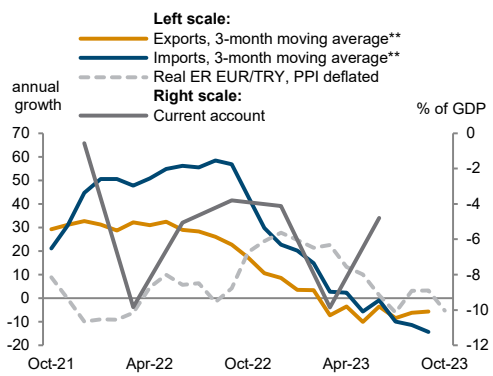
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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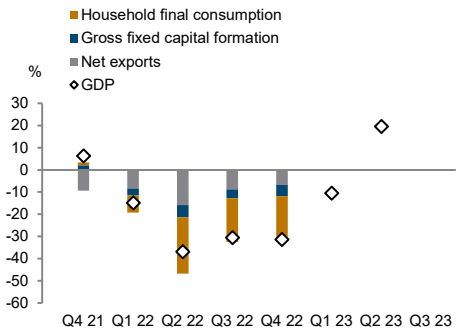
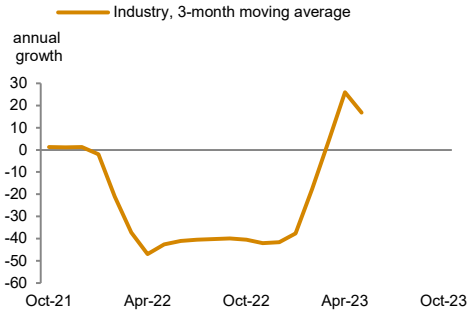
Ukraine

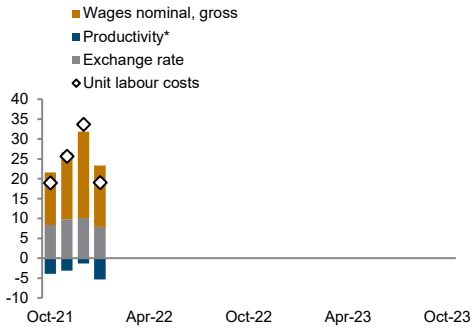
Real GDP growth and contributions
y-o-y



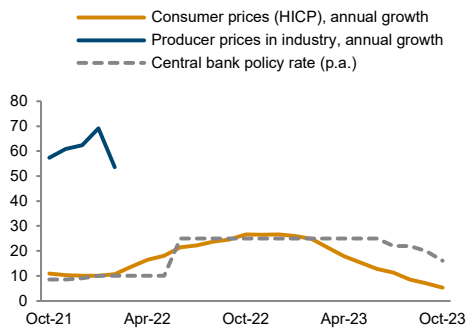
Real sector development
in %



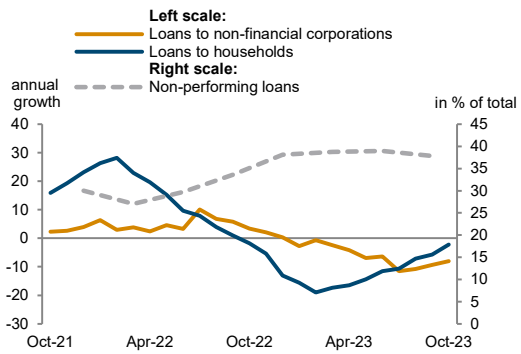
Unit labour costs in industry
annual growth rate in %



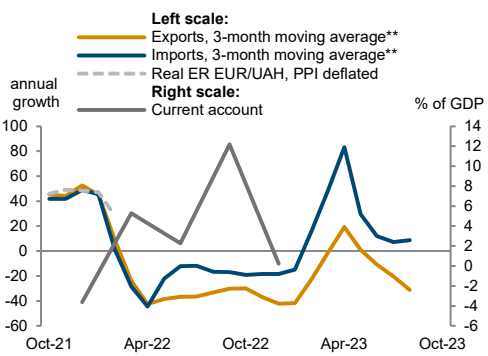
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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multi-country articles and statistical overviews

Monthly and quarterly statistics for Central, East and Southeast Europe are compiled by the statistics department: Alexandra Bykova (coordination), Beata Borosak, Nadja Heger, Beate Muck, Monika Schwarzhappel, Galina Vasaros and David Zenz.

Economics editor: Vasily Astrov

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