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DECEMBER 2025

Monthly Report

Russia's military spending is not as high as you might think

The war as the new Russian business model

A geoeconomic mistake by the EU in Kosovo

Economic growth and income convergence in the EU

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

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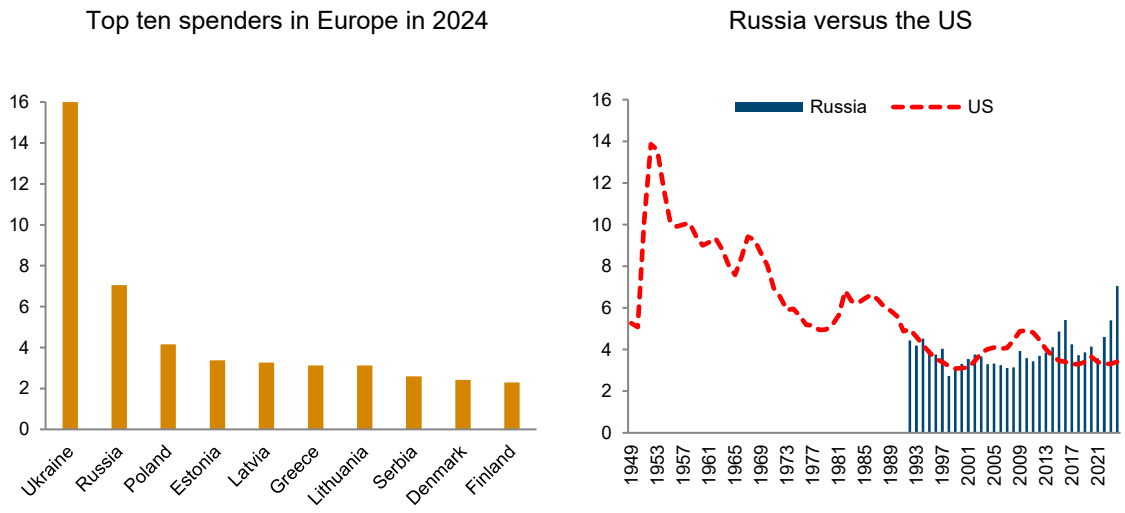
Chart of the Month: Russia's military spending is not as high as you might think

BY VASILY ASTROV

Figure 1 / Military spending, as % of GDP



Note: Data on Ukraine, Serbia and Russia (for 2022-2024) are SIPRI estimates.
Source: SIPRI Military Expenditure Database.

Since Russia launched its full-scale war on Ukraine, its defence spending has almost doubled as a share of GDP, reaching 7.1% in 2024, according to estimates by the Stockholm International Peace Research Institute (SIPRI).[1] Increased procurements of armaments and ammunition have been only part of the story: around a quarter of total spending is now made up of payments to soldiers that are sent to the front (for more on that, see the next article in this report).

Having said that, given the circumstances, Russia's military spending does not appear to be particularly high – either in a historical context or in the current cross-country comparison (Figure 1, left panel). Although last year, Russia was the second-biggest defence spender in Europe (behind Ukraine), the level was only a couple of percentage points of GDP higher than in Poland and the Baltic states – countries that were not at war with anyone (or at least not a hot war). Besides, the gap will likely narrow over the next few years. While Russian defence spending has now likely peaked (as suggested by the newly adopted federal budget for 2026-2028), other countries – including Poland and the Baltics, but

[1] Russia's official statistics suggest somewhat lower levels of defence spending than the SIPRI figures.

also Germany – are planning to raise theirs. Estonia, in particular, is planning to spend more than 5% of GDP on defence next year, making the country a front-runner in the EU in this respect.[2]

Incidentally, the USSR in its later days spent much more on defence than the present-day Russia – even without a major war.[3] That said, it has always been a formidable challenge for researchers to quantify the extent of Soviet defence spending: e.g. Wolf et al. (1983: 20, Table 2) estimated it at 14% of gross national product (GNP) in 1980, while Firth and Noren (1998) argued that the share rose further by several percentage points during the second half of the 1980s. The current Russian levels of military spending are more in line with the US in the mid-1980s, when the Reagan administration launched its so-called Strategic Defence Initiative, also known as the 'Star Wars' programme (Grieveson et al., 2024), and are far below US levels recorded in the 1950s and 1960s (Figure 1, right panel).

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Wolf, C. et al. (1983). The costs of the Soviet empire. RAND Corporation, R-3073/1-NA, September, available at: https://www.rand.org/pubs/reports/R3073z1.html

[2] https://www.bloomberg.com/news/articles/2025-12-02/estonia-is-writing-its-own-playbook-to-build-a-defense-industry

[3] The war in Afghanistan in which the USSR was involved was much smaller in scope than the current war in Ukraine. This is suggested by the much lower number of casualties: around 13,000 Soviet casualties in Afghanistan over a ten-year period (1979-1989) versus upwards of 200,000 Russian casualties estimated in Ukraine in just three and a half years – see https://zona.media/news/2025/08/29/220k

The war as the new Russian business model

BY VLADISLAV INOZEMTSEV[1]

The largely mercenary army deployed in the war against Ukraine represents a radical break with 300 years of Russian history, when soldiers were very cheap. For the time being, this strategy has allowed the ruling regime not only to avoid a deeply unpopular mass mobilisation, but also to utilise a labour force that would have been of little value to the rest of the economy. However, the longer-term economic and social costs associated with this strategy are likely to be profoundly negative.

Russia's war against Ukraine is not yet over, but it has already undermined the existing world order: for the first time since the end of the Second World War, it has significantly redrawn internationally recognised borders through the use of force. The war – labelled by the Kremlin as a 'special military operation' – has been a unique undertaking: despite the fact that it has lasted almost as long as the war between Nazi Germany and the Soviet Union, and even though it has led to hundreds of thousands of casualties, the majority of Russians do not regard it as a war in the traditional sense of that word.[2]

The main reasons for this have been the absence of those privations commonly associated with wartime (rationing of food and goods, restrictions on freedom of movement, financial restrictions, etc.) and the fact that there has been no full-scale mobilisation and conscript soldiers have not been used on the front line. That last point is worth emphasising: it has led people to feel that they and their relatives are (and may stay) safe and is the single most important reason why the great majority of citizens 'accept' or 'tolerate' the war.

MERCENARY ARMY: A RADICAL BREAK WITH 300 YEARS OF RUSSIAN HISTORY

To achieve this, the Kremlin has changed its entire attitude to military service, as it evolved in Russia over several centuries. Up to the latter half of the seventeenth century, the tsars in Muscovy relied on a fairly limited but nonetheless professional military that was considered to be a privileged social group;[3] since then, however, the Russian army has been composed either of serfs enlisted in its ranks – initially for life, though later for 'just' 25 or 12 years – or (from 1874) of conscripts who served for 4-5 years or in later times for 2-3 years. The latest version of the draft survived until the end of the Soviet era.[4]

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2 The lowest estimates put the number of killed and missing in action at no fewer than 220,000, see https://zona.media/news/2025/08/29/220k (29 August 2025) (website accessed 29 November 2025).

3 See, for example, Vladimir Volkov (2004). *Войны и войска Московского государства (конец XV – первая половина XVII веков)* [*Wars and Troops of the Muscovite State (end 15th to the first half of the 17th century)*]. Moscow: Eksmo, Algoritm.

4 See https://www.kommersant.ru/doc/5644000 (31 October 2022) (website accessed 29 November 2025).

Throughout this time, soldiers were drawn predominantly from the lower social strata and were paid rather a token wage, while the officers received a reasonable (albeit not high) salary.[5] In the early 1990s, the new Russian leadership announced its desire to establish a modern 'contract army', in which rank-and-file soldiers would be paid 'generously' (i.e. on a par with the national average wage).[6] However, even 30 years after that intention was declared, the Russian army was still a long way from being completely made up of contract soldiers.

When the war against Ukraine began, President Putin realised almost immediately that if social protest were to be kept to a minimum, the value placed on a soldier's life had to be much higher than previously. Accordingly, just two weeks into the invasion he ordered that the relatives of any fallen serviceman should be paid RUB 5 million (EUR 80,000 at the mid-2022 exchange rate).[7] At that time, the Kremlin already had some experience of using mercenary forces: they were employed by certain 'private military companies' – formally outlawed, but in fact often deployed to regional conflict zones, such as Syria. These regiments – in which soldiers were paid several thousand dollars a month in cash and were eligible for death gratuities similar to what the president instituted in 2022 – were used in Eastern Ukraine at the time of Russia's first attempts to advance there in 2014-2015, and they proved very effective. And so, the Russian government authorised Evgeny Prigozhin, boss of the Wagner Group, the biggest private military company, to recruit new servicemen even from detention facilities and jails.[8] This resulted in the creation of a kind of large mercenary army, which fought alongside a 'contract' army whose servicemen continued to be paid at a significantly lower level.

The 'moment of truth' came in September 2022, when a Ukrainian counteroffensive drove the Russians out of Kharkiv region, prompting the Kremlin to call for a 'partial mobilisation' in a risky and panicky move. This was followed by the announcement that those mobilised would be paid RUB 195,000 (EUR 2,750) a month[9] – and the same approach was extended to all 'contract soldiers' already involved in the action, thus multiplying their rewards fivefold. Since then, the Russian armed forces have in fact comprised three completely different groups:

› first, conscript soldiers, who are called up for one year, receive token pay of RUB 2,000-3,000 (EUR 22-35) a month and cannot be sent to a conflict zone (although some of them were attacked and killed when the Ukrainian forces undertook an incursion into the Kursk region in 2024;[10] the Russian command did its best to evacuate them from the zone of hostilities and to get back those captured by the Ukrainians);

› second, 'regular' contract soldiers, who earn RUB 42,000-50,000 (EUR 460-600) a month and are deployed in different parts of the country for garrison service; and

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5 See e.g. https://www.kommersant.ru/doc/6160265 (17 August 2023) (website accessed 29 November 2025) and Boris Mironov (2016). Жалованье офицеров русской армии в XVIII-начале XX века [Salaries of Russian army officers in the 18th to the early 20th century]. *Военно-исторический журнал*, 2, pp. 45-53.

6 In 2021, it was set at around RUB 40,000 (EUR 500) a month.

7 See https://base.garant.ru/403615454/ (5 March 2022) (website accessed 29 November 2025).

8 See https://meduza.io/feature/2022/09/14/ya-vas-zhivymi-zabirayu-no-ne-vsegda-zhivymi-vozvraschayu (14 September 2022) (website accessed 29 November 2025).

9 See https://base.garant.ru/405603317/ (2 November 2022) (website accessed 29 November 2025).

10 See https://istories.media/news/2025/10/03/v-rezultate-operatsii-vsu-v-kurskoi-oblasti-pogibli-kak-minimum-60-soldat-srochnikov/ (2 October 2025) (website accessed 29 November 2025).

› third, those who have signed a contract that allows them to be sent to the front line – they get RUB 210,000-230,000 (EUR 2,300-2,400 at the current exchange rate) a month and represent a major part of the Russian forces in Ukraine.

These three groups might be called the *conscript*, the *contract* and the *mercenary* armies, and all are commanded by the Ministry of Defence. The emergence of the third group is, to my mind, extremely important, as it represents a phenomenon that I call 'deathonomics'.

Under the new system, a serviceman can freely sign a contract that carries with it a significant likelihood that he will lose his life. This is not simply because of the intensity of the fighting, but also because the Russian army is plagued by incredible internal violence, which leads to hundreds of deaths each month,[11] and because the general conditions allow serious diseases to spread, including AIDS and hepatitis C, at rates dozens of times in excess of the Russian averages.[12] At the same time, it can be argued that such a contract is not only 'fair' but positively advantageous to the serviceman who signs it, since the remuneration is enormous by Russian standards. On top of the regular monthly recompense, the federal government pays a lump sum of RUB 400,000 on signature of the contract,[13] and the regional authorities add anything from RUB 800,000 to RUB 3 million. The fact is that nine months of service can net a private soldier RUB 2 million in salary; and if he is killed, his relatives will receive at least RUB 14 million (as of 2025);[14] indeed, the overall sum reaches RUB 18 million on average (EUR 200,000).

This is not only a huge amount *per se*, but as of September 2025 is equivalent to 188 times the average monthly wage[15] (and more than 330 times the average monthly wage that can be earned in 56 of the 85 Russian regions). This means that a civilian aged 35 has precious little hope of earning as much before he retires as his relatives will receive if instead he joins up, does a year of combat duty and dies a hero's death. As I wrote back in 2023, 'if a man goes to war and dies at the age of 30 to 35 (i.e. at the most active age and best health status), *his death will be more economically profitable than his further life*'.[16] Thus, 'deathonomics' gives many Russians a greater interest in dying than in living, and this has seriously altered the entire way in which life and death are regarded by the Russian people after four years of war in Ukraine.

11 See https://verstka.media/im-pohuj-kogo-obnulyat-kak-kaznyat-v-rossijskoj-armii (28 October 2025) (website accessed 29 November 2025).

12 See https://verstka.media/chislo-zaregistrirovannyh-sluchaev-vich-v-rossiyskoy-armii-rezko-vyroslo-posle-nachala-voiny-v-ukraine-news (17 September 2024) (website accessed 29 November 2025).

13 See https://novayagazeta.eu/articles/2024/07/31/putin-podpisal-ukaz-o-edinovremennoi-vyplate-400-tysiach-rublei-tem-kto-otpravitsia-na-voinu-v-ukraine-do-kontsa-goda-news (31 July 2024) (website accessed 29 November 2025).

14 See https://voengrup.ru/infocentr/publikacii/vyplaty-za-gibel-na-svo-v-2025-godu (website accessed 29 November 2025).

15 Calculated after https://www.kommersant.ru/doc/8008530 (3 September 2025) (website accessed 29 November 2025).

16 See https://ridl.io/putin-s-deathonomics/ (11 July 2023) (website accessed 29 November 2025).

THE WAR AS A TOOL OF SOCIAL MOBILITY

The natural economic logic makes it patently obvious that no one who already earns hundreds of thousands (or even millions) of roubles per month would ever enlist in the military. So the vast majority of those who do enlist are poor, do not have even averagely paid work, are elderly or ill, and face bankruptcy or criminal prosecution – people who are not really of any use to the national economy.

Therefore, the essence of 'deathonomics' lies in the exchange of largely useless lives for a tangible monetary asset. Every year the Russian government pays over RUB 3 trillion[17] (around 1.7% of GDP) to 'utilise' these people on the front line, injecting something akin to 'helicopter money' into the national economy. The death of tens of thousands of people is converted into an improvement in the lives of millions of others. Russian researchers have already noted that the widows of fallen servicemen are among the most responsible and effective private investors in the country, spending the money they have been awarded on new housing, on raising and educating their children, and on improving their own health and well-being.[18] Thus, death becomes a rather remarkable wellspring of life – allowing beneficiaries to achieve something that is beyond the grasp of the vast majority of the Russian people, who live in one of the most economically unequal societies on Earth.

As mentioned above, 'deathonomics' emerged almost by accident, as the Kremlin discovered a newfound readiness to offer insane benefits to those on whom it was relying to counter the 2022 Ukrainian counteroffensive. But it nevertheless fits perfectly into the fabric of current Russian society, characterised as that is by both the cheapness of human life and the total lawlessness that has spread across all social strata during Putin's reign. In promoting this new model, the Russian authorities have violated their own laws aimed at making military service a kind of respected, if not privileged, activity. Now, all the basic conditions for enrolment are ignored: there are no age or health requirements (up to half of new servicemen are aged 50 or over, and many suffer from chronic disease);[19] there is no educational requirement; a criminal record is no longer regarded as an obstacle; and even the absence of a Russian passport is not a hindrance, as thousands of guest workers and hundreds of foreign nationals have been admitted to the Russian army in recent years.[20] The latest laws – enacted in short order – have opened up the opportunity for those arrested even for a serious crime to avoid not only punishment, but also a proper investigation. Once a person signs a military contract, he is immediately released from custody and sent to the front line.[21]

From a purely economic point of view, 'deathonomics' would seem to have certain natural limits: once the boldest, poorest and most desperate people are killed, the number of new recruits ought to decrease. However, recent experience suggests that this limitation can be effectively removed through the medium of money. Many criminals joined the Russian army in 2022-2023 (shrinking the prison

17 See e.g. https://re-russia.net/review/760/ (16 July 2024) (website accessed 29 November 2025).

18 See https://novayagazeta.ru/articles/2023/04/07/vdovii-kapital (7 April 2023) (website accessed 29 November 2025).

19 See https://www.moscowtimes.ru/2024/10/09/tri-chetverti-stariki-v-rossiiskoi-armii-nachali-zhalovatsya-na-nabor-slishkom-vozrastnih-kontraktnikov-a144398 (9 October 2024) (website accessed 29 November 2025).

20 See https://www.moscowtimes.ru/2025/11/25/masshtab-kampanii-po-verbovke-inostrantsev-v-rossiiskuyu-armiyu-viros-bolee-chem-v-sem-raz-a180978 (25 November 2025) (website accessed 29 November 2025).

21 See https://lenta.ru/news/2024/10/02/putin-razreshil-osvobozhdat-podsudimyh-pri-postuplenii-na-voennuyu-sluzhbu-chto-izvestno-o-novom-zakone/ (2 October 2024) (website accessed 29 November 2025).

population across the country by close to 40%),[22] but after that recruitment wave petered out the authorities were forced to raise the regional enlistment bonuses (the average amount more than trebled in 2024 alone),[23] in order to attract new soldiers. Moreover, since military service in Ukraine became quite a common choice for many of these wretched souls, even the cuts to the bonuses that occurred in 2025 did not result in any steep decline in people joining up.[24]

Recent surveys that we conducted at CASE Center have shown that the Kremlin possesses an almost bottomless pool of potential volunteers. All it needs to mobilise up to a million people is 'just' to double the monthly pay and triple the average enlistment bonus.[25] However, it remains unclear both whether the Russian budget can afford this[26] and whether the Kremlin actually needs more people at the front, since it seems to be gambling on a low-intensity conflict that will in time undermine Ukraine's willingness to resist (or even on a peace deal, if that involves significant concessions on the part of Ukraine).

THE MACROECONOMIC AND SOCIAL EFFECTS OF 'DEATHONOMICS'

'Deathonomics' appears now to be one of the central planks of the war. Even if it was earlier seen as a spontaneous decision, it has become a vital element that has helped Russia organise its wartime economy. Today, Russia's total military expenditure amounts to 6.5-7.5% of GDP, with more than a quarter of that connected to 'deathonomics'. The steep rise in payments to servicemen has transformed the Russian economy – not only because it has channelled significant funds into underdeveloped regions and to the lowest social strata, but also because it has opened the way for semi- and low-skilled labour to earn generous pay.

This latter has become the main factor behind the widespread wage rises throughout the Russian economy, which have raised the labour share of GDP from its multi-year lows of 38-39% back to around 45%.[27] The overall immediate economic effect of 'deathonomics' has thus been no less than the rise in government military-industrial orders; both were essential in securing high GDP growth rates in 2023-2024. The present 'cooling-down' of the Russian economy is – at least partially – a result of the changing patterns in 'deathonomics', as those people who were waiting on the sidelines in expectation of a further pay increase started to realise that those expectations were not going to come to pass. All this has affected consumption patterns in different social groups.

Of course, 'deathonomics' has a fairly obvious flip side: since not all those who have enlisted in Russia's mercenary army will be killed in Ukraine, their return home will create significant problems both for the economy (the government will need to provide many of them with social security and retirement

22 See https://fparf.ru/news/media/tyuremnoe-naselenie-prodolzhaet-ischezat/ (17 February 2025) (website accessed 29 November 2025).

23 See https://re-russia.net/analytics/0212/ (19 November 2024) (website accessed 29 November 2025).

24 See https://novayagazeta.eu/articles/2025/11/26/dlia-patriotov-dengi-ne-dolzhny-byt-glavnym-motivom (26 November 2025) (website accessed 29 November 2025).

25 See: Dmitrii Gudkov and Dmitry Nekrasov (2024). *The Price of Life: A study of Russians' willingness to fight for money*. Nicosia: CASE Center.

26 It has recently been reported that many regions have fallen short in financing such bonuses. See https://novayagazeta.ru/articles/2025/11/27/dolg-rodine (27 November 2025) (website accessed 29 November 2025).

27 See https://econs.online/articles/ekonomika/rossiyskiy-rynok-truda-idealnyy-shtorm/ (10 April 2024) (website accessed 29 November 2025).

payments, and will have to fund their medical costs, as the number of incapacitated people is growing enormously)[28] and for society.[29] But no one today is even trying to calculate the economic and social cost, as if pretending that the authorities will never have to cope with it.

What would appear to be more important for Putin's empire is that 'deathonomics' is having a profound ideological effect that is still gravely underestimated. Here I mean that 'deathonomics' – which refers mainly to economic issues – is nurturing a widespread sense of the 'normality' of death, or even of its superiority over life. When, 10 or 15 years ago, some people in Russia – like the famous cleric Vsevolod Chaplin – started to argue that war is better and more natural than peace,[30] it caused something of a stir, and not just among 'liberals'. However, nowadays the idea that a genuine Russian should be prepared (if not indeed happy) to die (rather than to live) for his Motherland is evolving into the core of a new national ideology.

Some authors have started to call this 'necropolitics' – a phenomenon that reflects a drive to prioritise death over life as a social virtue.[31] Several recent texts published by Alexander Kharichev, a rising chief Kremlin ideologist, state just this: he says openly that the value of life is exaggerated and 'there are much more important things',[32] such as the greatness of the state, victory over one's enemies, the preservation of sovereignty, etc. The Russian elite does not seem prepared to stop at the invention of 'deathonomics': it wants to go much further and expand a purely opportunistic idea into the basis both for its further actions and for its nascent ideological doctrine.

Putin's policy is turning Russia into a realm of death: it uses death, it nurtures death, it spreads death. And by doing so, it is abandoning all hope of turning back and restoring society to a normal way of life. This mindset is so natural these days that even if some kind of peace were to be brokered in Ukraine, it would be considered by the Kremlin merely as a temporary blip, in the same way that the Bolsheviks regarded any setback simply as an annoying, but ultimately insignificant obstacle on their way to the global Communist realm…

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28 See https://www.moscowtimes.ru/2025/06/10/spros-na-protezi-ruk-i-nog-v-rossii-vzletel-v-15-raza-a165863 (6 June 2025) (website accessed 29 November 2025).

29 Those who have been engaged in killing and violence will most probably bring their proclivities back to Russia. This is already happening: as of February 2025, war veterans had killed at least 300 people in the country. See https://novayagazeta.eu/articles/2025/02/26/7kh7-pochti-300-chelovek-v-rossii-pogibli-ot-ruk-uchastnikov-voiny-vernuvshikhsia-iz-ukrainy-news (26 February 2025) (website accessed 29 November 2025).

30 See https://www.ng.ru/facts/2015-07-01/4_war.html (1 July 2015) (website accessed 29 November 2025).

31 See e.g. https://novayagazeta.ru/articles/2025/11/20/federalnyi-pogost (25 November 2025) (website accessed 29 November 2025).

32 See https://ru.scribd.com/document/950709851/Кто-мы-Харичев-А-Д (4 May 2025) (website accessed 29 November 2025).

Opinion Corner*: A geoeconomic mistake by the EU in Kosovo

BY BIRGIT NIESSNER[1]

The EU's measures taken against Kosovo, which were triggered by disputed municipal elections in 2023, have suspended key agreements and frozen EUR 600m in development funds, leaving the country isolated. These measures are widely seen as unjust and counterproductive, especially given Kosovo's progress toward European standards and integration. The EU's stance runs counter to its stated goal of deeper engagement with the Western Balkans, undermines its credibility and opens the way to rival powers like Russia and China.

Russia, Belarus, Iran, North Korea… and which country next springs to mind? Which country is also subject to European Union 'measures' – a euphemism for sanctions?

Kosovo. I must admit that I, too, was unaware of this until I travelled there in November. Curious about the reasons, I sought to understand them. Allow me to share my findings.

'THE BALKANS PRODUCE MORE HISTORY THAN THEY CAN CONSUME'

While borrowing Winston Churchill's famous remark, I will refrain from delving into the complex and turbulent history of Kosovo over the past century. As an economist, I will also avoid passing judgement on the foundations of the EU's 'targeted political and financial measures' against the country. Instead, I will simply outline the facts.

The immediate trigger was the municipal elections of 2023 in the Serb-majority municipalities of northern Kosovo. The polls became necessary after the Serbian mayors and municipal councillors (as well as Serb MPs in the Kosovo parliament, police officers, judges, etc.) decided to resign and boycott participation in Kosovar institutions. As the elections were also boycotted by the Serbian population, Kosovo Albanian mayors were then elected on an extremely low voter turnout. Under international pressure, the Kosovar government eventually even adopted a (granted, very complicated) procedure for holding a round of fresh elections – which were again boycotted. Consequently, Albanian mayors were installed in those municipalities – an outcome that Brussels deemed unilateral and destabilising.

The measures imposed by the European Union weigh heavily on Kosovo. The Stabilisation and Association Agreement (SAA), a cornerstone of the pre-accession process for Kosovo, was suspended. EU-funded development projects worth over EUR 600m in such critical sectors as environment, energy

* 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.

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and digitalisation were frozen. And exclusion from high-level EU events, though symbolic, has deepened the perception of isolation.

In conversations with people from diverse backgrounds, I encountered not a single individual who understood the rationale behind these measures – let alone why they remain in place. People regard the requirements for the measures to be lifted as having been fulfilled: a sustained de-escalation in the north and the avoidance by Kosovo of further unilateral escalatory actions.

This tough stance in relation to Kosovo is in stark contrast to the EU's proclaimed 'enhanced engagement with the Western Balkans'. With Ukraine and Moldova applying for EU membership, complacency in the Balkans is no longer an option. Accession processes have regained their momentum – Albania and Montenegro being notable examples. The EU's growth plan is a remarkable blueprint for integrating neighbouring countries, a geopolitical necessity in turbulent times.

HOW TO TRANSLATE 'THE LOGIC OF WAR INTO THE GRAMMAR OF COMMERCE'

Edward Luttwak, the American Cold War historian, famously described geoeconomics as 'translating the logic of war into the grammar of commerce'. This concept is increasingly relevant these days, as sovereignty and power are redefined. While military might remains a tool of influence, superpowers such as the US and China increasingly deploy economic instruments – tariffs as tanks, rare earths as weapons – in their struggle for dominance.

In contrast to the US and China, the EU does not pursue coercion. Yet its strategy suffers from a lack of economic thinking and geoeconomic reasoning. One strength the EU could harness is its soft power appeal and rules-based approach. The Western Balkans is the very region where these values resonate. Successful integration of the region into the EU would strengthen Europe as a whole and enhance its resilience. Failure, by contrast, would signal weakness and invite other powers to expand their economic influence in our neighbourhood.

As Riho Terras, the European Parliament's rapporteur for Kosovo, noted in his April report:

> *'The enlargement of the European Union has been one of the EU's most important success stories and it must continue. The broader geopolitical goal of enlargement is to eliminate the so-called grey areas from the map of Europe. The significant changes that have taken place in the context of Russia's war of aggression against Ukraine must increase the European Union's readiness to confront competing authoritarian global players. Both Russia and China have shown that they have very clear interests in the Western Balkans'.*[2]

[2] Report on the 2023 and 2024 Commission Reports on Kosovo, 16.4.2025, European Parliament, available at: https://www.europarl.europa.eu/doceo/document/A-10-2025-0075_EN.html

KOSOVO: A SMALL COUNTRY WITH A BIG QUESTION

Kosovo is a small nation of roughly 1.7m inhabitants – fewer than the population of Vienna. It is rich in history, yet burdened by political deadlock. It must address its internal divisions and its fraught relationship with Serbia.

Nevertheless, both Kosovo and the EU would benefit from having the measures lifted and the accession path resumed sooner rather than later. People in the region are acutely sensitive to double standards. The current measures are widely perceived as unjust. Kosovo is committed to adopting European standards, and with a million Kosovars living in the diaspora, it is deeply connected to Europe. The liberalisation of the EU visa regime in early 2024 was long overdue, and integration into the SEPA area – facilitating cross-border payments – is the next milestone.

Admittedly, progress on the measures has begun, but it remains inadequate and opaque. In the report of Riho Terras, the European Parliament explicitly

> *'[c]alls for the immediate lifting of the EU measures against Kosovo, which are no longer justified as Kosovo has fulfilled the EU requirements and as the measures also stand in gross contradiction to Kosovo's demonstrated commitment to European values and alignment with EU policies, limiting the impact of the EU's partnership with Kosovo and hindering the resumption of the Belgrade-Pristina dialogue in good faith'.*

So far the only tangible step has been the convening of the first SAA Subcommittee on 10 July 2025, after a two-year hiatus. Discussions in Pristina covered trade, industry, customs and taxation. On 25 November, the Subcommittee on Economy, Financial Issues and Statistics followed. While important, this is nowhere near enough. The measures have inflicted serious economic costs, while at the same time having limited political effect. The urgent priority is to unfreeze the EUR 600m in development funds, enabling Kosovo to invest in its future.

A FINAL WORD

The EU itself has unfinished business. The member states of Cyprus, Greece, Romania, Slovakia and Spain still do not recognise Kosovo's independence. If the Union wishes to be taken seriously as a global actor, it must overcome such internal divisions and speak with one voice.

Economic growth and income convergence in the EU

BY ROMAN RÖMISCH

Why have the EU member states of Central and Eastern Europe caught up so rapidly with Western Europe, and what does this progress truly imply for living standards? This article looks beyond headline GDP figures to explain how economic growth, demographic change and rising price levels have together shaped income convergence in the region over the past two and a half decades.

Economic growth and income convergence are intricately linked; however, they are not synonymous. Meanwhile, economic convergence is the phenomenon by which less affluent nations experience faster growth rates than wealthier nations, thereby enabling them to reduce income disparities. The attainment of convergence in gross domestic product (GDP) per capita, a common indicator of income, not only necessitates an increase in total economic output, but also involves a consideration of demographic changes and variations in price levels across countries.

This article illustrates, step by step, how aggregate economic growth in Central and Eastern European EU member states (EU-CEE) translates into convergence in per capita income when adjustments are made for population and price-level disparities. Data derived from the 11 EU-CEE countries – namely Bulgaria, Croatia, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia – are compared with those from Austria, Germany and the EU average over the period 2000 to 2024. Each step incorporates an additional adjustment layer, progressing from basic real GDP growth to per capita growth, and ultimately to GDP per capita in purchasing power standards (PPS), thereby highlighting the contributions of inflation, population and price-level changes in narrowing the income gap.

NOMINAL VS REAL GDP – THE ROLE OF INFLATION

GDP can be measured in either nominal or real terms. Nominal GDP sums the total value of all goods and services produced, using current market prices for each year. This means that growth in nominal GDP can result from both increased production and rising prices, i.e. inflation. On the other hand, real GDP measures the actual volume of production by valuing goods and services at constant prices from a base year, thus excluding inflation effects. Consequently, growth in real GDP reflects the actual increases in output volume, keeping price levels stable. The link between nominal and real GDP is explained by the GDP deflator, a broad index of price changes for all goods and services produced in the economy.

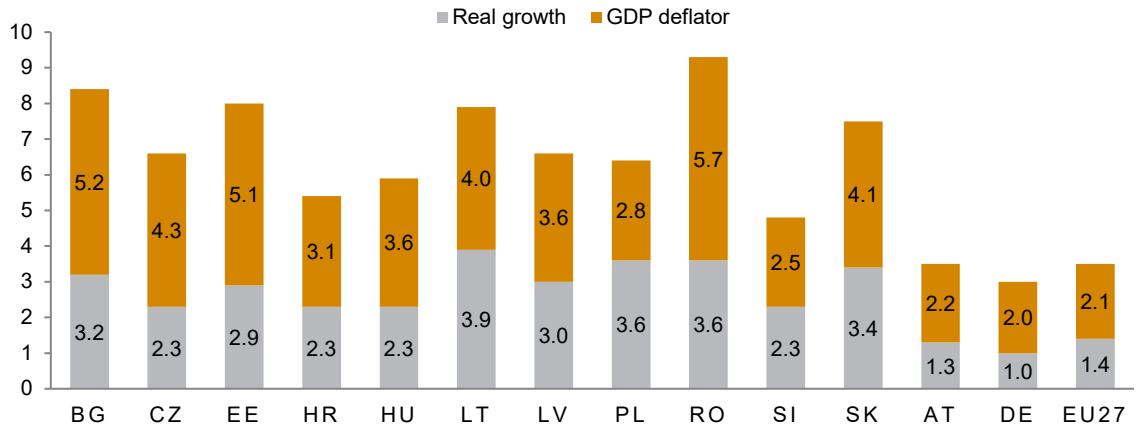
Therefore, in more technical notation, the growth of nominal GDP (GDP^{nom}) can be approximated by the sum of the growth rate of real GDP (GDP^{real}) and the growth rate of the GDP deflator, i.e. inflation:[1]

$$g(GDP^{nom}) \approx g(GDP^{real}) + inflation$$

This relationship is illustrated in Figure 1, which shows average annual real GDP growth (grey bars) and GDP deflator growth (orange bars) for the EU-CEE countries, Austria, Germany and the EU aggregate from 2000 to 2024. Their combination approximates nominal GDP growth.

Figure 1 shows that the EU-CEE countries have enjoyed robust real GDP growth over the past two and a half decades, consistently outstripping Austria, Germany and the EU average. Countries like Bulgaria, Lithuania, Poland, Romania and Slovakia have experienced annual growth rates in excess of 3%, while Czechia, Estonia, Croatia, Hungary and Slovenia have grown at about 2-3% per year. By contrast, Austria, Germany and the EU as a whole have expanded more slowly, at approximately 1.0% to 1.4% annually. Inflation, measured by the GDP deflator, has been positive across all countries, but has tended to be higher in the EU-CEE region as well. This partly reflects general price increases, but also the gradual alignment of price levels with those of Western Europe. Austria and Germany have experienced more subdued inflation of around 2% a year. Consequently, the trends in Figure 1 show that the rapid nominal GDP growth in EU-CEE countries has resulted from strong real growth combined with higher inflation. However, to see how this affects income per capita, it is important to account for population changes.

Figure 1 / Real GDP growth and GDP deflator, annual average growth rate 2000-2024, in %



Source: Eurostat, own calculations.

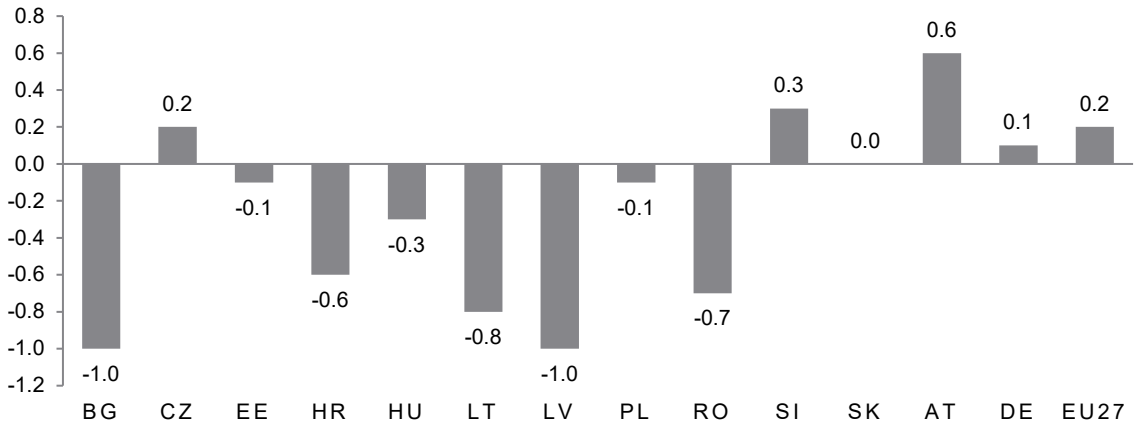
[1] This is because the level of nominal GDP in each year is the product of real GDP times the price level in the respective year, or $GDP_t^{nom} = GDP_t^{real} \times p_t$; with t indicating the year and p_t the price level in year t. Using logarithmic derivation, it can be shown that the growth in nominal GDP can be approximated by the growth in real GDP and the growth of prices.

FROM AGGREGATE TO PER CAPITA ECONOMIC GROWTH

Population dynamics have a direct and significant influence on GDP per capita. When an economy's output increases at the same time as the population is declining, the same volume of production is shared among fewer people, meaning that average income rises more rapidly (though this often comes with social and economic challenges).[2] Conversely, population growth dilutes the effects of economic expansion, as a larger number of individuals share the available output.

Figure 2 shows that in most EU-CEE countries a shrinking (or only slowly growing) population led to higher GDP per capita measures in 2000-2024. For instance, Bulgaria's population decline of about 1% annually caused its GDP per capita to grow by roughly 1 percentage point (pp), as the same output was spread over fewer people. Latvia and Lithuania experienced similar effects. By contrast, Austria's population grew by 0.6% a year, which partially diminished the effects of aggregate economic growth; while its real GDP grew by around 1.3% annually, its real GDP per capita increased by only about 0.7%, since output was distributed across a larger population.

Figure 2 / Population growth, annual average growth rate 2000-2024, in %



Source: Eurostat, own calculations.

Figure 3 brings together the results from the initial two steps. It compares overall real GDP growth with real GDP per capita growth for each country, showing how population changes have led to differences between the two. From a more technical perspective, the relation of real GDP growth ($g(GDP^{real})$) and real GDP per capita growth ($g\left(GDP_{pc}^{real}\right)$) can be approximated by:[3]

$$g\left(GDP_{pc}^{real}\right) \approx g(GDP^{real}) - g(population)$$

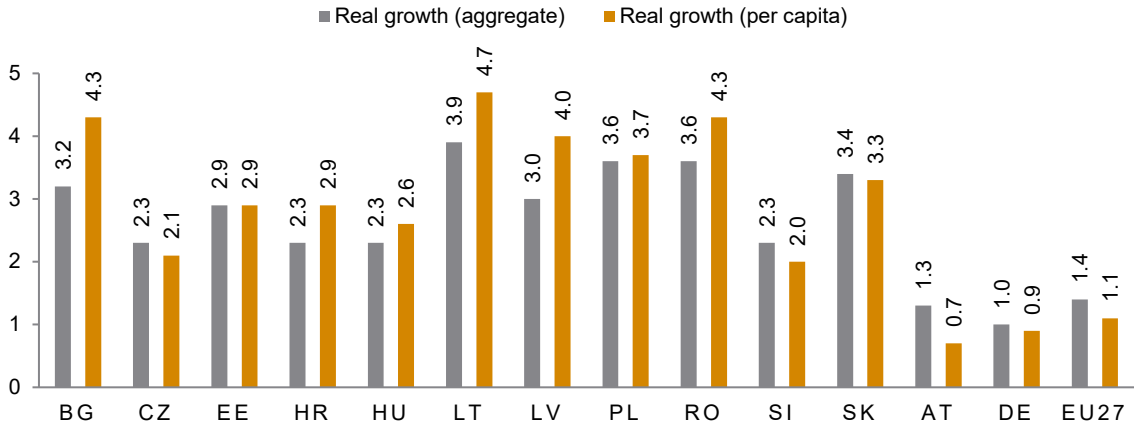
[2] The challenges may include, among other things: a brain-drain through the emigration of young, well-educated people; a reduction in labour supply; strains in the social and pension systems; a reduction in the tax base and resulting fiscal challenges; the depopulation of especially rural areas, causing increased polarisation between urban and rural areas.

[3] This is because real GDP per capita is defined as the ratio of real GDP and population, or: $GDP_{pc}^{real} = GDP^{real}/population$. Using logarithmic derivation, it can be shown that real GDP per capita growth can be approximated by the growth of real GDP minus population growth.

Figure 3 illustrates that adjusting for population change is crucial when assessing convergence, since population growth has a major impact on how aggregate economic growth translates into per capita GDP convergence. Economies like Bulgaria, Romania, Latvia and Lithuania, where per capita growth in 2000-2024 greatly exceeded overall growth, experienced faster convergence in per capita income than the headline GDP growth would suggest. By contrast, countries with a growing population, such as Czechia and Slovenia, as well as Austria and Germany, needed higher aggregate growth to achieve similar per capita income improvements. Overall, Figure 3 demonstrates that most EU-CEE countries clearly outpaced the EU average in per capita real GDP growth, and did so at a rate even faster than their overall growth figures would indicate.

Nevertheless, before evaluating convergence in living standards, an additional adjustment is needed for differences in price levels.

Figure 3 / Real growth of aggregate GDP and GDP per capita, annual average growth rate 2000-2024, in %



Source: Eurostat, own calculations.

ADJUSTING FOR PRICE LEVELS – FROM REAL TO PPS-ADJUSTED GDP PER CAPITA

To compare incomes across various countries,[4] it is essential to consider differing price levels, as a euro can purchase more in a low-cost country than in a high-cost one. Consequently, GDP is frequently measured in PPS, a standardised, artificial currency used to convert (nominal) GDP, expressed in national currencies, into a common denomination (PPS) and to remove the effects of price-level differences across countries.[5] This conversion yields GDP per capita at PPS that is comparable across countries and that can serve as an indicator of the standard of living of their inhabitants.

[4] That is, GDP per capita is not a direct measure of the income of individuals. It does not account for income distribution, tax systems, social transfers, etc., and is best understood as a broad, approximate measure of living standards, rather than as a precise measure of household income.

[5] In the EU, PPS are estimated by Eurostat, which, together with national statistical offices, collects extensive price data for a common basket of goods and services. These data are used to compute purchasing power parities (PPPs), i.e.

In this context, it is important to recognise that GDP in PPS is calculated annually from each country's nominal GDP. Since the conversion depends on purchasing power parities (PPPs) estimated for that specific year, the GDP in PPS may not account fully for domestic inflation, as indicated by movements in the GDP deflator. Changes in PPS can differ from domestic inflation, because they may rely on different price structures. PPS compares price levels between EU countries and reflects what an average EU household typically spends its money on. Domestic inflation (the GDP deflator in this case), by contrast, measures how prices change over time within a single country, based on that country's own consumption basket.[6] Because food, goods and services can rise in price at different speeds, the inflation rate may not reflect the same price pressures that shape PPS. As a result, PPS may shift even when domestic inflation does not, and domestic inflation may move in ways that do not affect PPS. Thus, PPS captures cross-country cost-of-living differences, while inflation captures year-to-year price changes at home, so the two may diverge.

In more technical terms and being aware of methodological caveats,[7] the relation between real GDP growth and the growth of GDP in PPS for a country (disregarding population growth for the moment) can be expressed as:

$$g(GDP^{PPS}) \approx g(GDP^{real}) + inflation - \Delta PPS$$

This re-states that when inflation exceeds the change in PPS, the growth of GDP in PPS appears (artificially) higher than the real economic growth. Conversely, if the change in PPS is greater than inflation, the growth in GDP in PPS shows a downward bias relative to actual economic growth. These discrepancies do not invalidate the use of PPS, but they do suggest that GDP in PPS should be interpreted carefully, as it may not precisely reflect changes in real economic activity within individual countries.

Figure 4 demonstrates the effects of relative price changes, by depicting each country's price-level index (PLI) growth compared to the EU average, adjusted for exchange-rate fluctuations, along with each country's inflation (measured by GDP deflator growth) relative to EU average inflation. The findings indicate that all EU-CEE countries have experienced a significant increase in PLI over the past two and a half decades, signalling a convergence of price levels toward the EU average. This growth often aligns with income convergence because, as economies expand, local wages and prices for non-tradable goods (such as services and housing) tend to rise. This phenomenon aligns with the so-called 'Balassa-Samuelson effect', whereby productivity gains in tradable sectors lead to wage increases across the economy as a whole, translating into rising prices for non-tradables.

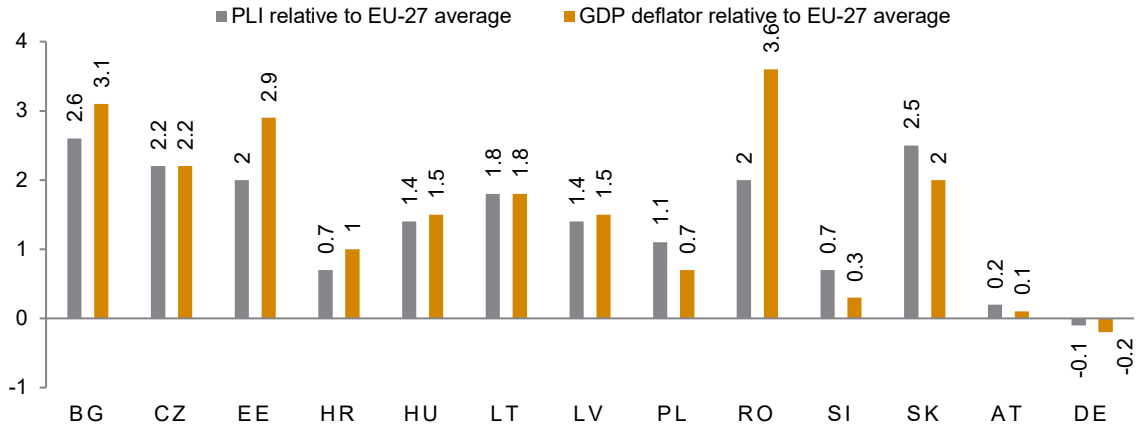
price level indices showing how many euros are needed in each country to buy the same basket of goods. From this, in turn, PPS are derived, so that 1 PPS has the same purchasing power in every EU country.

6 In poorer countries, a much larger share of income goes on food, both because many people cannot afford a broad range of goods and services and because food is often relatively expensive compared to services. This pattern, described by Engel's Law, means that PPS is strongly influenced by international differences in food prices and by the composition of consumption in each country.

7 Calculating growth rates for GDP per capita in PPS merits careful attention, because PPS conversions are mainly appropriate for comparing countries or regions at a specific time. Unlike consumer price indices, the sampling for PPPs is not intended to track price changes over time, but rather to compare prices across countries or geographical areas at one point in time. Nonetheless, within the context of this article, utilising PPS is justified, as the focus is on decomposing changes in GDP per capita into real, demographic and price components, aiming for an accurate interpretation of convergence.

This article highlights the fact that in some EU-CEE countries, such as Bulgaria, Estonia and Romania, inflation has outpaced changes in the PLI, whereas in others, such as Poland, Slovenia and Slovakia, inflation has remained below the PLI shifts. These differences in relative price changes, calculated as inflation minus PPS or PLI changes, have a direct effect on measured PPS incomes. For example, Romania and Estonia have benefited from an artificial boost to their reported GDP per capita in PPS. Their actual output growth has been inflated by a statistical effect: as local prices increased more rapidly than the EU average, their nominal GDP, when converted at slightly lagging PPS rates, resulted in higher PPS figures. Conversely, in countries where PPS adjustments exceeded domestic inflation, the effect actually suppressed their income measurements in PPS terms.

Figure 4 / Growth in relative prices, annual average growth rate 2000-2024, in %



Note: PLI is the price-level index, adjusted for exchange-rate fluctuations.
Source: Eurostat, own calculations.

GDP PER CAPITA GROWTH IN PPS – CONVERGENCE OUTCOMES

Having accounted for inflation, population and price-level differences, we can now assess overall convergence in the GDP per capita (PPS) of EU-CEE countries and the contribution of each individual factor. In essence, a country's growth in GDP per capita (PPS) is driven by three components: real GDP growth, population change and relative price change.

Formally, this can be expressed as:

$$g\left(GDP_{pc}^{PPS}\right) \approx g(GDP^{real}) - g(population) + \underbrace{inflation - \Delta PPS}_{change\ in\ relative\ prices}$$

where $g\left(GDP_{pc}^{PPS}\right)$ is the growth of GDP per capita in PPS, $g(GDP^{real})$ is the real growth rate of GDP, $g(population)$ is the growth rate of the population and $inflation - \Delta PPS$ is the change in relative prices.

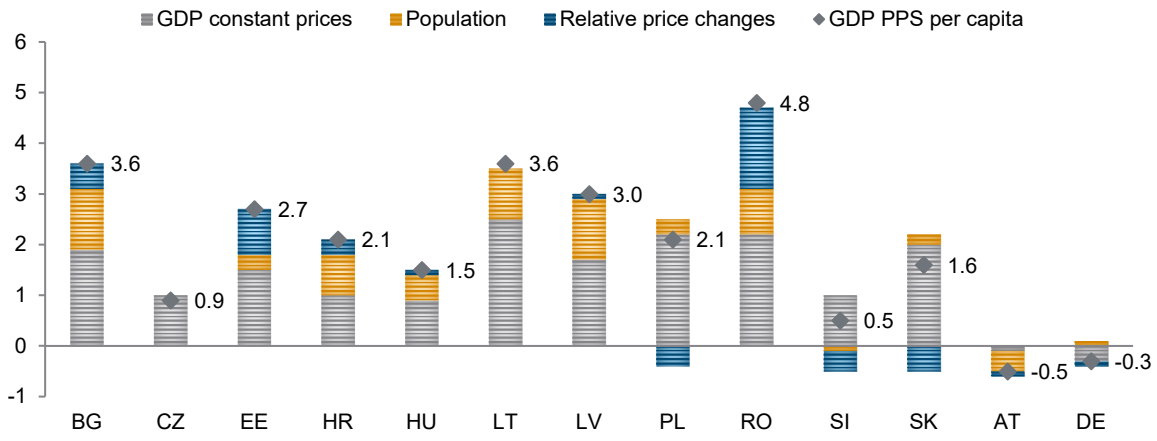
Figure 5 shows the average annual GDP per capita growth in PPS for each country from 2000 to 2024, decomposed into individual components: real economic expansion, demographic changes and price-level movements. All figures are **relative to the EU27 average**. A positive value indicates faster growth than the EU average, signifying convergence toward higher incomes; a negative value indicates below-

average performance. Figure 6 further displays each component's percentage contribution to the total PPS-adjusted per capita GDP growth rate.

Several patterns can be observed from both figures. In the period 2000-2024, EU-CEE countries consistently outperformed the EU average in GDP per capita growth (in PPS), indicating a swift convergence in living standards. Romania, Bulgaria and Lithuania were the top performers, with annual per capita income growth in PPS approximately 3-5pp above the EU average. Sources of convergence vary across countries. In **Romania**, about half of the convergence speed stemmed from exceptionally high real GDP growth, exceeding the EU average by 2.2pp on average, while roughly one fifth resulted from a declining population (-0.9pp annually relative to the EU average). Additionally, a third of the convergence was due to relative price gains (+1.6pp per year), which inflated the PPS metric. In **Bulgaria**, high real growth (+1.9pp above the EU average) was combined with one of Europe's fastest population declines (around -1.2pp annually compared to the EU average). This demographic decline contributed approximately a third of Bulgaria's convergence, effectively increasing per capita GDP growth by 1.2pp annually, as fewer people shared the output. A minor contribution came from price levels: Bulgaria's prices slowly approached the EU average (0.5pp above that figure), providing an additional marginal gain.

Lithuania, in contrast, experienced significant real GDP growth – the highest in the EU-CEE region at +2.5pp above the EU average – and 'benefited' from a declining population (-1.0pp annually compared to the EU). Importantly, changes in price levels had little effect on Lithuania's income convergence, making its 3.6pp annual catch-up mostly 'real': about 70% from real growth and 30% from demographic factors (see Figure 6). Latvia and Estonia also achieved strong income convergence. **Latvia**'s GDP per capita (PPS) increased by about 3.0pp above the EU average, driven by solid real GDP growth (1.7pp above the EU average) and a notable population decline (-1.2pp compared to the EU average), with minimal contribution from price changes. **Estonia**'s roughly +2.7pp of annual income convergence resulted from robust real growth (+1.5pp compared to the EU average) and an increase in the relative price level (+0.9pp compared to the EU average), which contributed roughly one third of its overall convergence, with only a minor contribution by demographic factors.

Figure 5 / Growth in GDP per capita at PPS and its components, annual average growth rates in 2000-2024, percentage points difference to the EU27 average

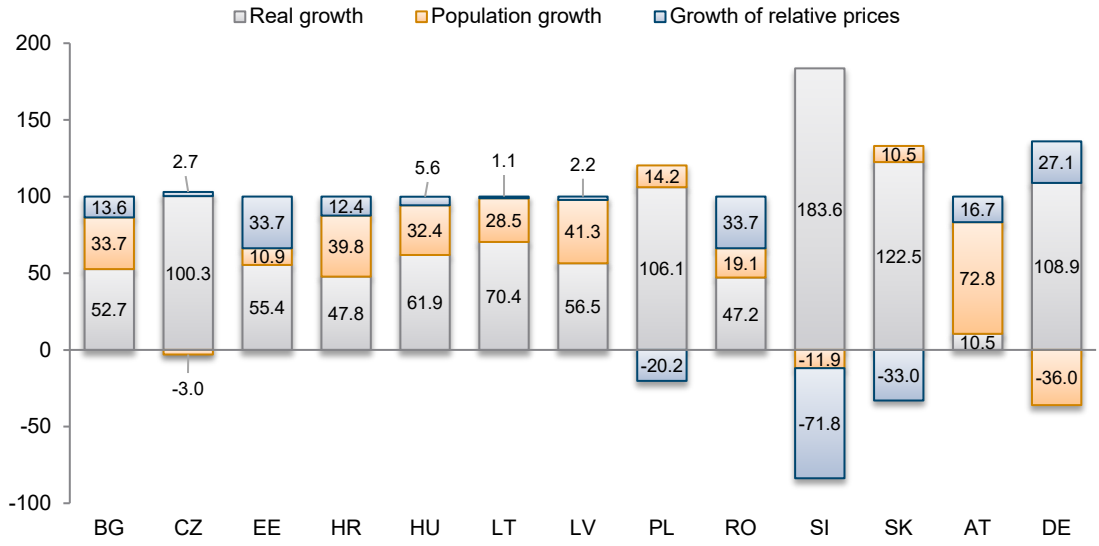


Source: Eurostat, own calculations.

Poland and Slovakia experienced quicker growth in PPS-adjusted incomes than the EU average, but their convergence was less pronounced once population and price factors are taken into account. **Poland**'s per capita GDP in PPS increased by about 2.1pp annually above the EU average, driven mainly by strong real GDP growth, with a slight 'positive' influence from population decline. However, these gains were partly negated by price-level movements. Poland saw its relative prices decrease by roughly 0.4pp per year compared to the EU average; unlike most other EU-CEE countries, therefore, it did not benefit from higher inflation in PPS. Instead, the PPP adjustment slightly hindered Poland's convergence by reducing its growth by around 0.4pp annually. As a result, although Poland's real economy grew rapidly, its GDP per capita in PPS did not increase by as much as it might have if prices had converged: Poland's price level was already relatively close to the EU average and even declined slightly over time. **Slovakia** exhibited a similar pattern: its real GDP growth was high (+2.0pp relative to the EU), but a modest population decline and a negative relative price trend (-0.5pp per year compared to the EU average) meant that its GDP per capita in PPS only rose by about 1.6pp above the EU average. After adopting the euro in 2009, Slovakia experienced very low inflation compared to its peers, which likely contributed to a slight widening of its price-level gap, thereby dampening its measured convergence.

Finally, Slovenia and Czechia were the slowest to converge within the EU-CEE group. These countries started out with relatively higher income levels, but experienced slower growth. **Slovenia**'s GDP per capita in PPS grew by roughly 0.5pp annually above the EU average. Its modest real GDP growth (+1.0pp relative to the EU average) was largely offset by a population increase (+0.1pp) and a decline in relative prices (-0.4pp below the EU average), resulting in minimal net convergence. As shown in Figure 6, Slovenia's real GDP growth contributed over 180% of its convergence, while rising population and declining relative prices worked against it. Similarly, **Czechia**'s annual income convergence was about +0.9pp. With real growth at +1.0pp above the EU average, stable population and no change in prices, its per capita PPS gains were modest, at around the EU average rate.

Figure 6 / Contributions of individual components to growth in GDP per capita at PPS in 2000-2024, in %



Source: Eurostat, own calculations.

The decomposition in Figure 5 and Figure 6 highlights that the observed convergence in GDP per capita at PPS in EU-CEE countries can hide very different underlying factors. For example, much of the catch-up experienced by Bulgaria and Latvia was the result of population decline, which may be viewed as an unsustainable form of convergence, since it reflects emigration and population ageing. Conversely, Poland's convergence was solely driven by real GDP growth, with demographic and price factors slightly limiting its progress. Romania's notable performance combines all three influences. Overall, the most rapid convergence – such as that seen in Romania, Bulgaria and the Baltic states – was achieved through strong real growth alongside 'favourable' demographic trends and/or significant increases in price levels. Conversely, countries with slower convergence lacked one or more of these 'supporting' factors.

CONCLUSION

In summary, this analysis indicates that measuring income convergence requires an examination of population and price effects, in addition to real growth. Two countries may exhibit similar growth rates for per capita GDP (adjusted for PPS), but may have very different welfare effects if one 'benefits' from declining population or rising relative prices. Changes in relative prices can also significantly distort cross-country income comparisons. For example, an economy might appear closer to Western living standards in PPS because of faster price increases, not necessarily due to higher real output or consumption. Conversely, low inflation can make PPS incomes seem stagnant, even when real growth is strong.

The convergence experience in the EU-CEE region shows that sustained real economic growth has been the main driver of income catch-up. However, it also emphasises the need to consider the 'quality' of convergence. Any evaluation of progress should include demographic trends and price fluctuations, as these can greatly affect income measurements. For the European Union's cohesion goals, this means that structural support should go beyond just GDP per capita rankings, and should be based on a wider understanding of the factors influencing economic convergence.

Monthly and quarterly statistics for Central, East and Southeast Europe

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

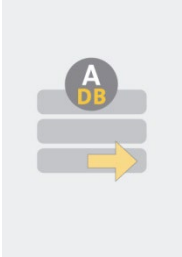
%	per cent
ER	exchange rate
GDP	Gross Domestic Product
HICP	Harmonised Index of Consumer Prices (for new EU member states)
LFS	Labour Force Survey
NPISHs	Non-profit institutions serving households
p.a.	per annum
PPI	Producer Price Index
reg.	registered
y-o-y	year on year

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



wiiw Annual Database

wiiw Monthly Database

wiiw FDI Database

The wiiw databases are accessible via a simple web interface, with only one password needed to access all databases (and all wiiw publications).

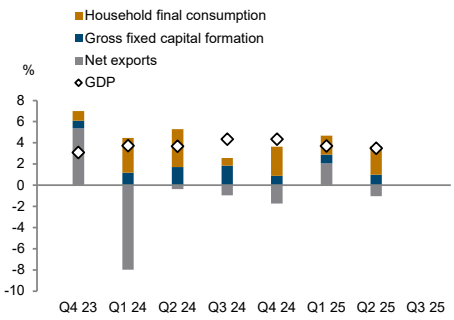
You may access the databases here: https://data.wiiw.ac.at.

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

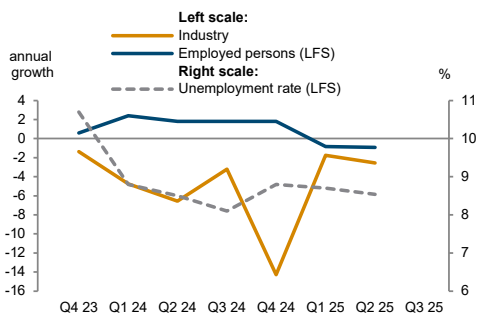
For more information on database access, please contact Ms. Monika Potocnik (potocnik@wiiw.ac.at), phone: (+43-1) 533 66 10.

Albania

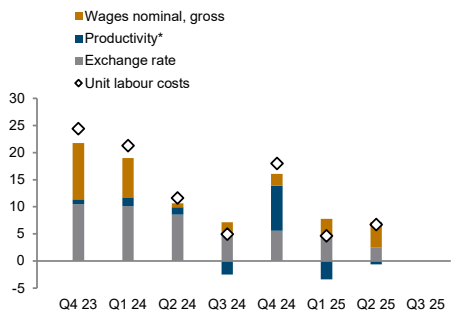
Real GDP growth and contributions
y-o-y



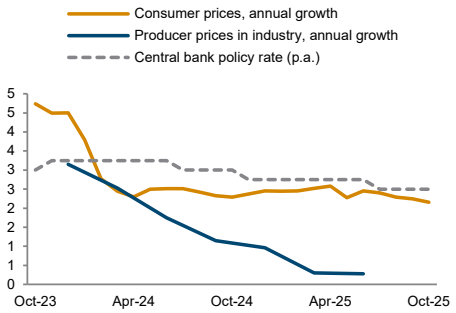
Real sector development
in %



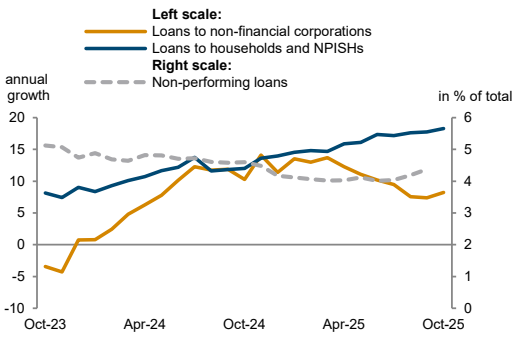
Unit labour costs in industry
annual growth rate in %



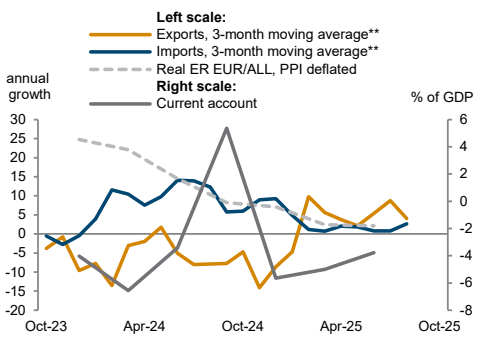
Inflation and policy rate
in %



Financial indicators
in %



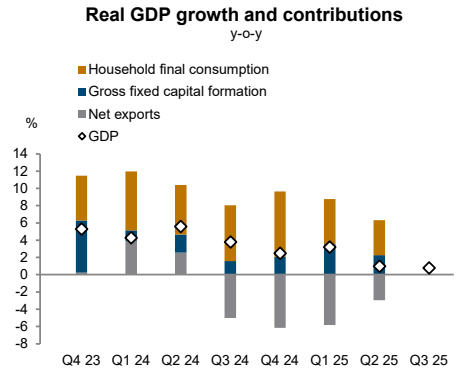
External sector development
in %

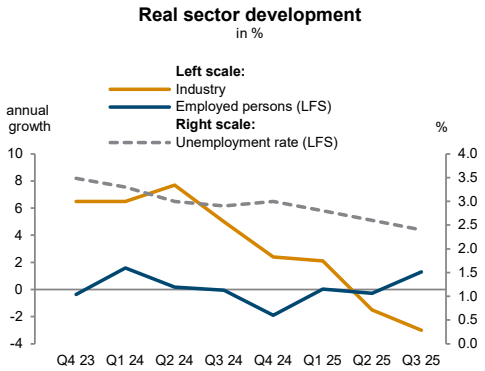


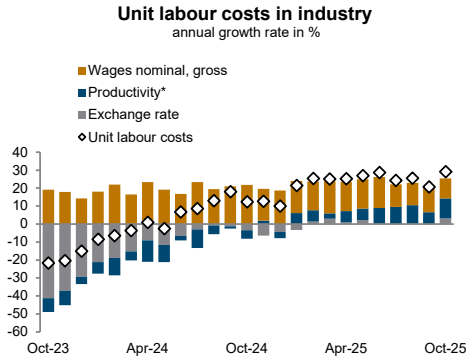
*Positive values of the productivity component on the graph reflect decline in productivity and vice versa.
**EUR based.

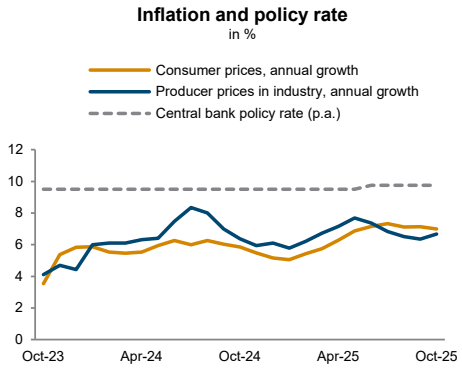
Source: wiiw Monthly Database incorporating Eurostat and national statistics.
Baseline data, country-specific definitions and methodological breaks in time series are available under:
https://data.wiiw.ac.at/monthly-database.html

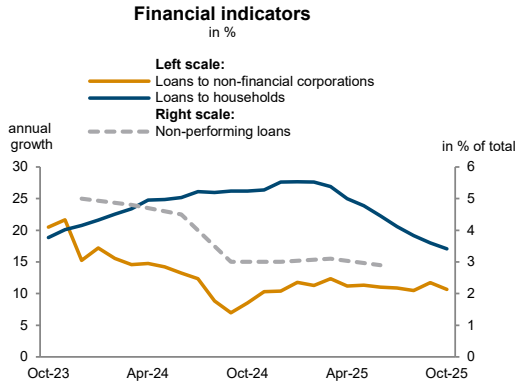
Belarus

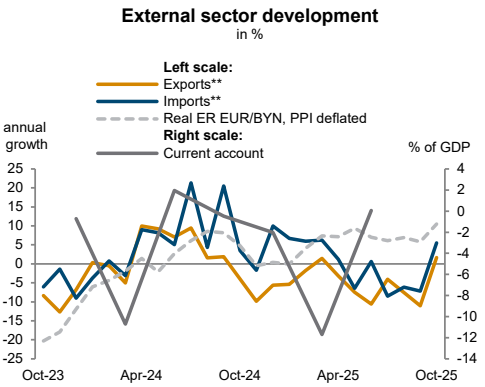












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**EUR based.

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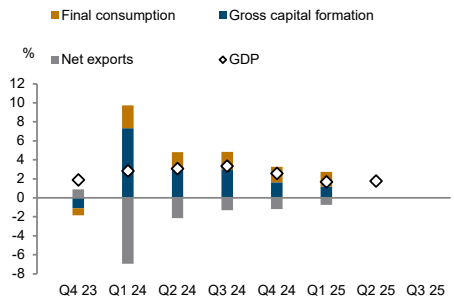
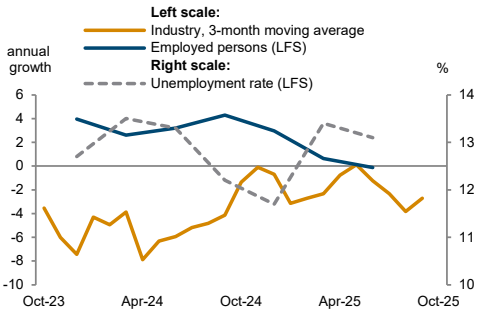
Bosnia and Herzegovina

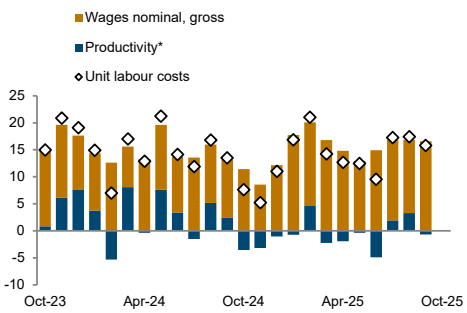
Real GDP growth and contributions
y-o-y



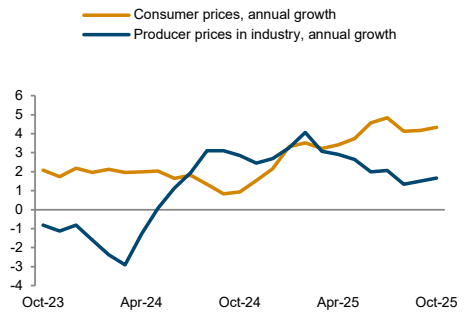
Real sector development
in %



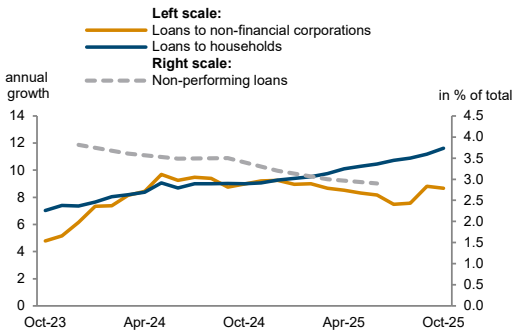
Unit labour costs in industry
annual growth rate in %



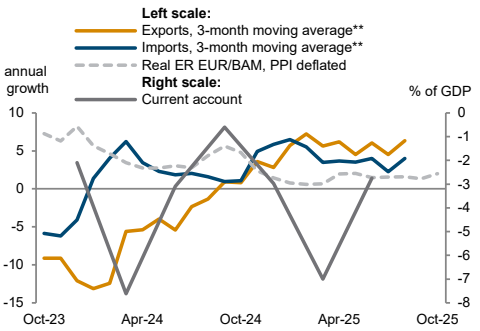
Inflation
in %



Financial indicators
in %



External sector development
in %



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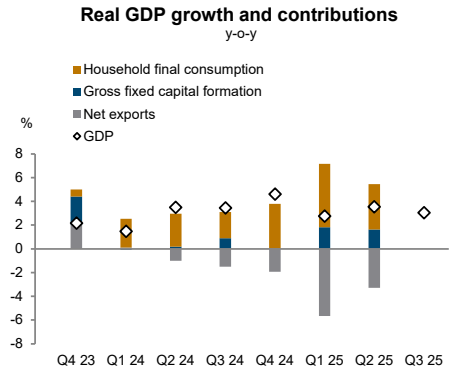
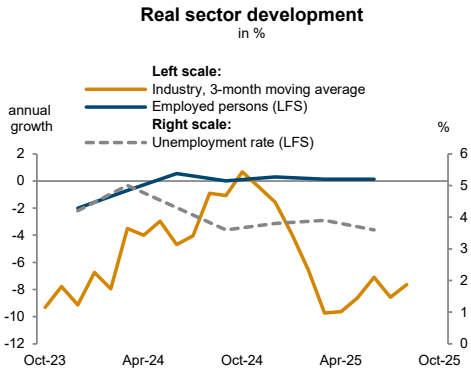
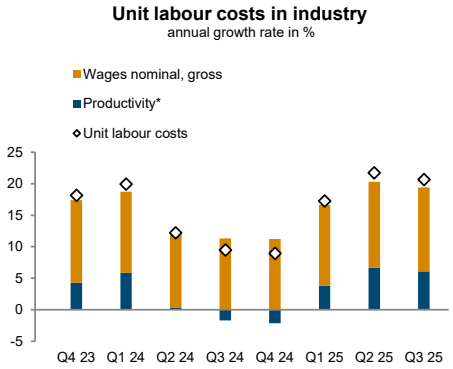
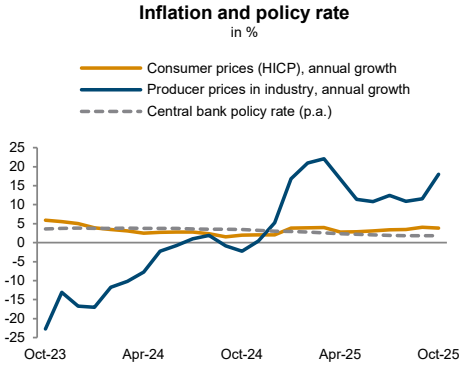
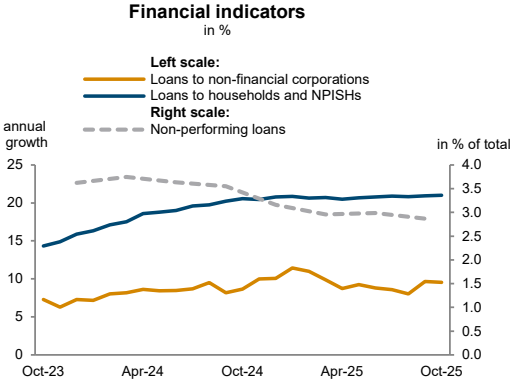
Bulgaria

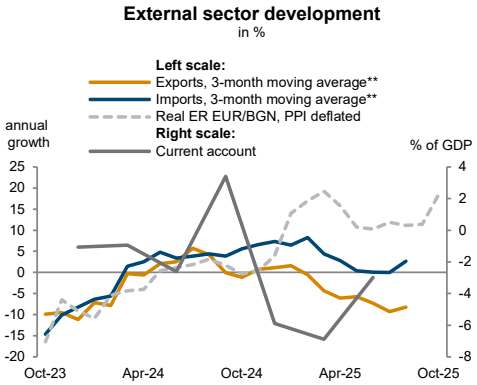












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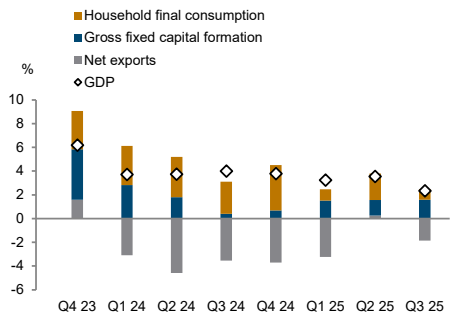
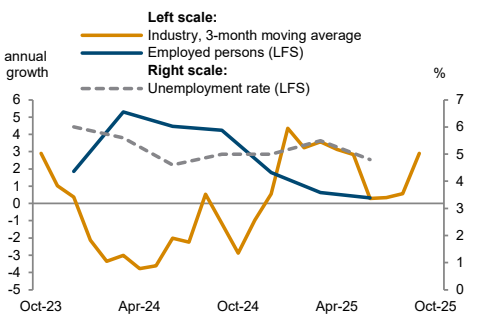
Croatia

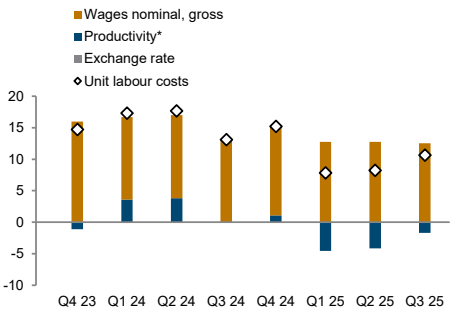
Real GDP growth and contributions
y-o-y



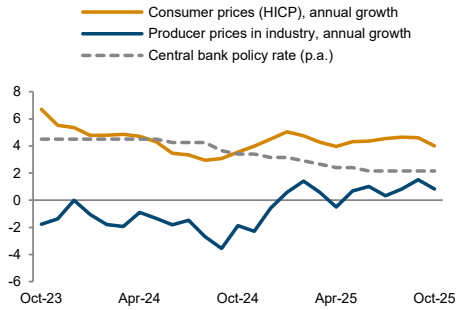
Real sector development
in %



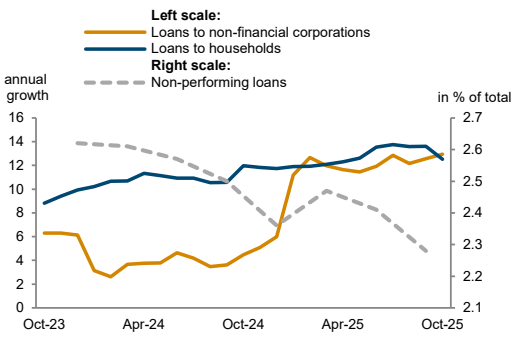
Unit labour costs in industry
annual growth rate in %



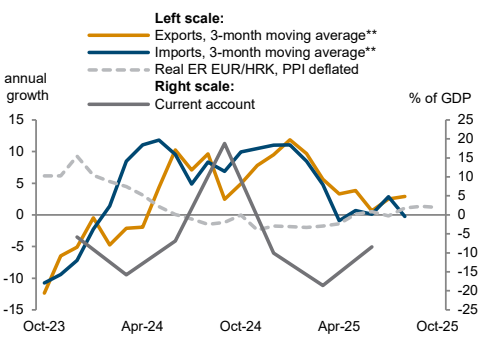
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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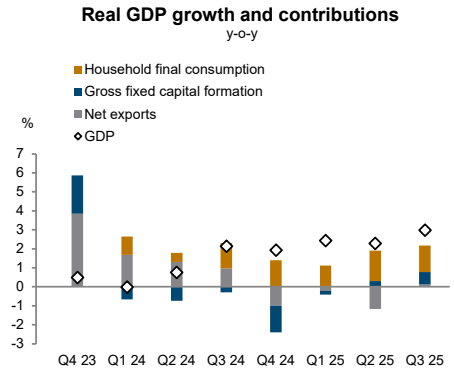
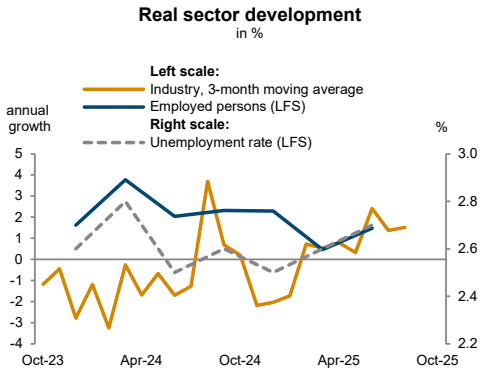
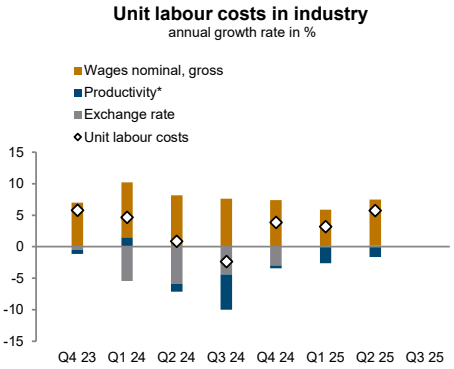
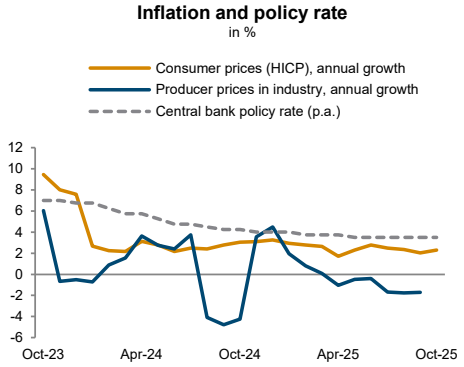
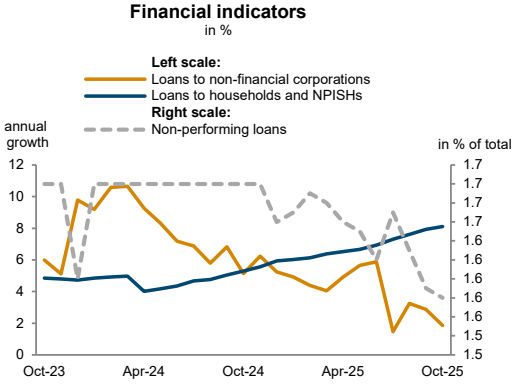
Czechia

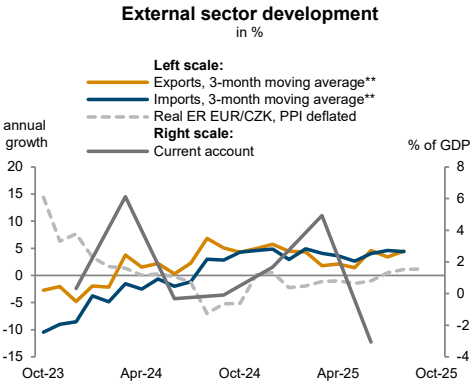












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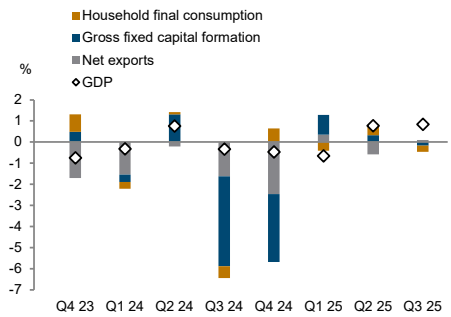
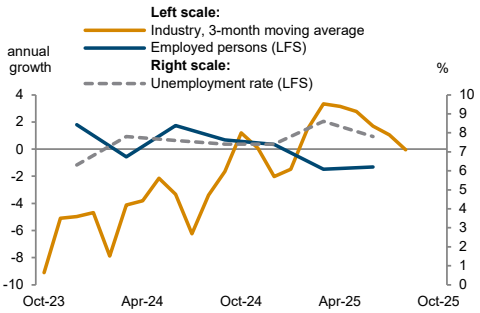
Estonia

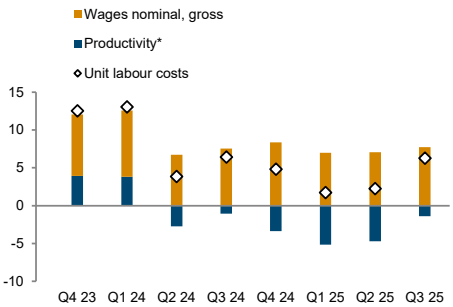
Real GDP growth and contributions
y-o-y



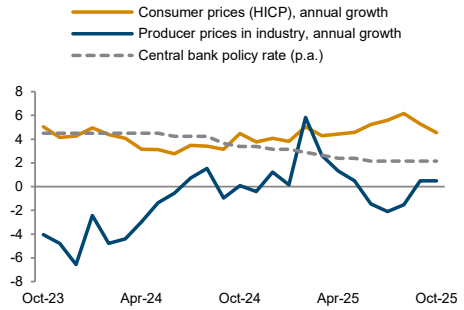
Real sector development
in %



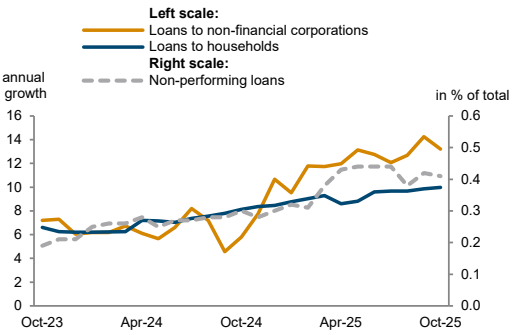
Unit labour costs in industry
annual growth rate in %



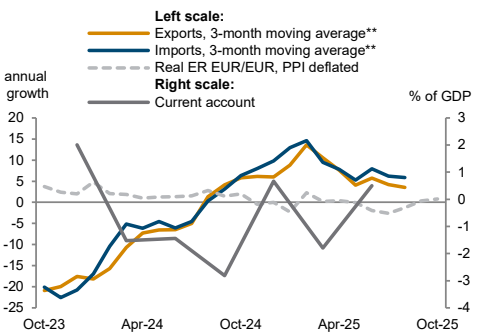
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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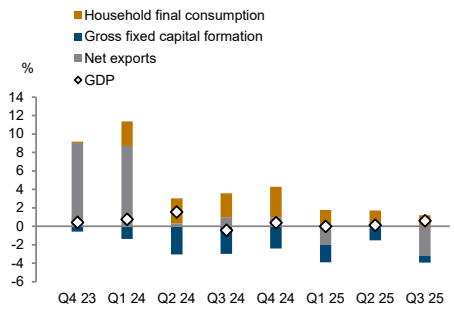
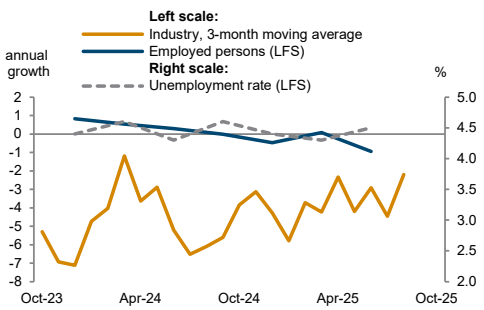
Hungary

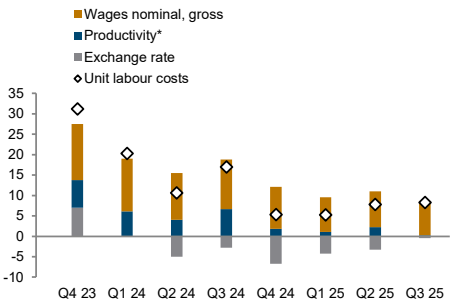
Real GDP growth and contributions
y-o-y



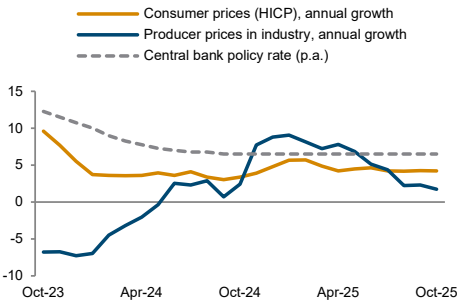
Real sector development
in %



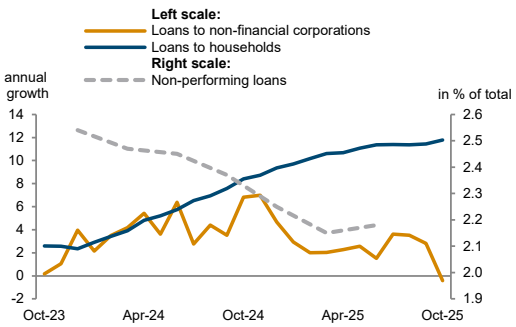
Unit labour costs in industry
annual growth rate in %



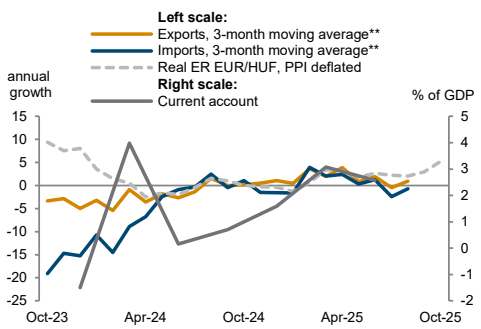
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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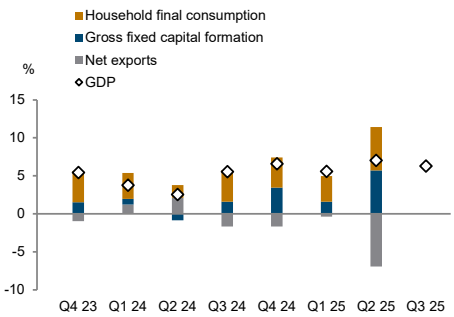
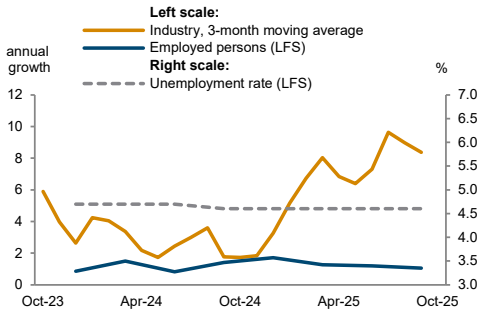
Kazakhstan

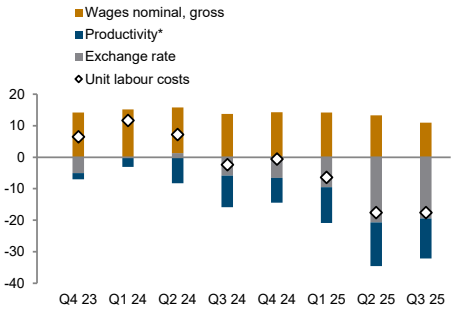
Real GDP growth and contributions
y-o-y



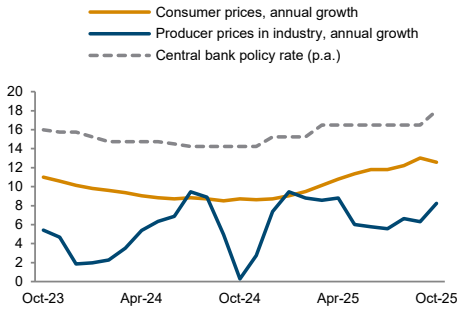
Real sector development
in %



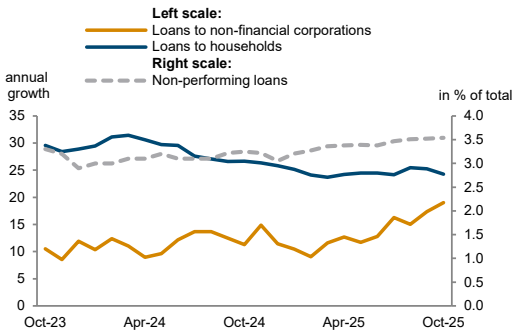
Unit labour costs in industry
annual growth rate in %



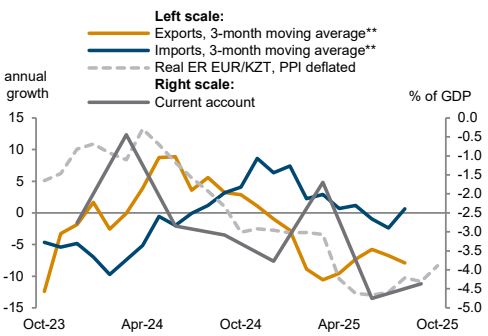
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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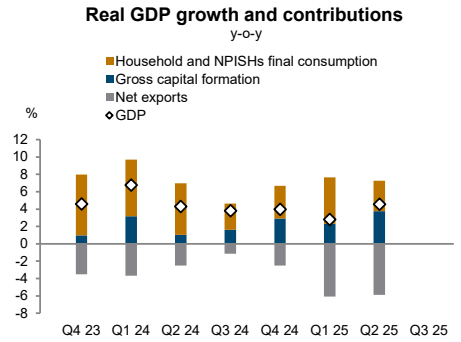
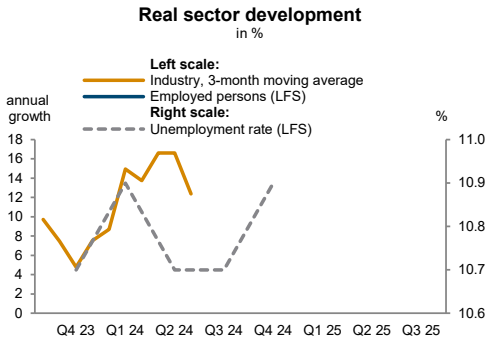
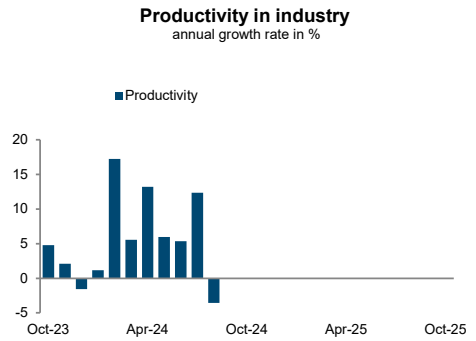
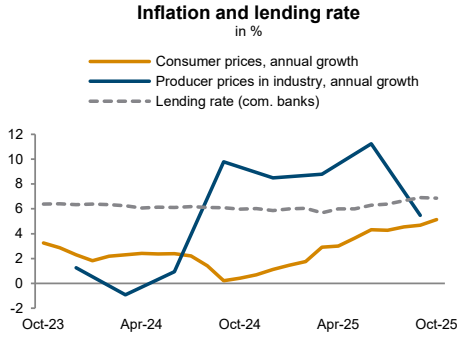
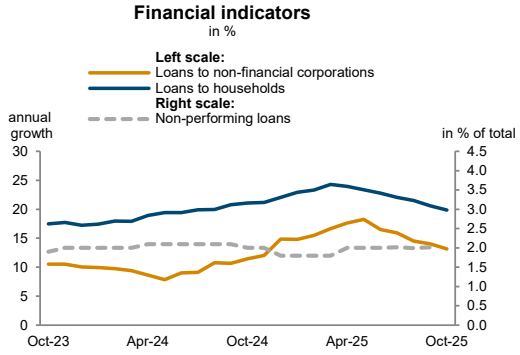
Kosovo

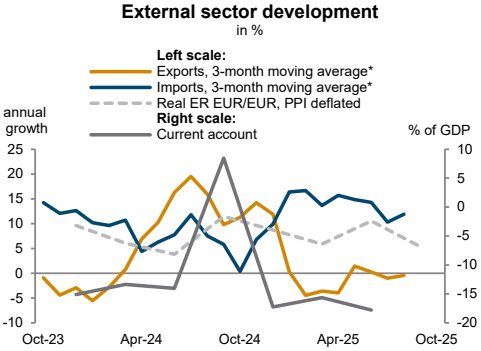












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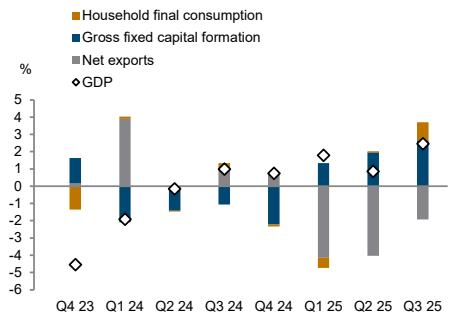
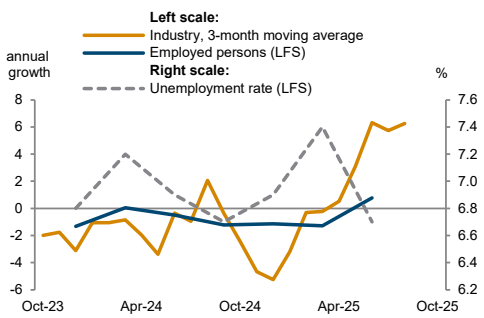
Latvia

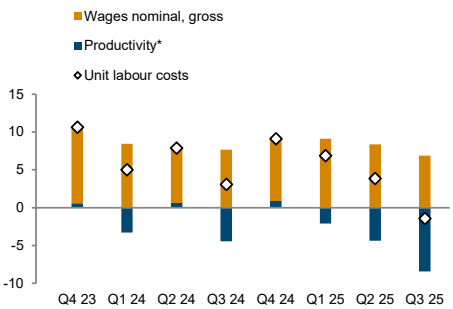
Real GDP growth and contributions
y-o-y



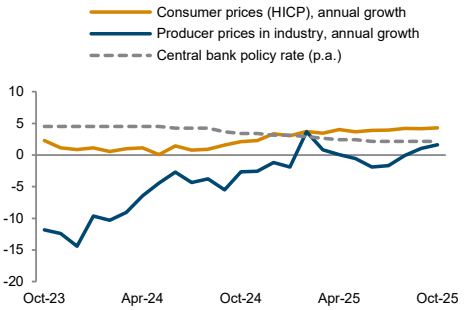
Real sector development
in %



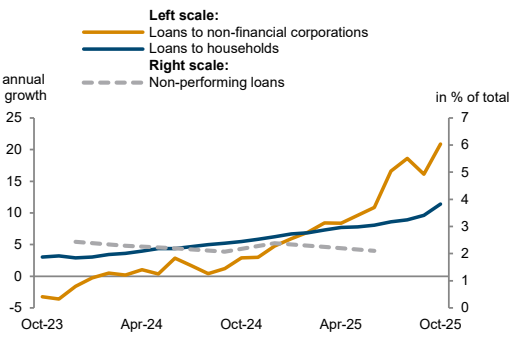
Unit labour costs in industry
annual growth rate in %



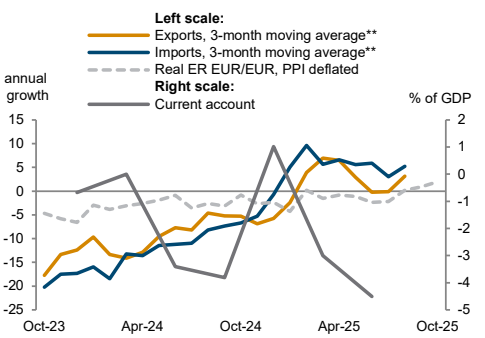
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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

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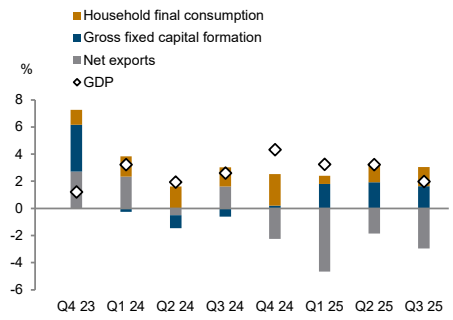
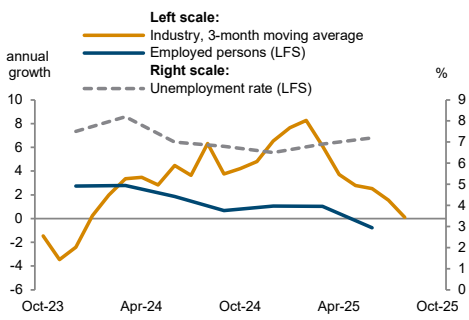
Lithuania

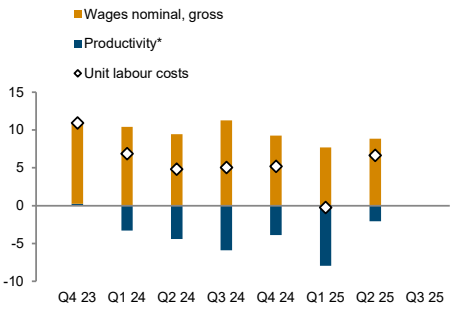
Real GDP growth and contributions
y-o-y



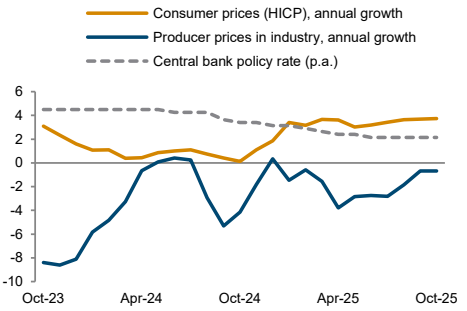
Real sector development
in %



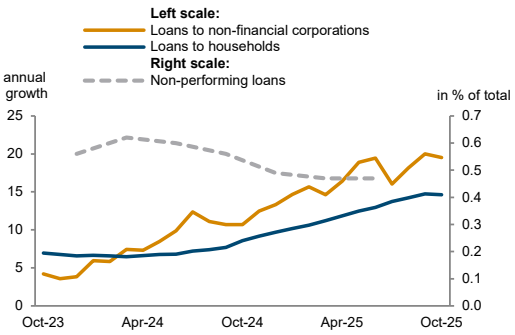
Unit labour costs in industry
annual growth rate in %



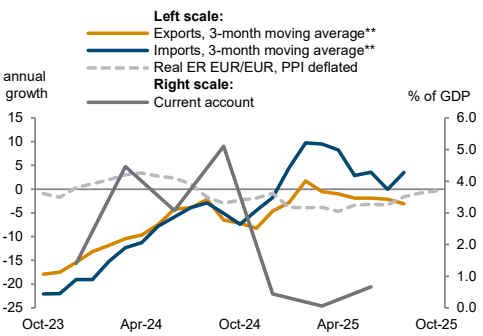
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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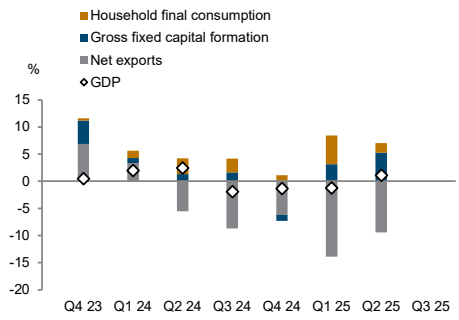
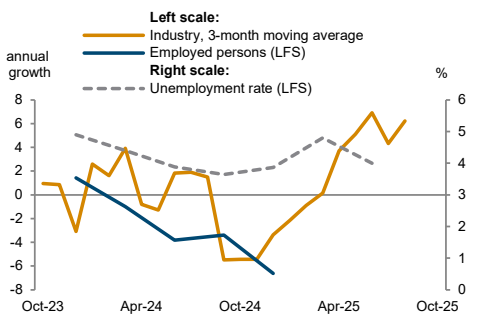
Moldova

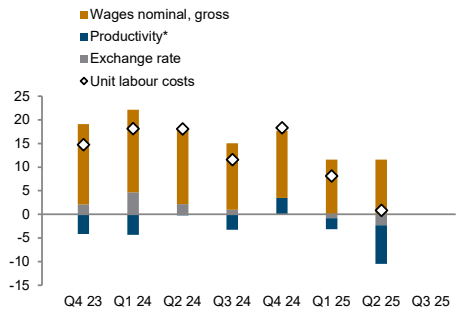
Real GDP growth and contributions
y-o-y



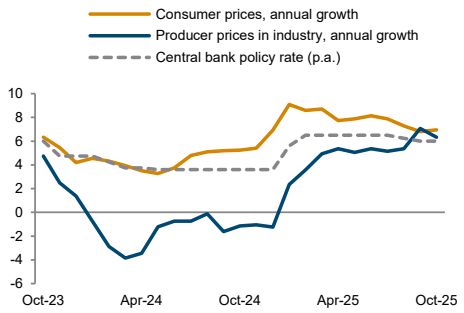
Real sector development
in %



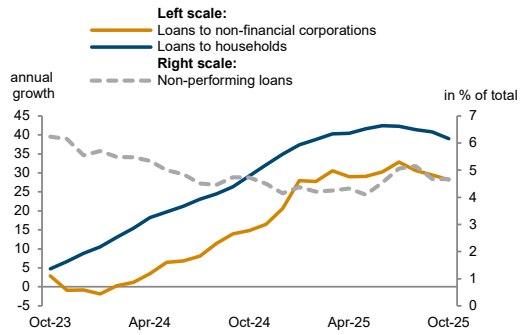
Unit labour costs in industry
annual growth rate in %



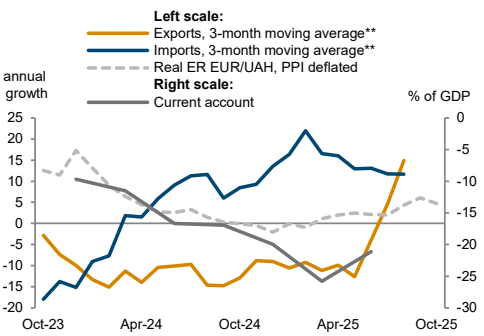
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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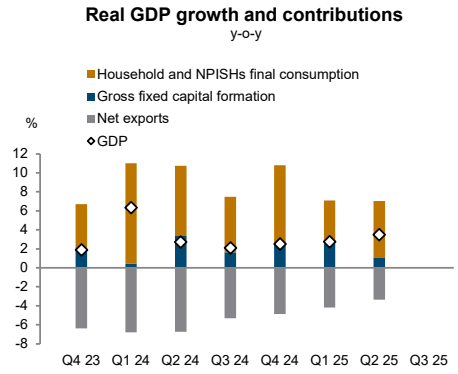
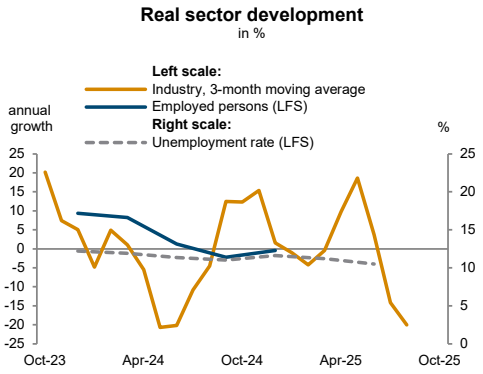
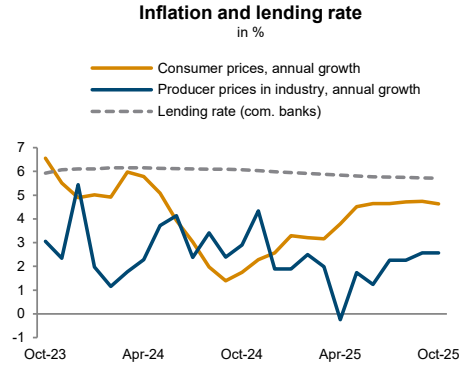
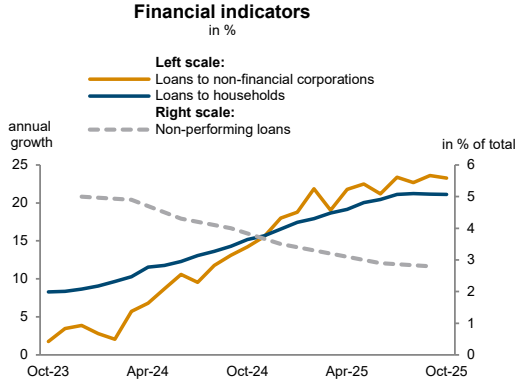
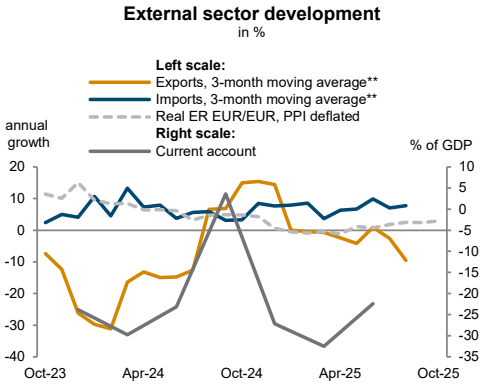
Montenegro











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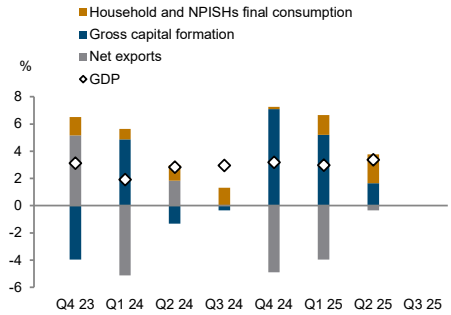
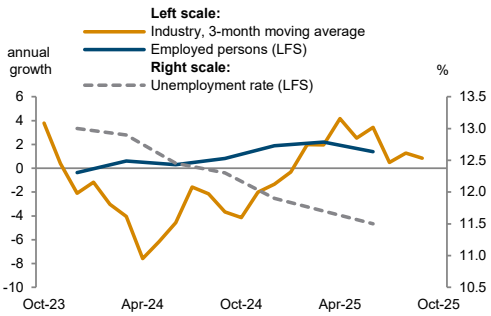
North Macedonia

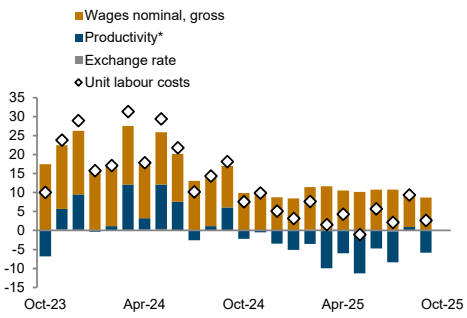
Real GDP growth and contributions
y-o-y



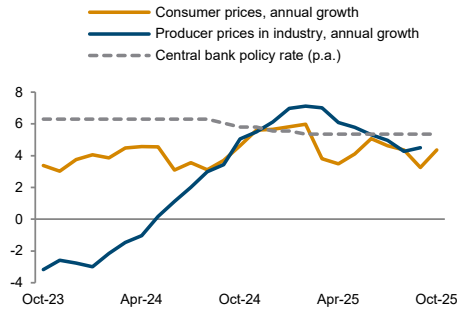
Real sector development
in %



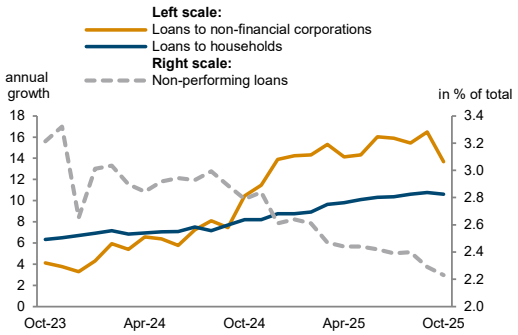
Unit labour costs in industry
annual growth rate in %



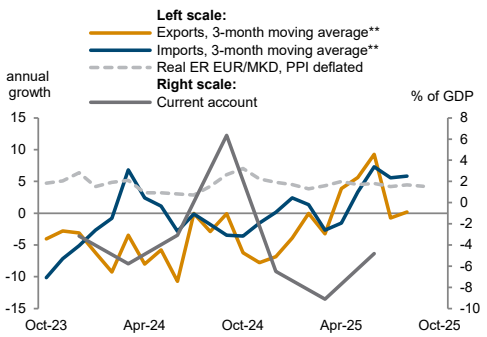
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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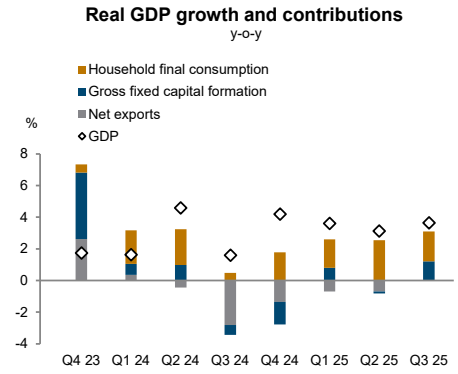
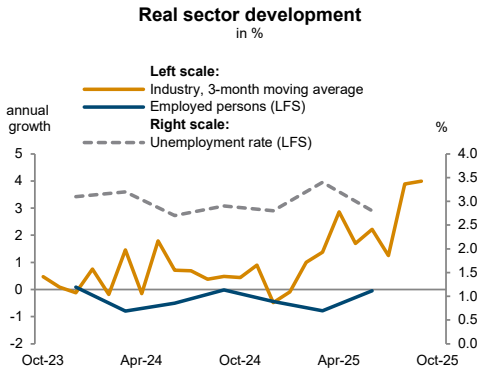
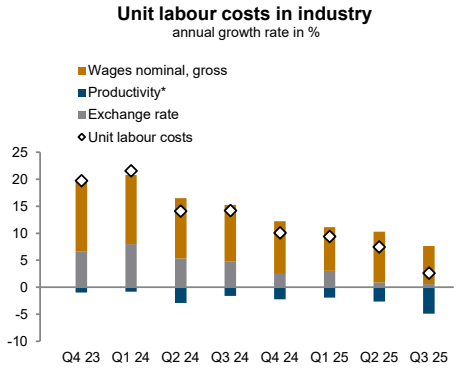
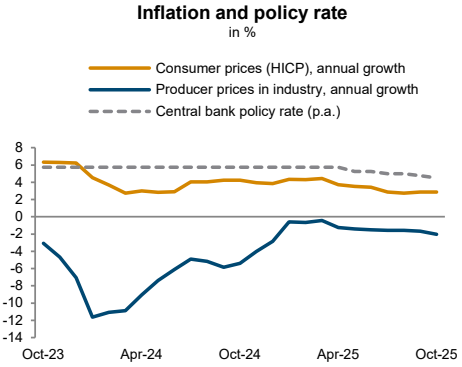
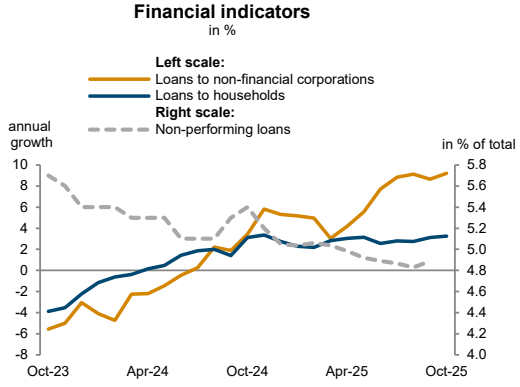
Poland

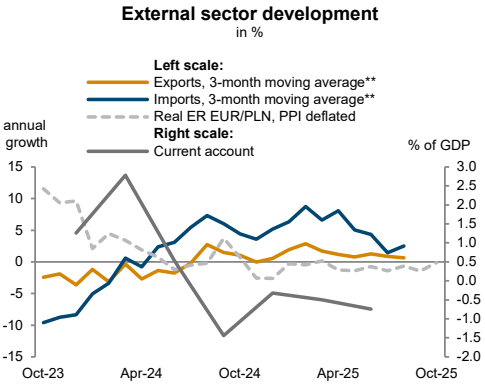












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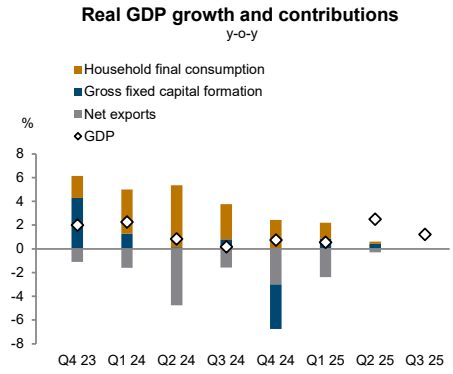
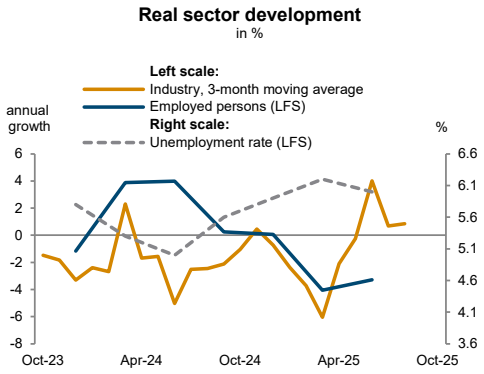
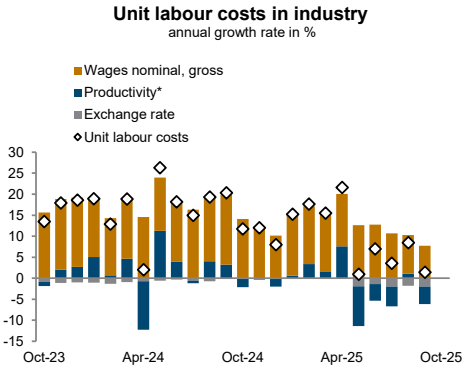
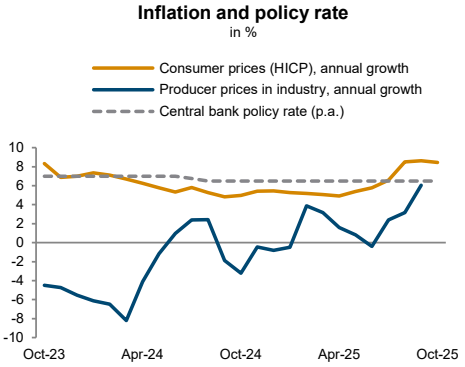
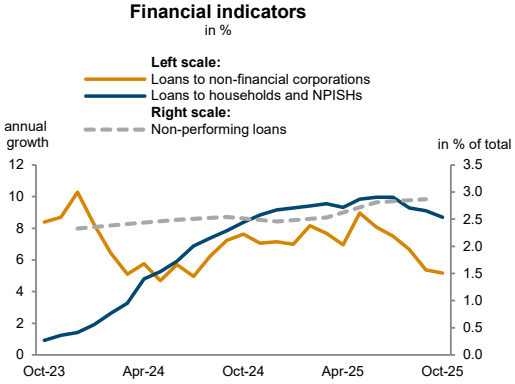
Romania

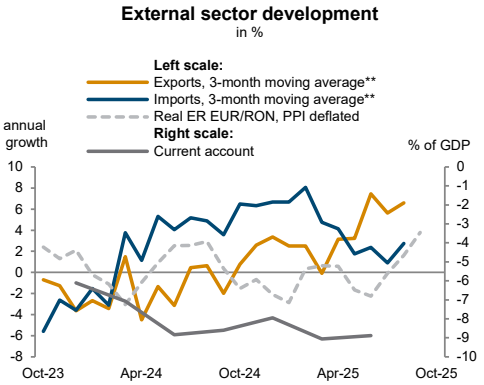












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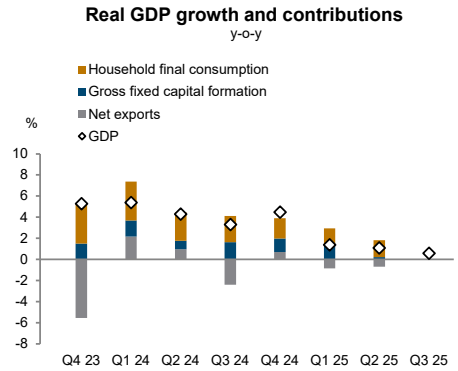
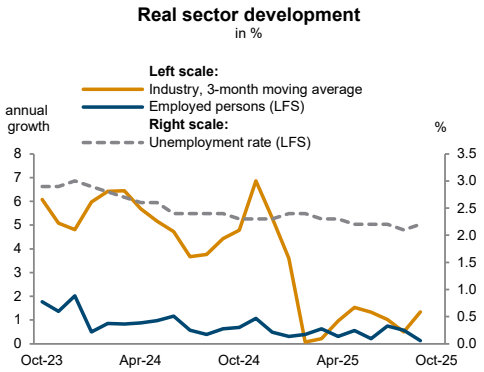
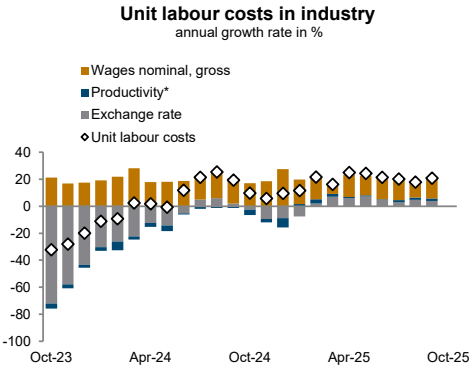
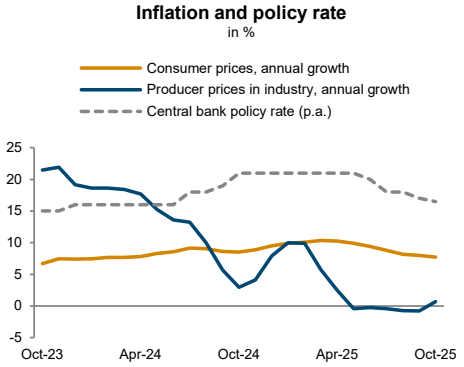
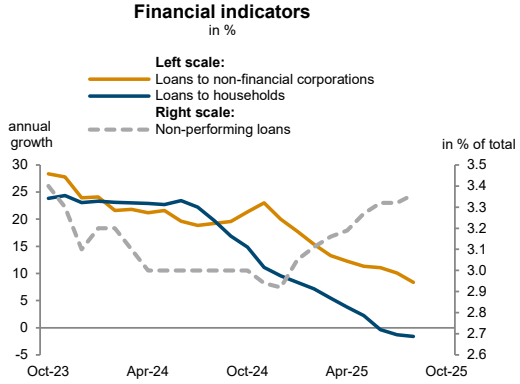
Russia

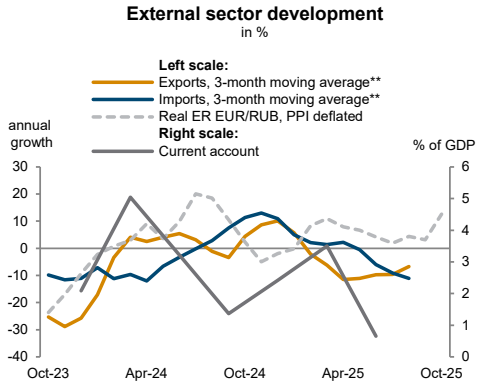












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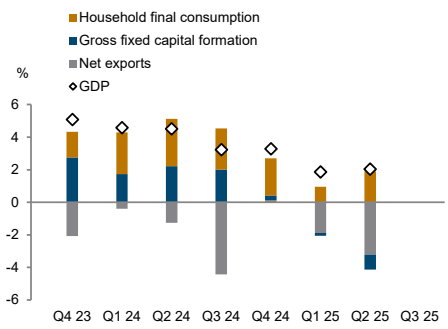
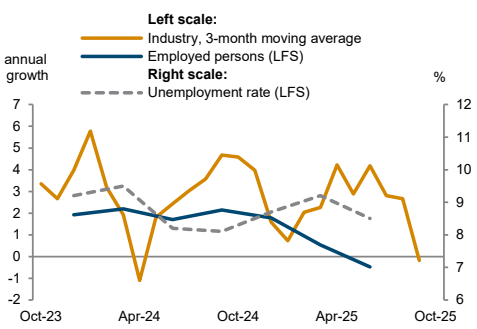
Serbia

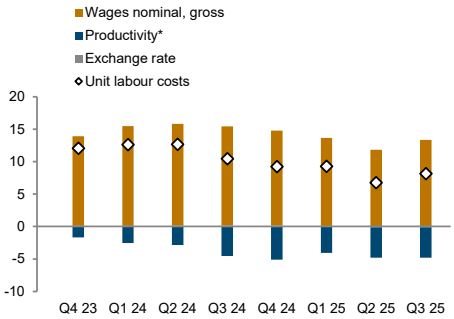
Real GDP growth and contributions
y-o-y



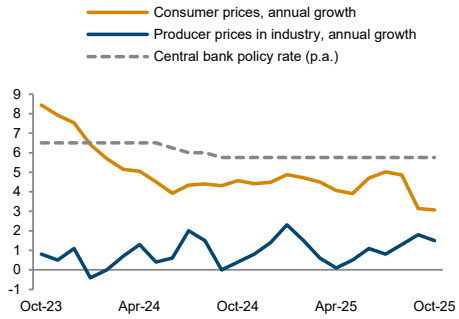
Real sector development
in %



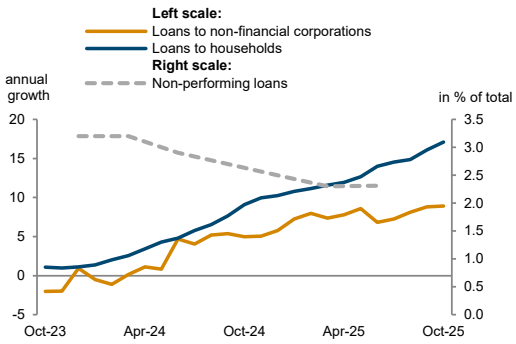
Unit labour costs in industry
annual growth rate in %



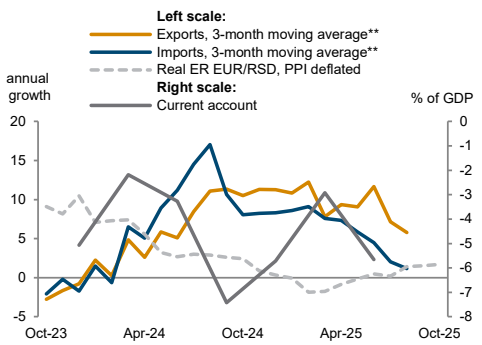
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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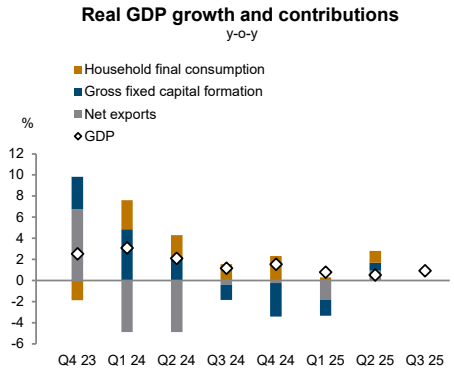
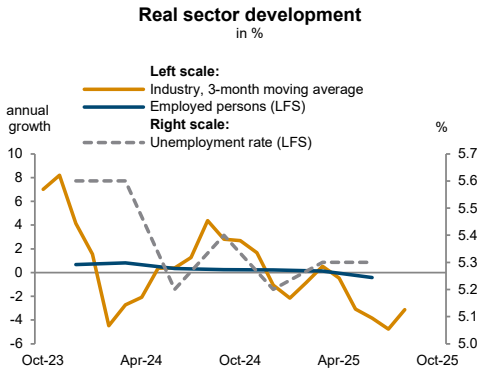
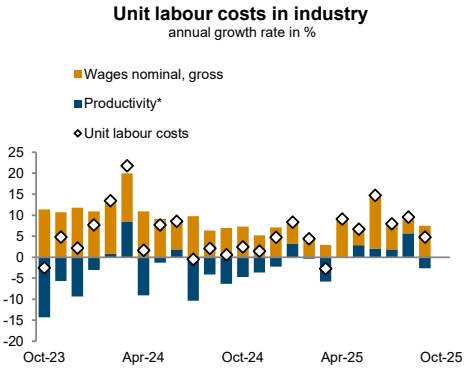
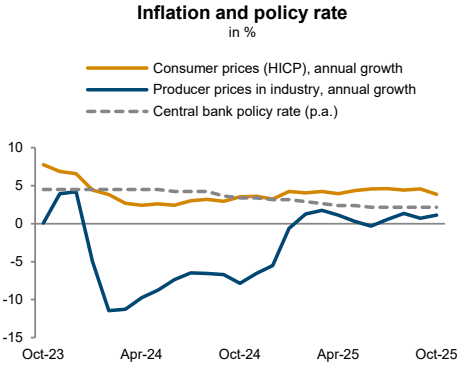
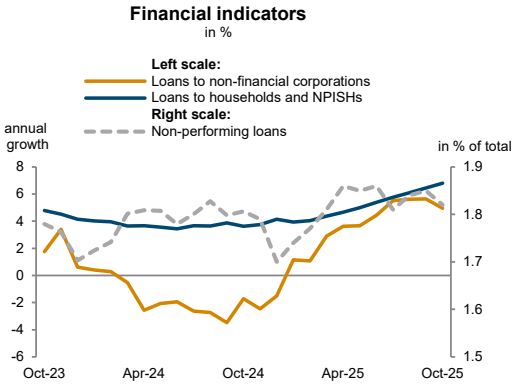
Slovakia

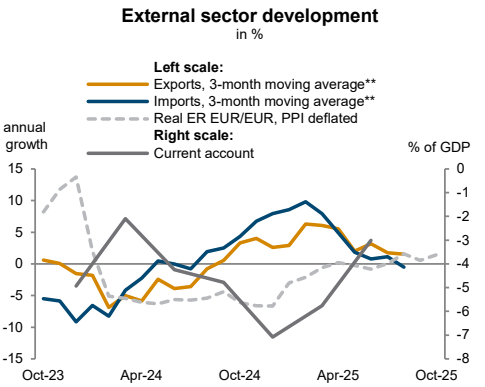












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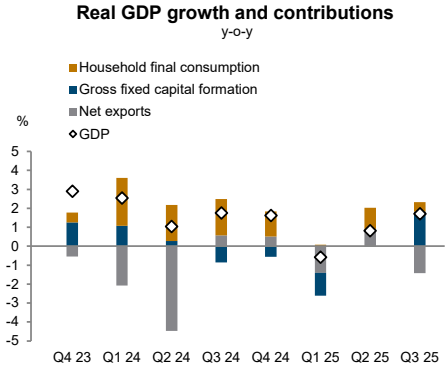
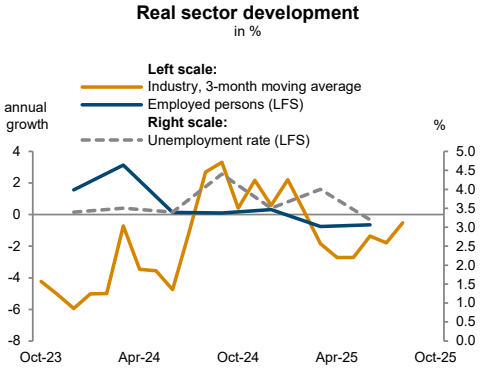
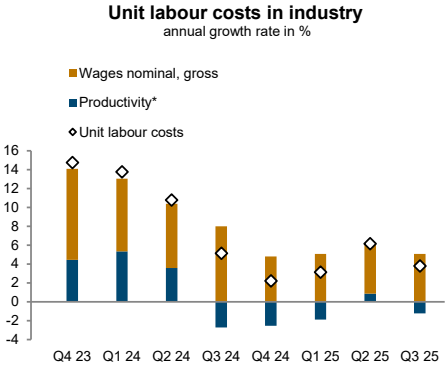
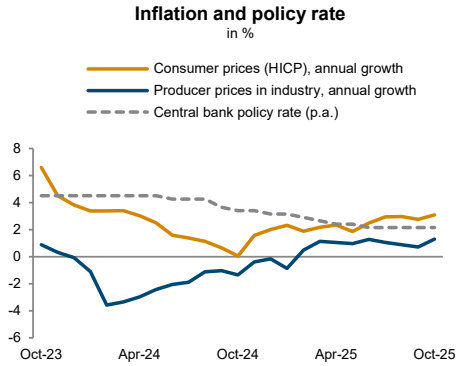
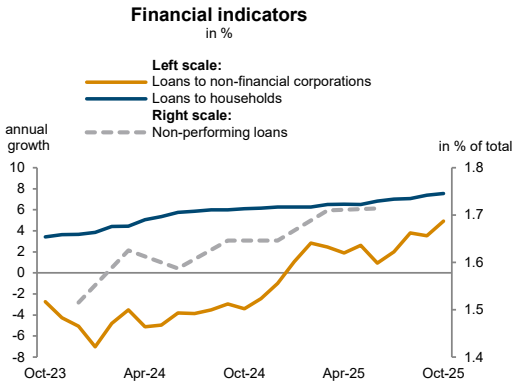
Slovenia

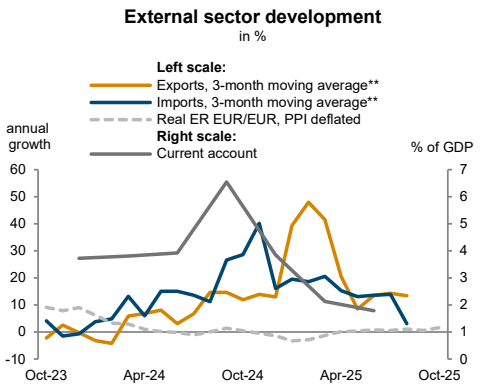












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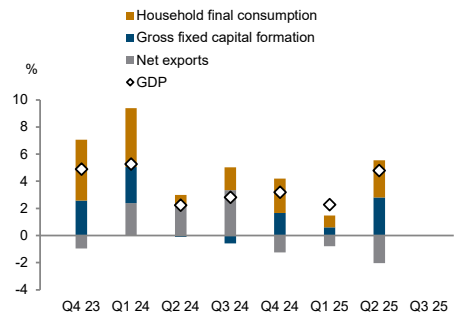
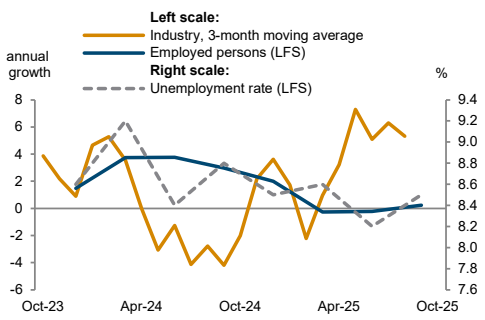
Turkey

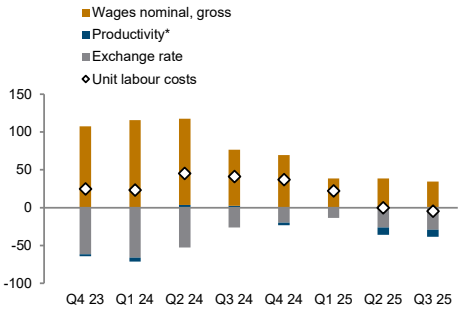
Real GDP growth and contributions
y-o-y



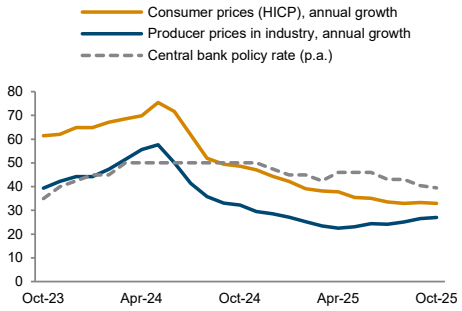
Real sector development
in %



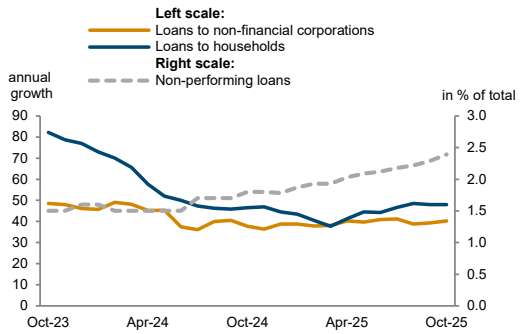
Unit labour costs in industry
annual growth rate in %



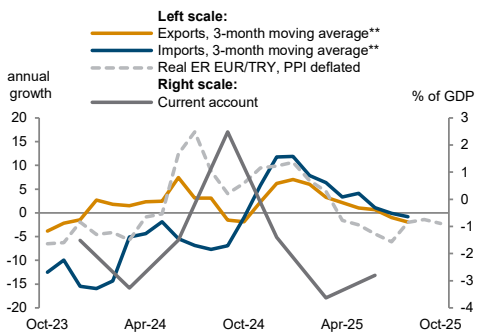
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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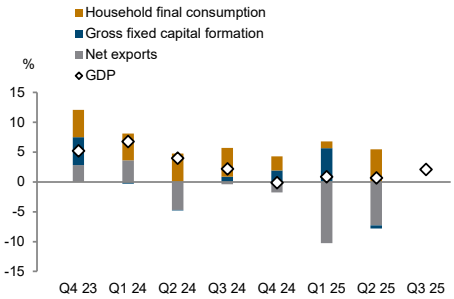
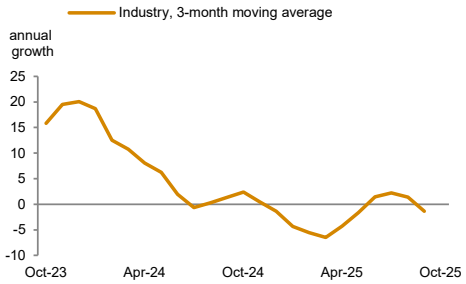
Ukraine

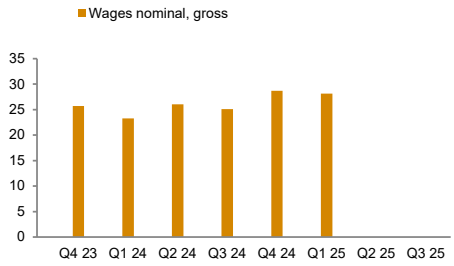
Real GDP growth and contributions
y-o-y



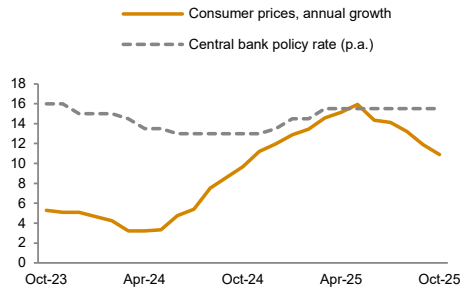
Real sector development
in %



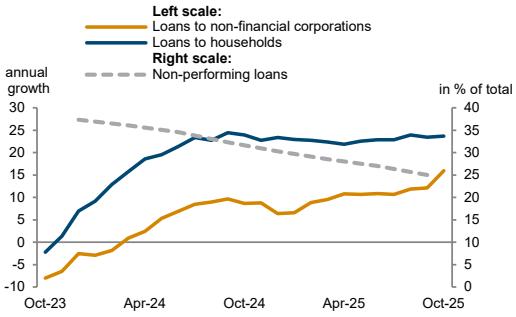
Wages in industry
annual growth rate in %



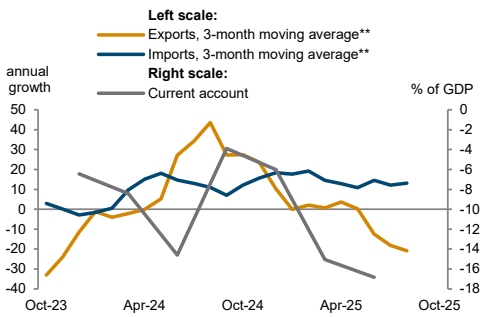
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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multi-country articles and statistical overviews

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Economics editor: Vasily Astrov

IMPRESSUM

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

ZVR-Zahl: 329995655

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

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

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