CZECH NATIONAL BANK

CNB's New Forecast (Monetary Policy Report Autumn 2021)

Meeting with Analysts

5 November 2021

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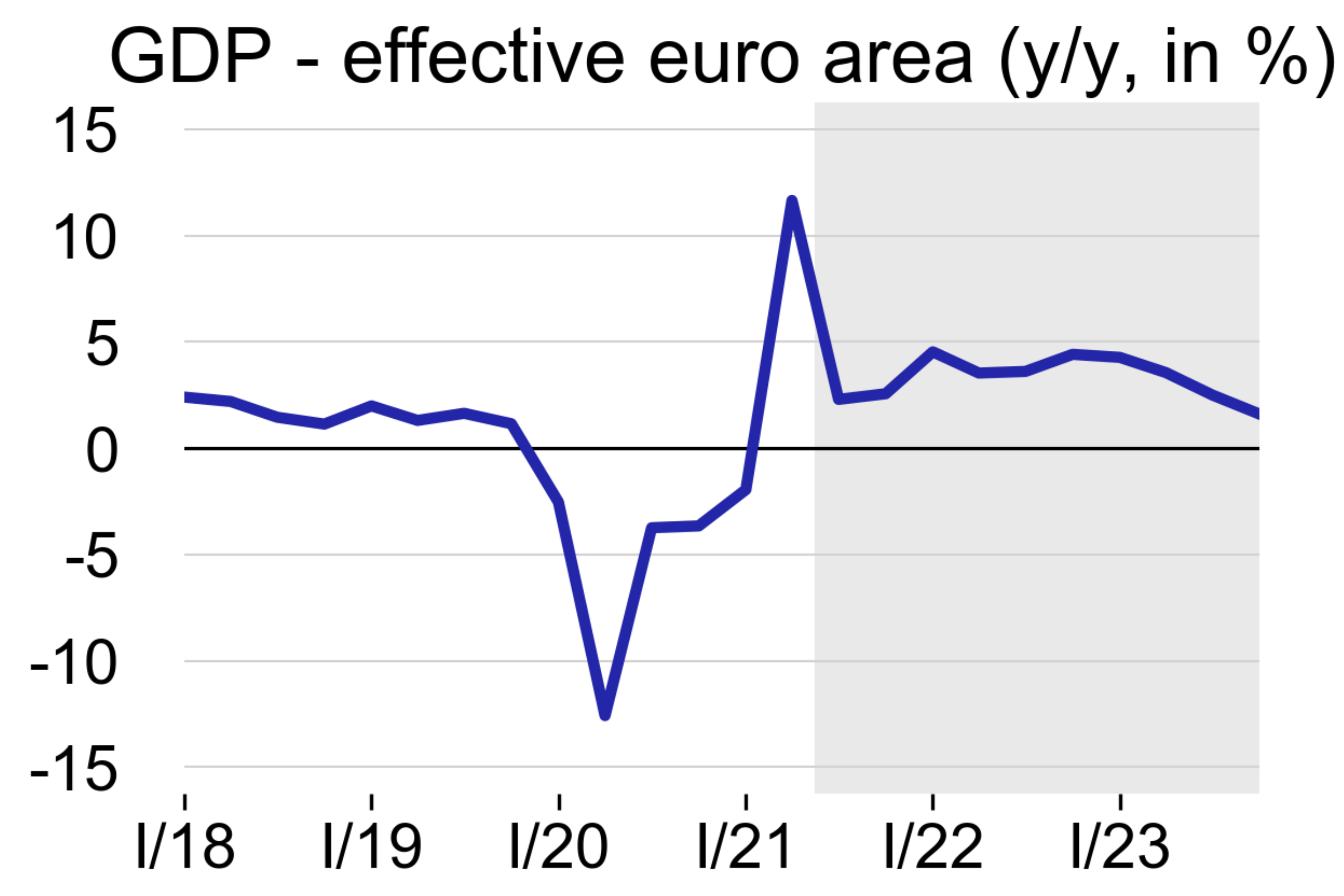
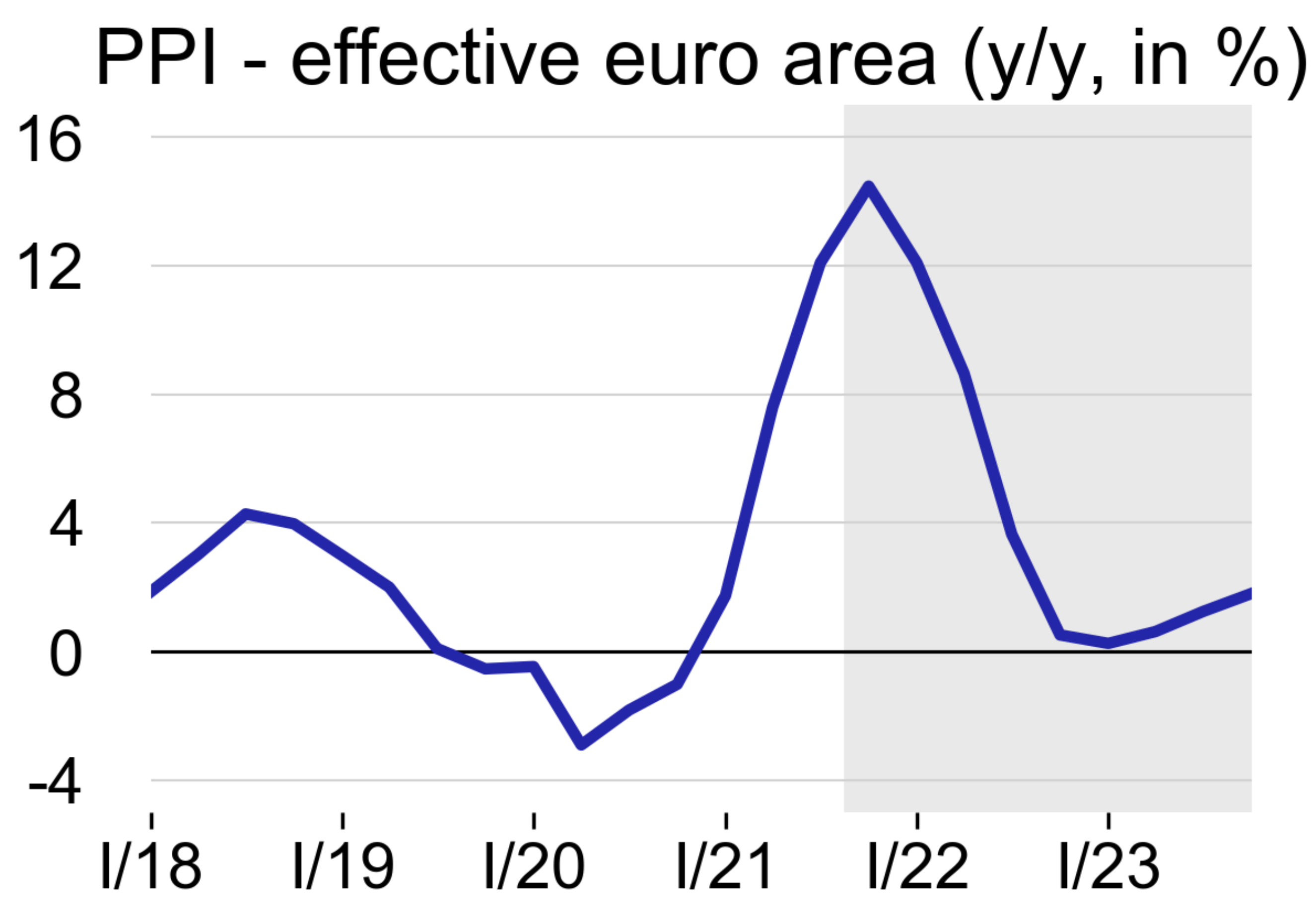
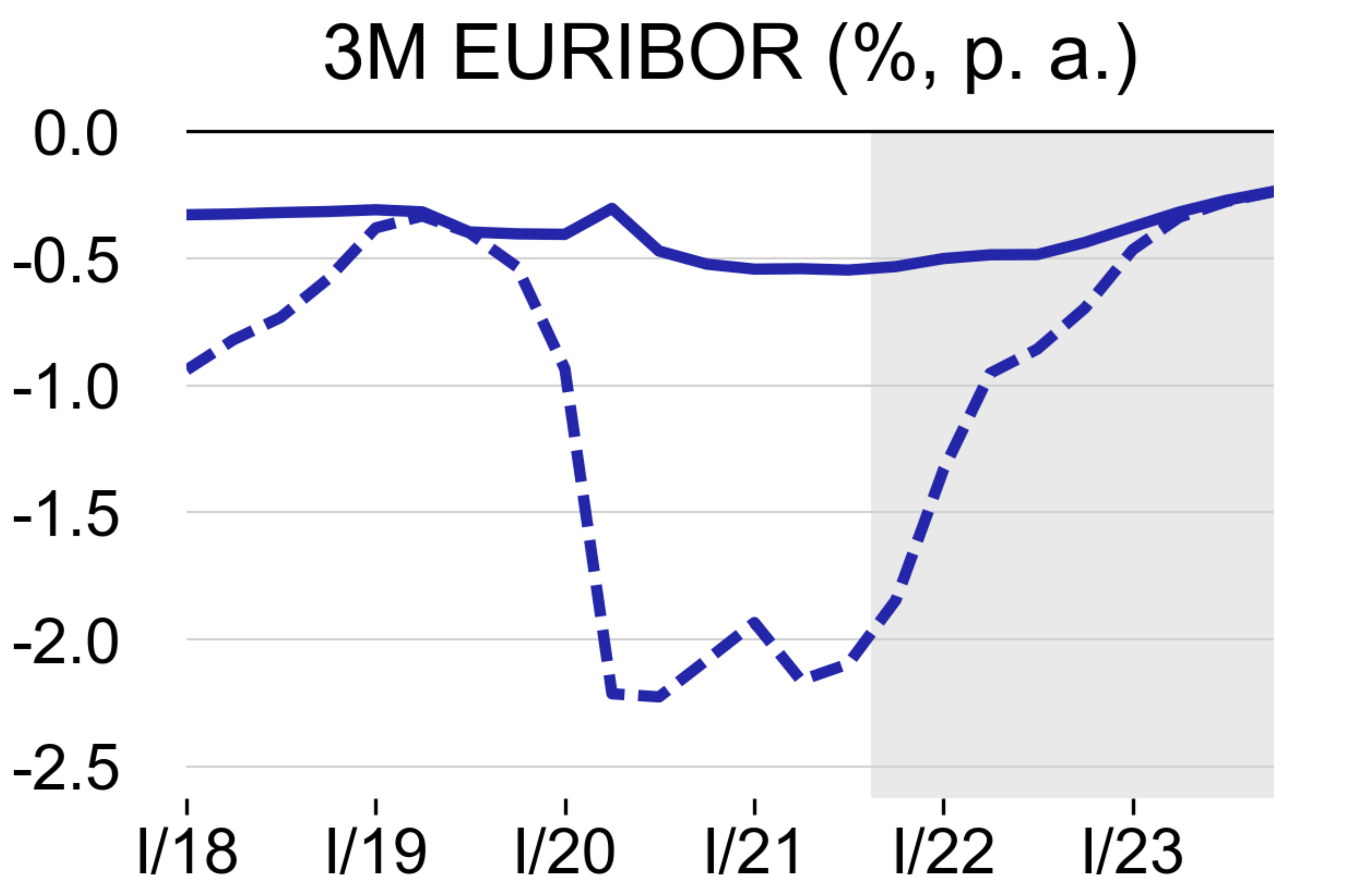
Presentation Outline

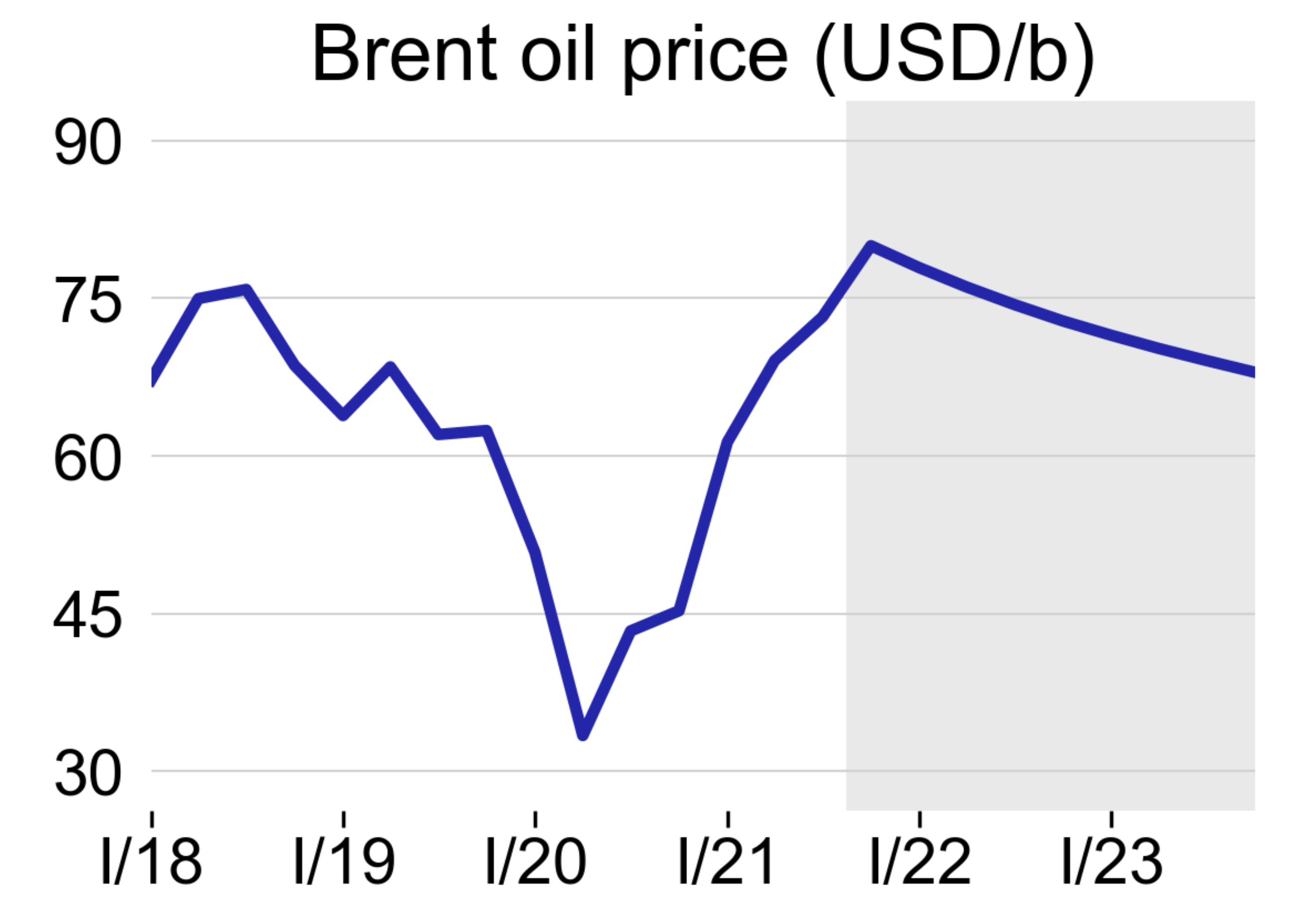
1. **Assumptions of the Forecast**
2. The New Macroeconomic Forecast
3. Comparison with the Previous Forecast
4. Scenarios and Monetary Policy Simulations

External Environment Outlook



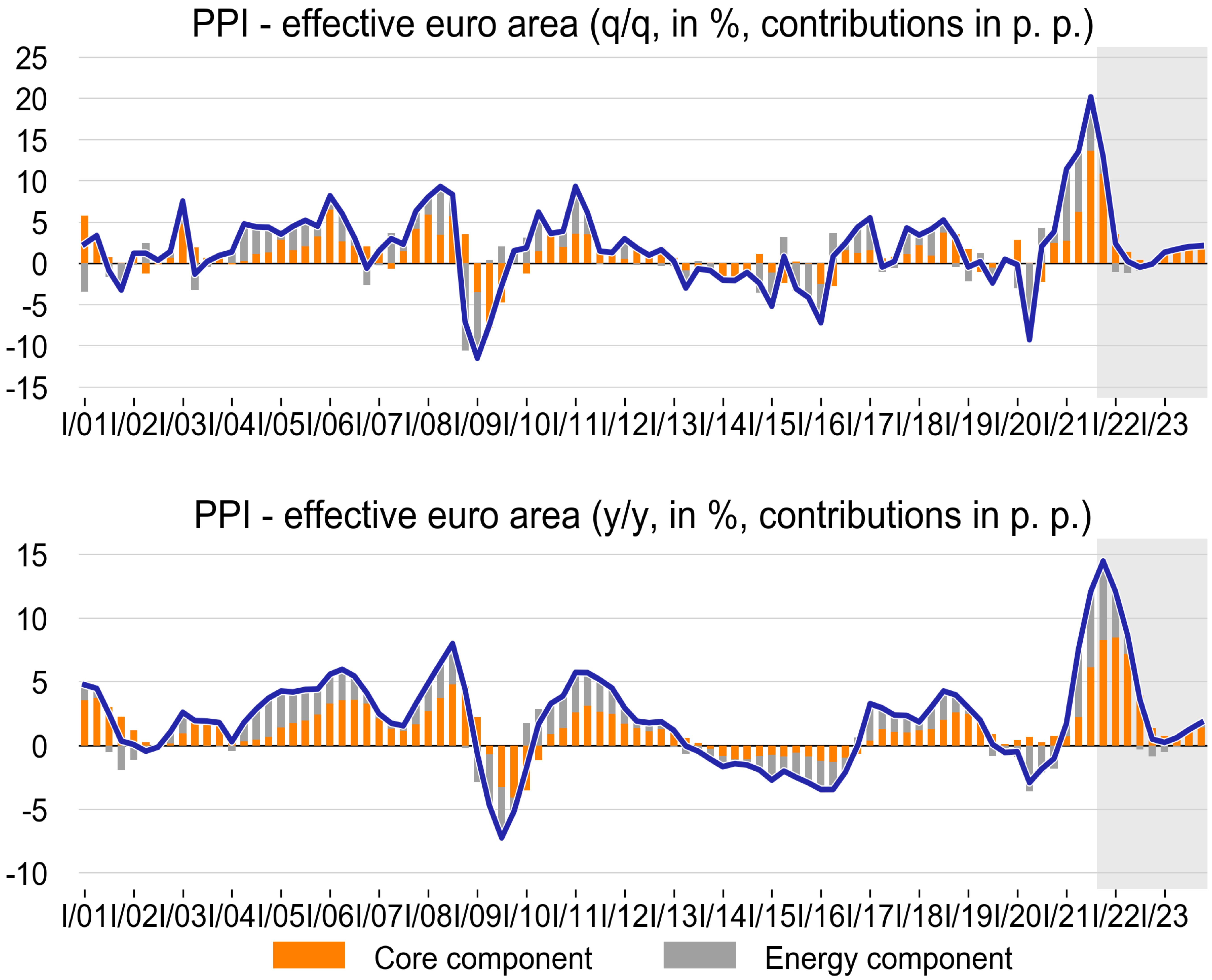






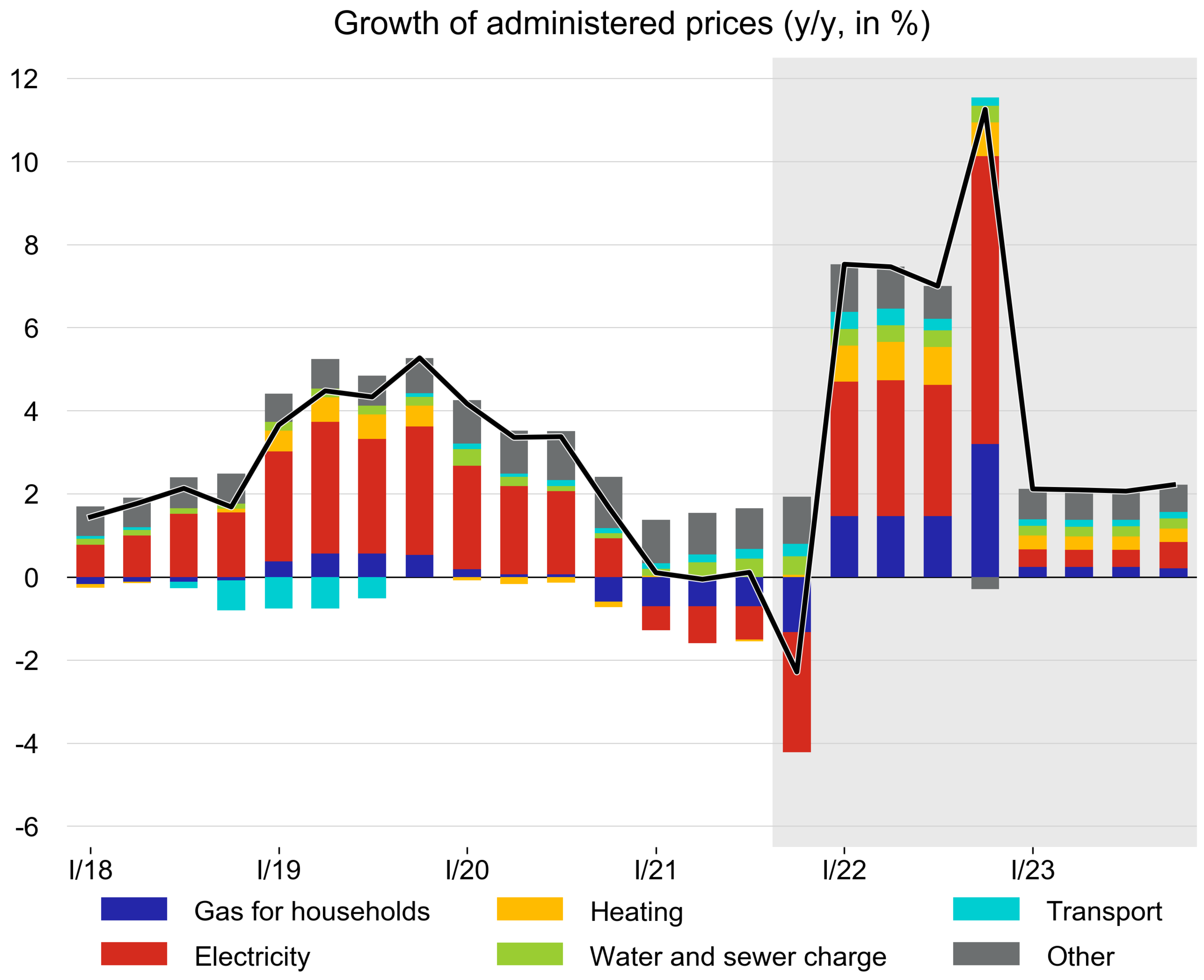
- The lifting of government shutdowns sparked buoyant growth in **effective euro area GDP** in the spring and summer of 2021. However, industrial production was disrupted by the overloading of global production chains, which will abate around mid-2022.
- Overall, **GDP growth in the effective euro area** will reach 3.4% this year and accelerate further in 2022.
- The current substantial **price growth abroad** will be replaced by a gradual fall in inflation next year. **Oil prices** will edge down in the next two years from the currently elevated levels.
- The **foreign interest rate** outlook expects the ECB to start tentatively tightening monetary policy.

Foreign Producer Price Growth



- The **inflation pressures in industrial production** are exceptionally strong at the moment and will increase further until the end of this year.
- Besides growth in prices of crude oil and other energy commodities, especially natural gas and electricity, high demand for industrial goods is still having an inflationary effect. This is being reflected in core producer price inflation.
- The inflation pressures will start to ease at the start of next year as the stress in supply chains abates. An expected decrease in the Brent crude oil price will also reduce the inflation pressures.

Growth of Administered Prices



- The growth in energy prices at the end of this year will not be reflected in consumer prices, as it will be outweighed by the temporary waiver of VAT on electricity and natural gas. Thus, the **administered prices** will drop in 2021 Q4.
- However, at the start of next year the administered prices will rise sharply as high commodity exchange prices of energy lead to a substantial increase in the corresponding consumer prices, including heat prices.
- Overall, administered price inflation will rise above 7% at the start of next year.
- According to market expectations, the unusually high energy prices will fall at the end of the coming winter but will remain elevated until early 2023.

Fiscal Policy

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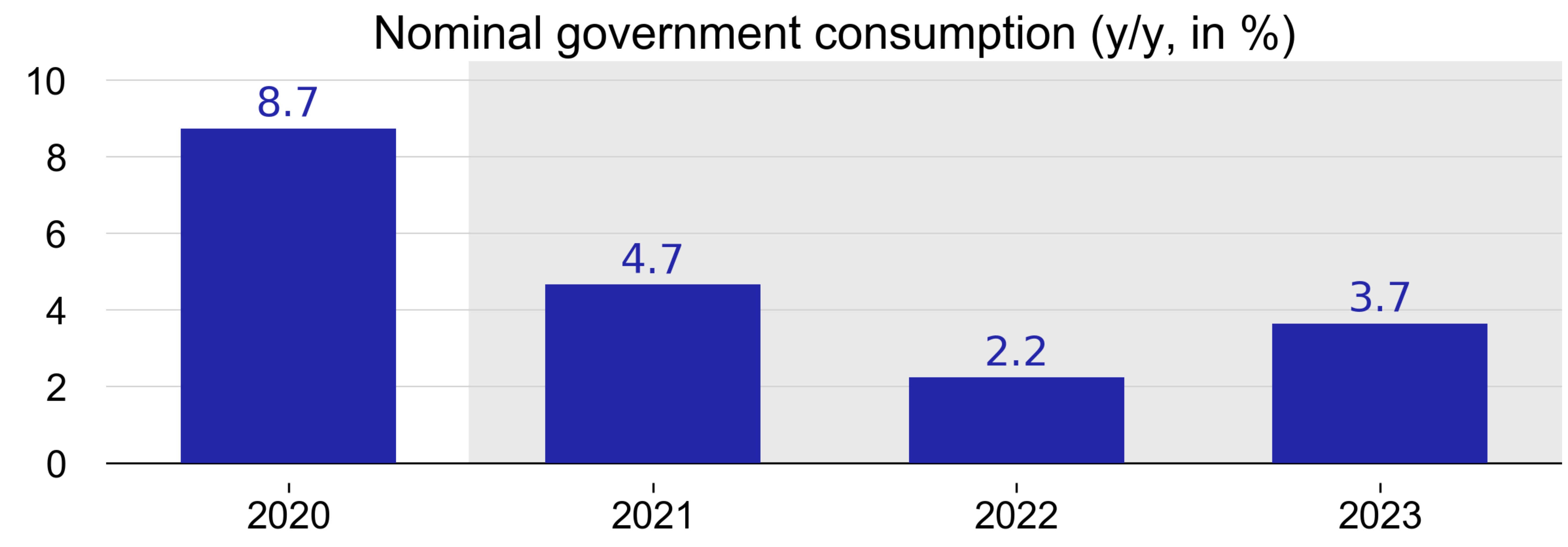
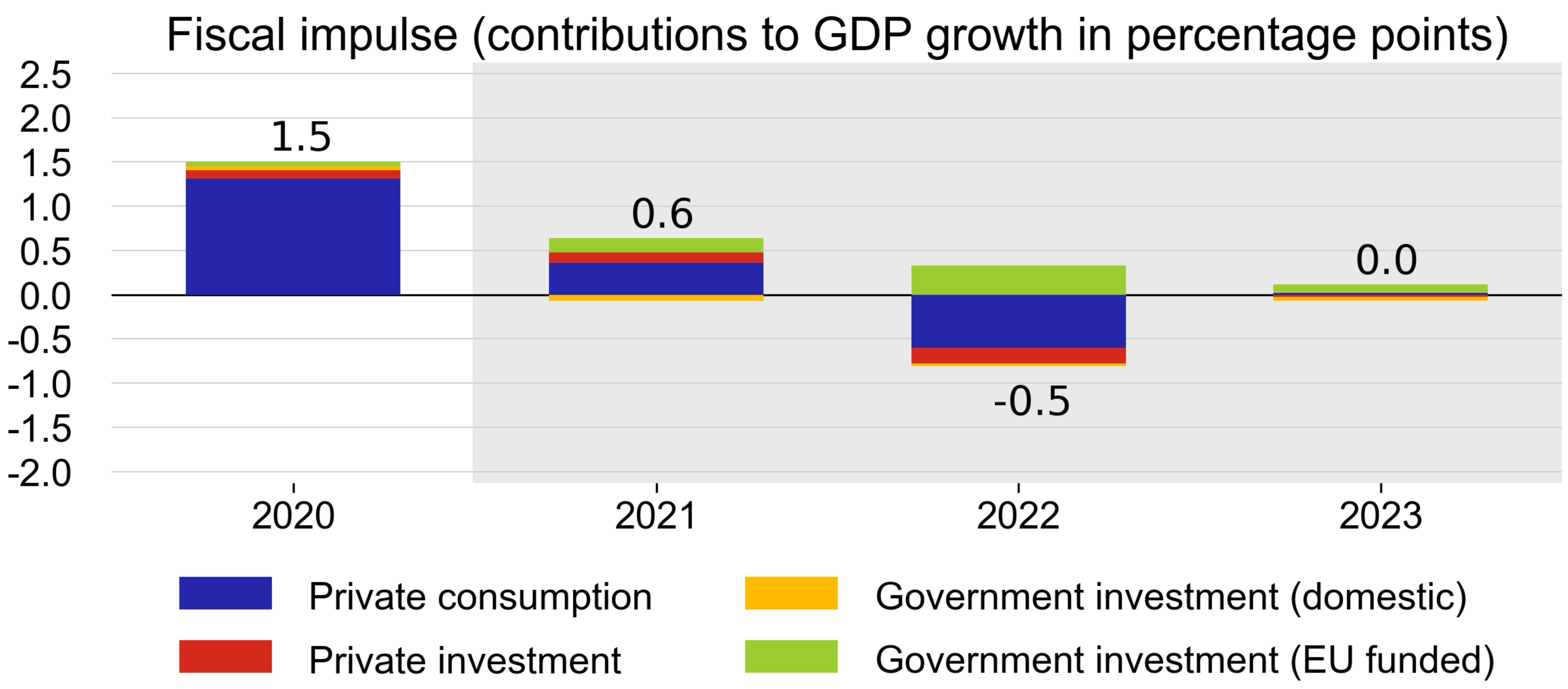
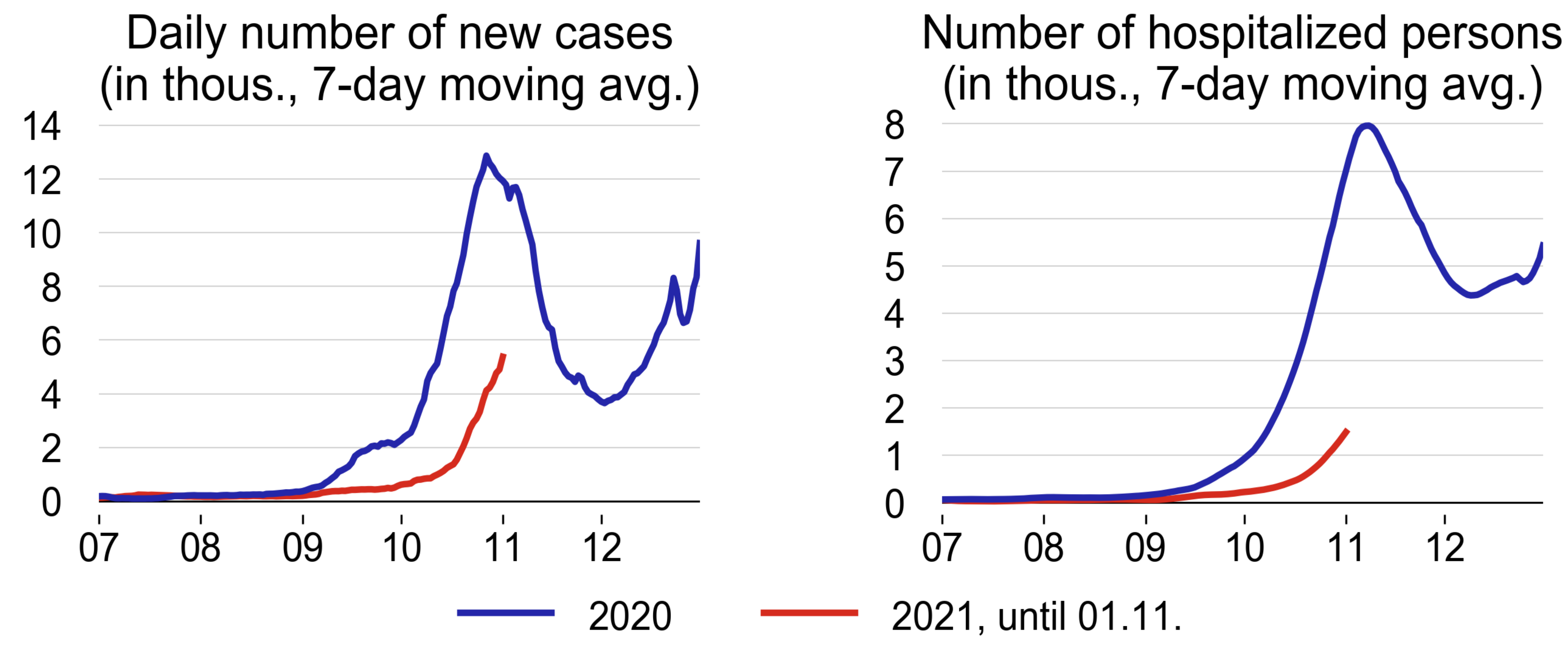
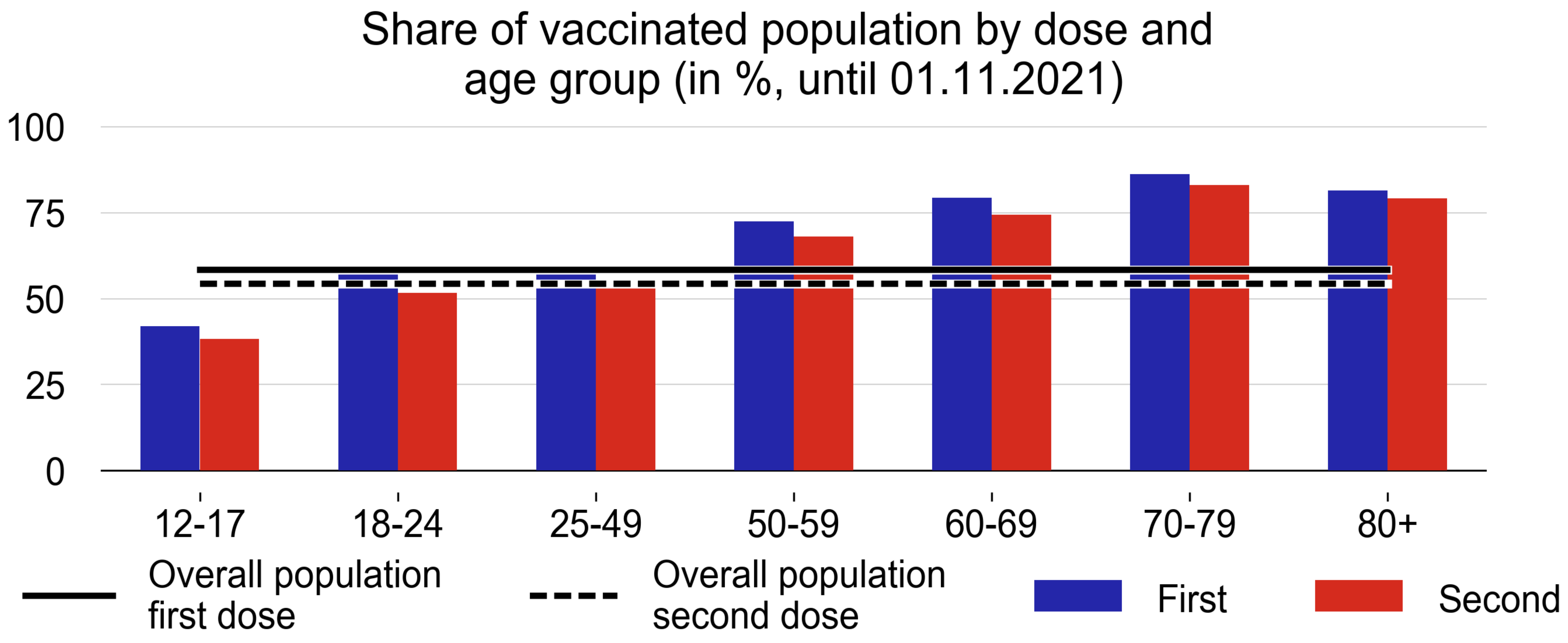




- **Government consumption** is rising this year, but its growth is slowing due to base effects. The nominal non-wage component of government consumption has been strengthened this year by extraordinary vaccination and testing-related health care spending.
- **Fiscal support** for economic activity will decrease this year and fiscal policy will dampen GDP growth slightly next year. In 2023, the fiscal impulse will be neutral.
- Fiscal policy is increasing GDP growth this year by supporting household income and consumption. The **fiscal impulse** will be negative in 2022 due to the phase-out of most support measures.

Pandemic Development





- The number of new cases started to surge in October, but it is clear in year-on-year comparison that **the worsening of the pandemic situation is notably smaller in scale than last autumn**. It is more important to look at the number of hospitalisations, which is several times lower than last year.
- This is due mainly to **more than 70% vaccination coverage in the most-at-risk population categories**, i.e. the 60+ age group, and the high number of people who have had the disease.
- Based on the above facts, the forecast therefore assumes that any tightening of anti-epidemic measures in the coming cold months will have **minimal economic impacts**.

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Headline and Monetary Policy-Relevant Inflation

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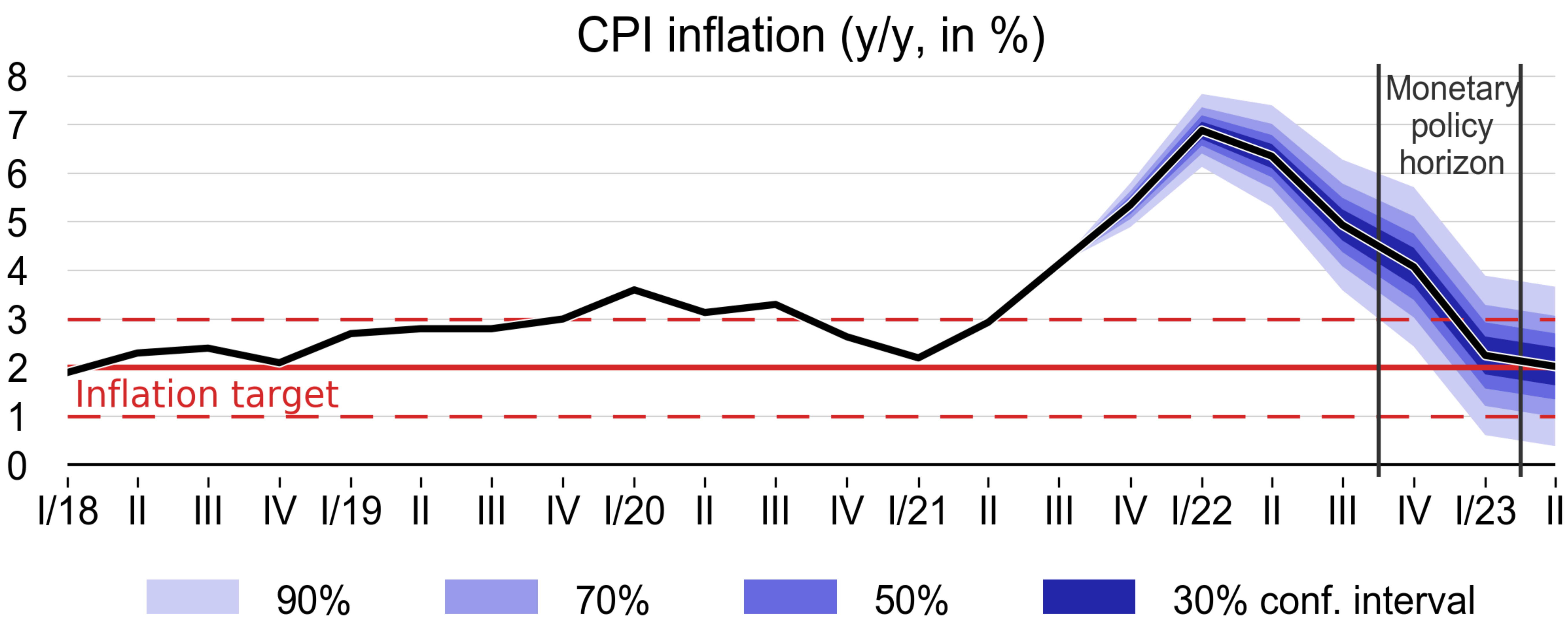
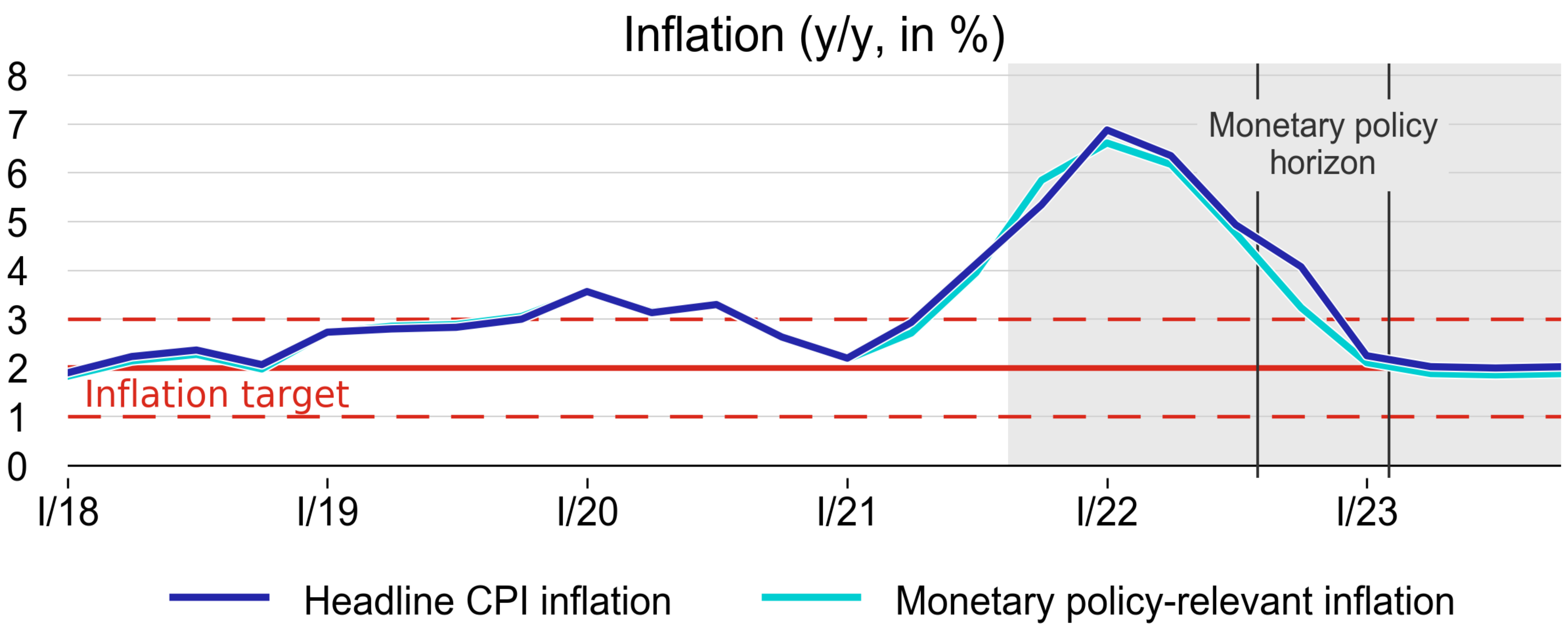
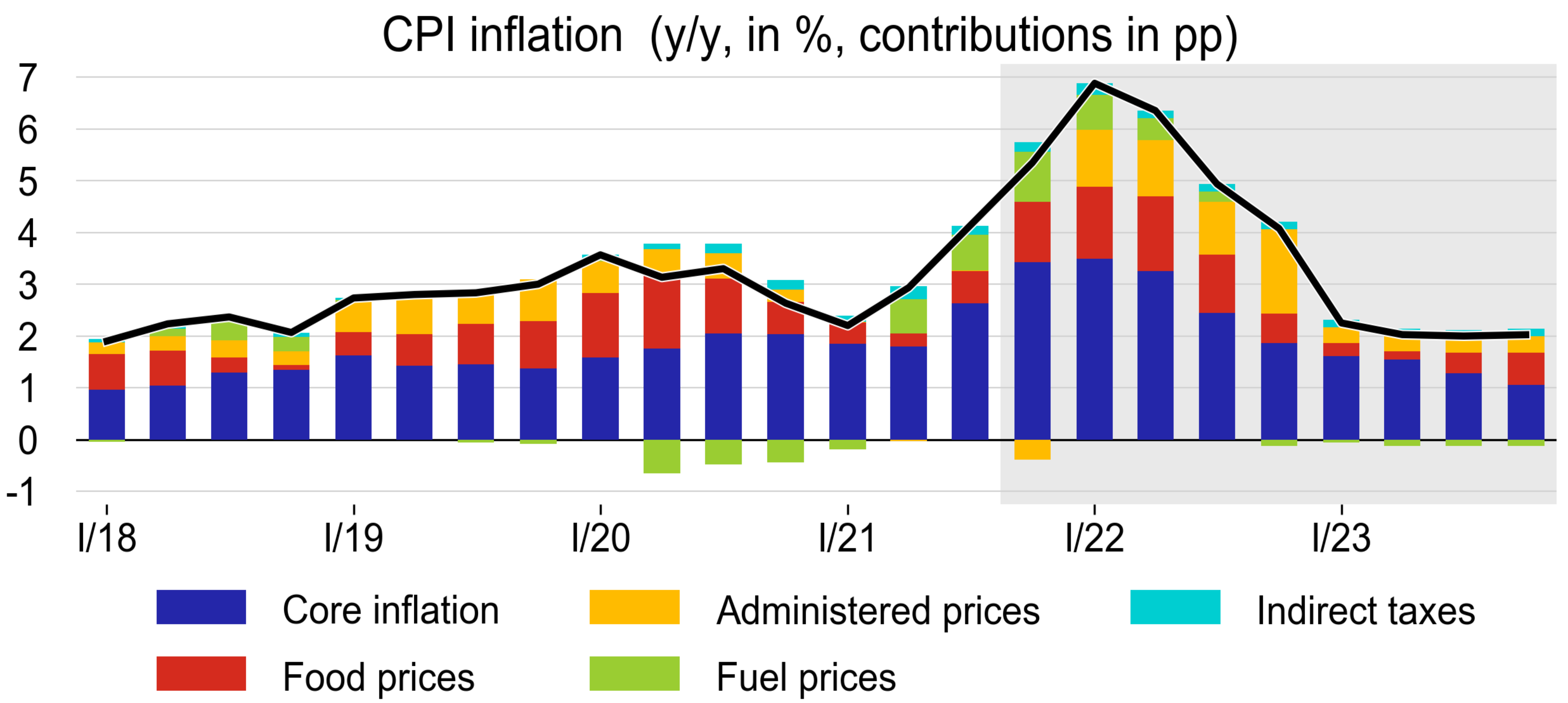
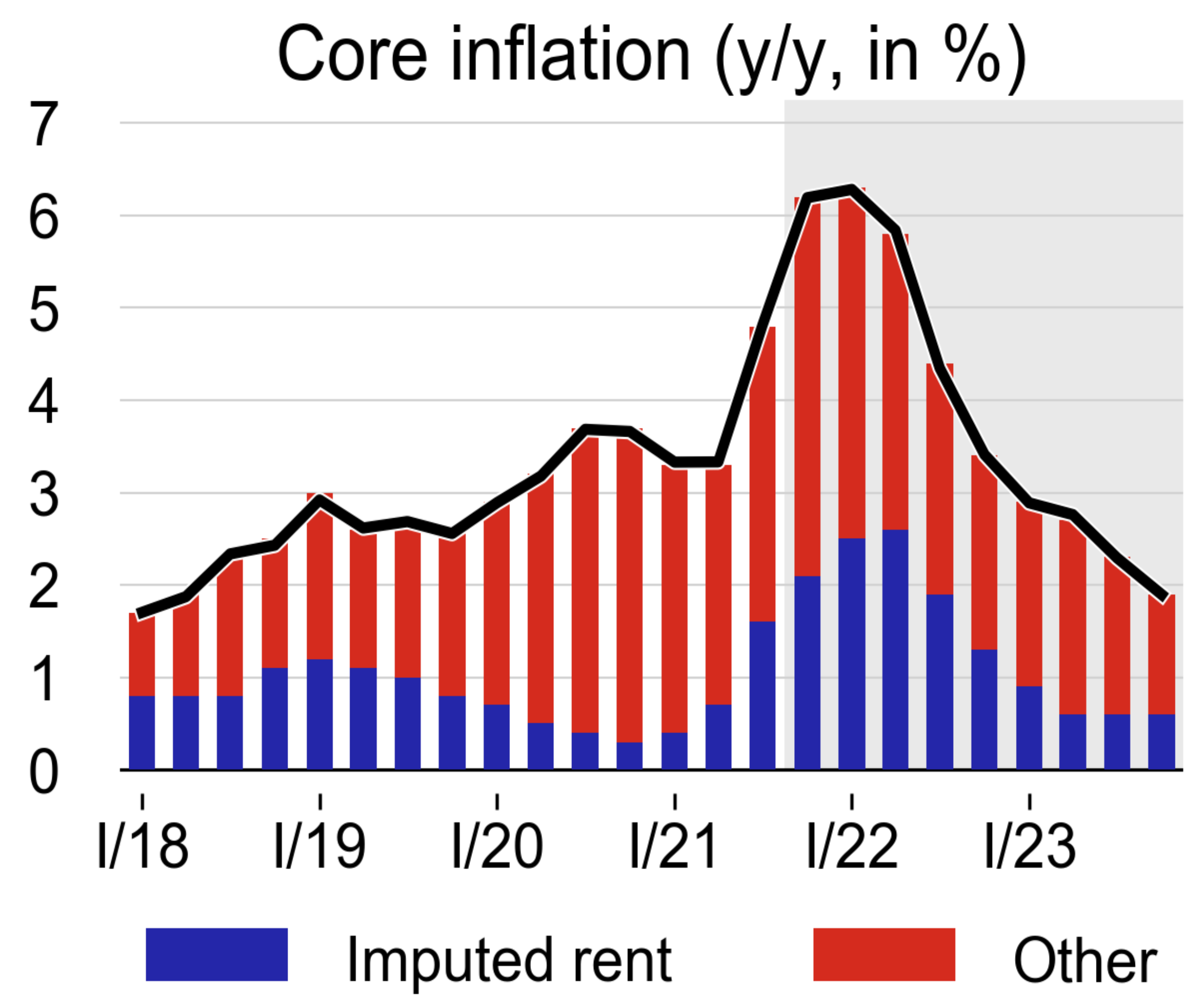


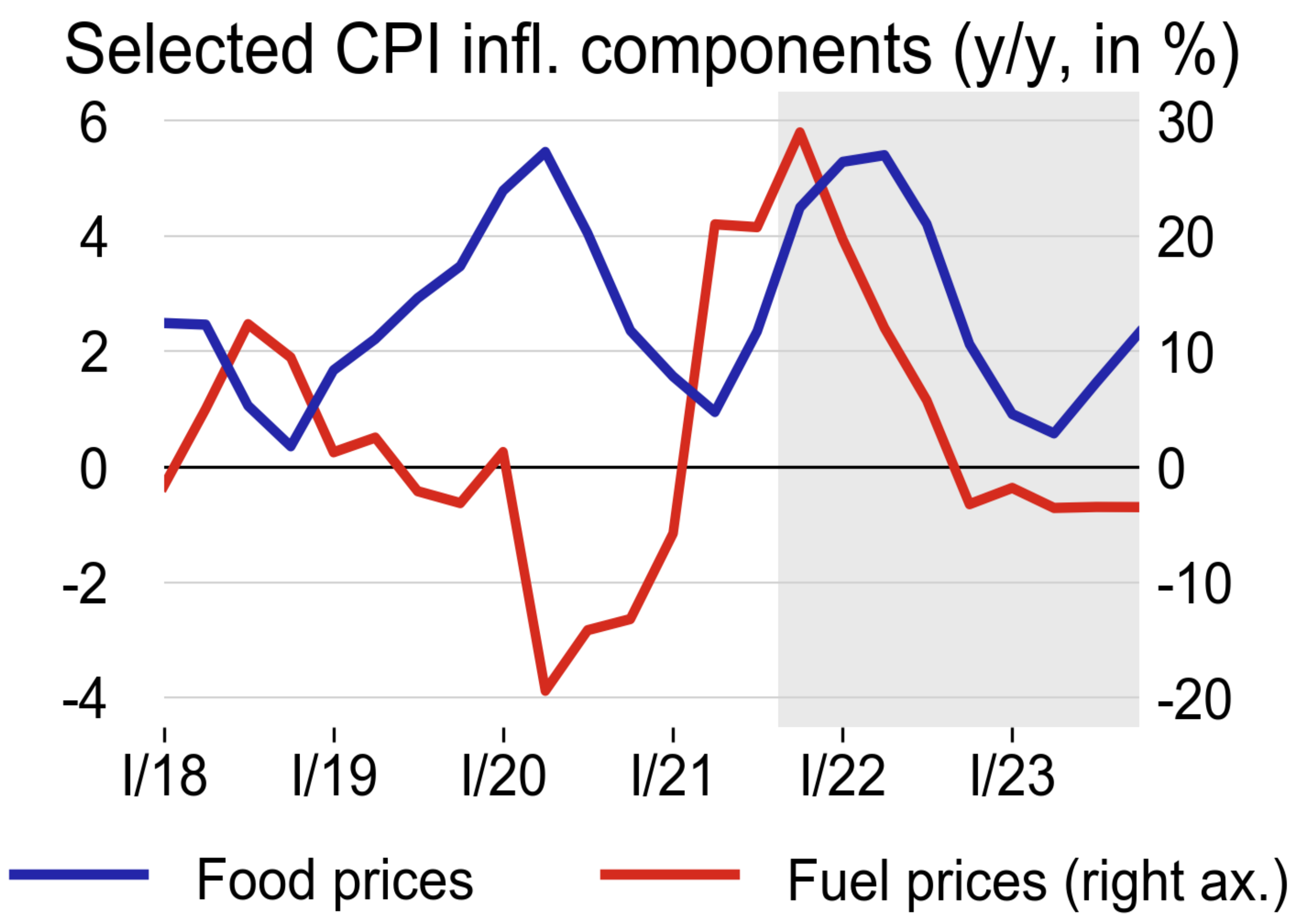


- **Headline inflation** will rise noticeably further at the turn of the year and stay high for most of next year.
- Besides further growth in core inflation, food and fuel price inflation will foster growth in headline inflation at the end of this year. Administered price inflation will rise sharply in early 2022 following a temporary drop in Q4. This will result in headline inflation rising to almost 7%.
- Inflation will gradually fall in the course of next year, aided by a prior significant tightening of both components of the monetary conditions.
- Inflation will decrease towards the 2% target over the monetary policy horizon. Headline inflation will be slightly above the **monetary policy-relevant inflation** over practically the entire horizon due to changes in excise duties.

Inflation



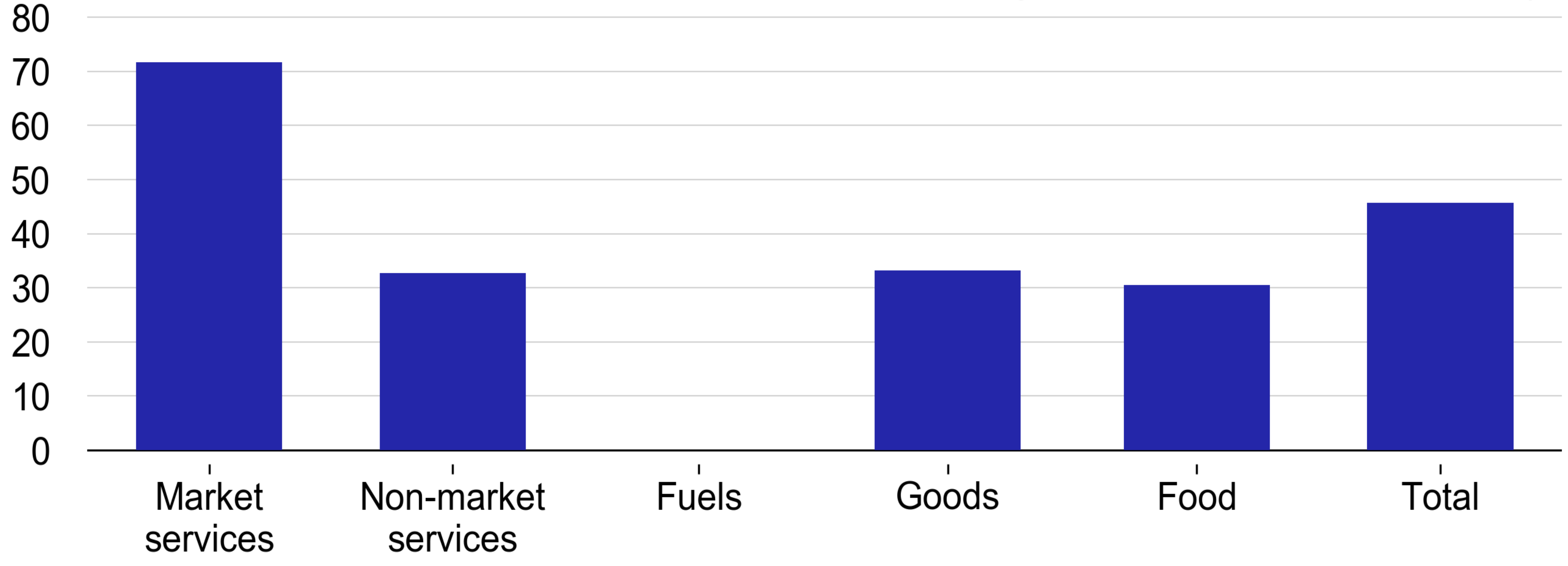




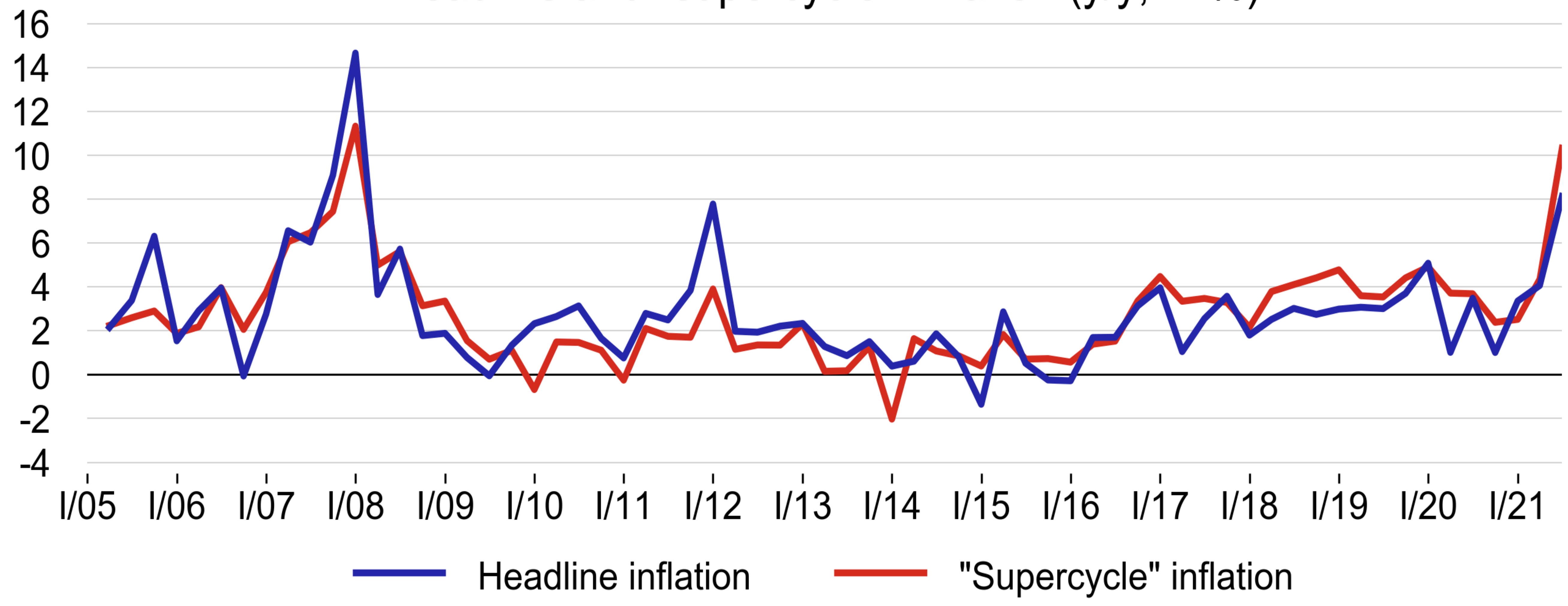
- **Inflation** will continue to be dominated by core inflation, but the contribution of food price inflation, and also administered price inflation from the start of next year, will be significant too.
- Rising growth in **imputed rent** is contributing significantly to the growth in **core inflation** in an environment of robust domestic demand. It reflects continued sharp growth in property prices and strengthening growth in construction work and input prices.
- Besides appreciable domestic demand pressures, growth in global agricultural commodity prices is contributing to rising **food prices**. The surging food price inflation will peak in the first half of next year.
- Next year, currently high **fuel price** inflation will slow due to a renewed steady decline in oil prices and a gradually strengthening koruna.

Domestic demand pressures

Estimated share of demand environment on quarterly CPI inflation in 2021 Q3 (in %)



Headline and "supercycle" inflation (y/y, in %)



- Besides the often discussed cost effects (mostly from abroad), a **strongly inflationary domestic environment** is contributing greatly to the current rapid growth in consumer prices.
- In the context of a significant easing of fiscal, monetary and macroprudential policy, the coronavirus pandemic cooled the labour market only to a limited extent.
- Consumers are currently willing to accept rising prices of goods and services, which allows firms to increase their profit margins and make up for their previous losses.
- The demand environment and labour market situation are affecting services price inflation most strongly.
- Demand-pull inflation is documented by **“supercycle” inflation**, which is currently higher than the usually followed headline inflation.

Cost Pressures

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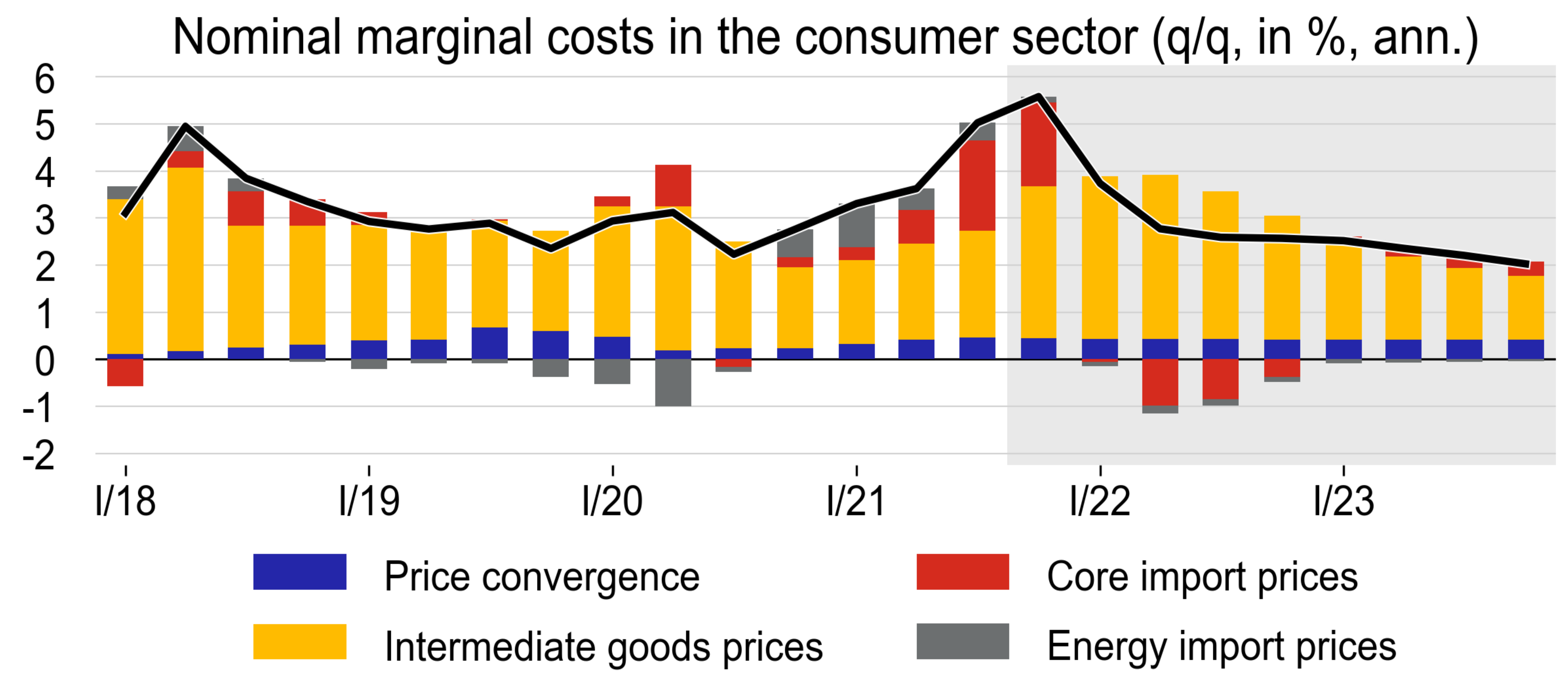
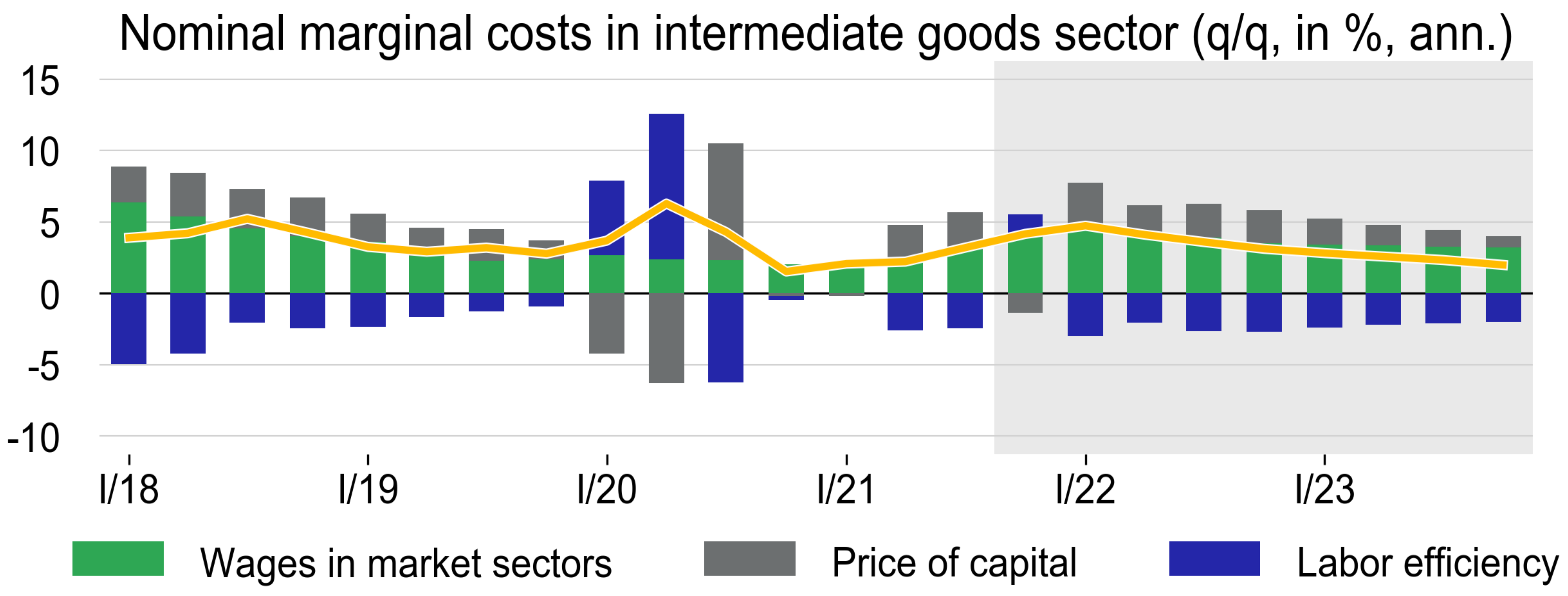
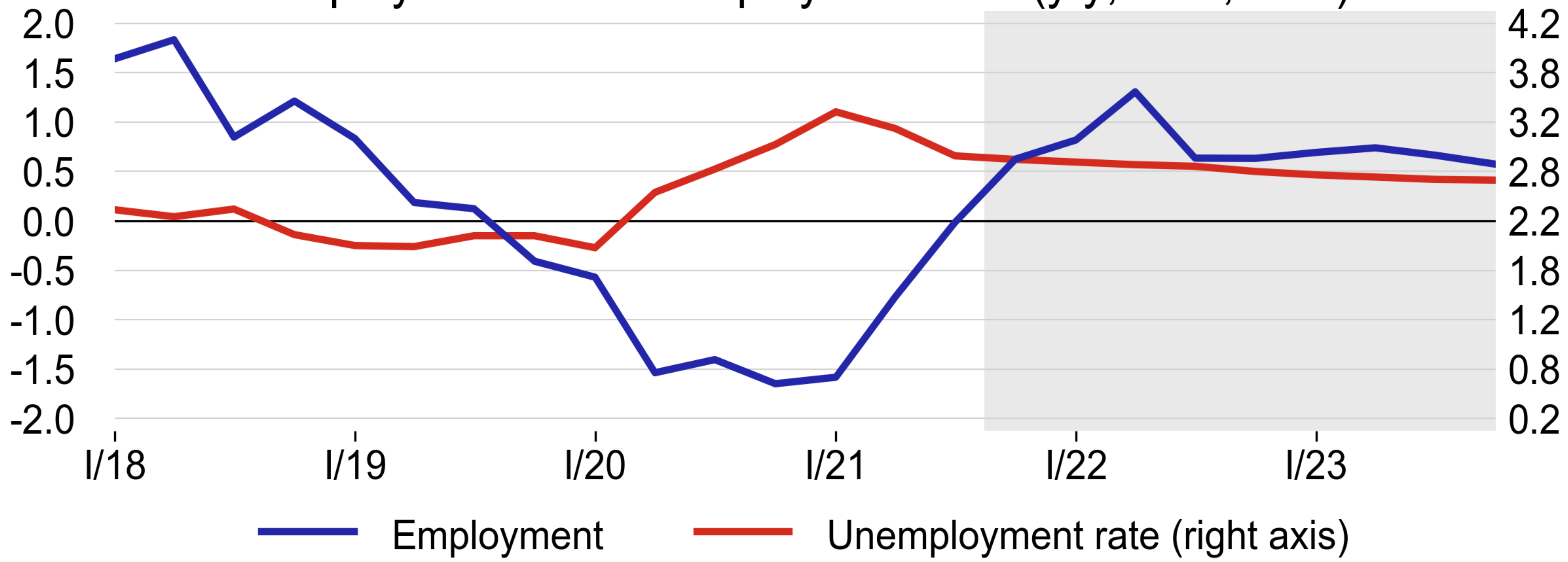




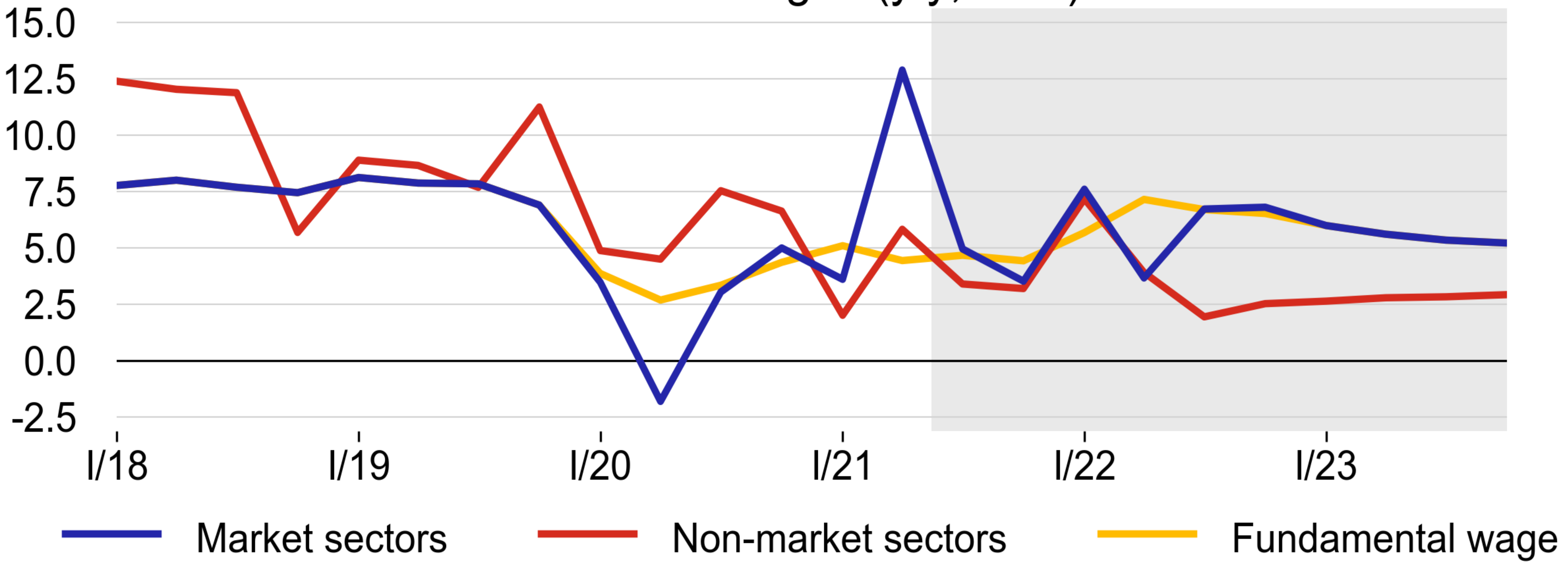
- The currently strong **overall cost pressures** will peak at the end of the year and then start to ease.
- The easing and subsequent fade-out of supply chain disruptions will be reflected in subdued quarter-on-quarter growth in **foreign core prices**. Together with a strengthening koruna and a slight drop in oil prices, this will cause **import prices** to turn anti-inflationary in the course of next year.
- **Domestic cost pressures** will strengthen further in the quarters ahead, owing mainly to rising fundamental wage growth, supported by a further marked increase in the **minimum wage** at the start of 2022.
- A fade-out of the difficulties in industry will result in a renewed positive contribution of the **price of capital** at the start of 2022 and the **labour efficiency growth** will also resume.

Labour Market

Employment and unemployment rate (y/y, in %, s. a.)

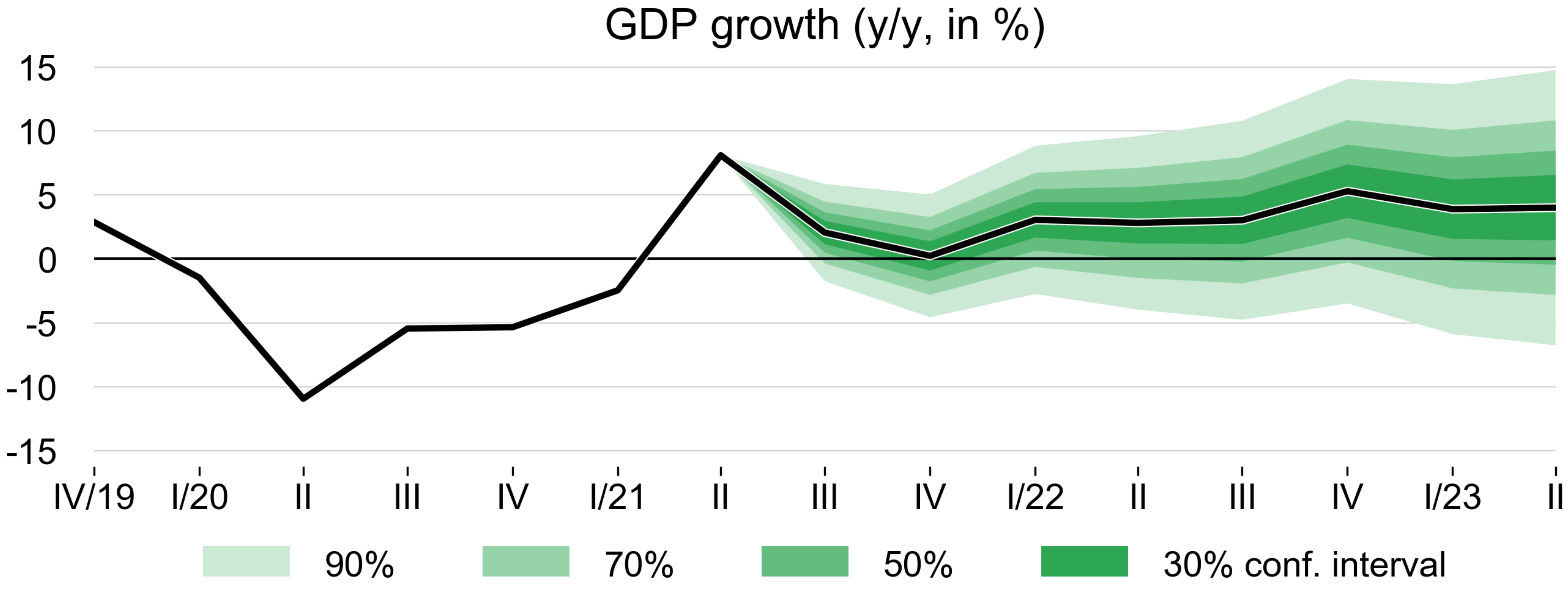


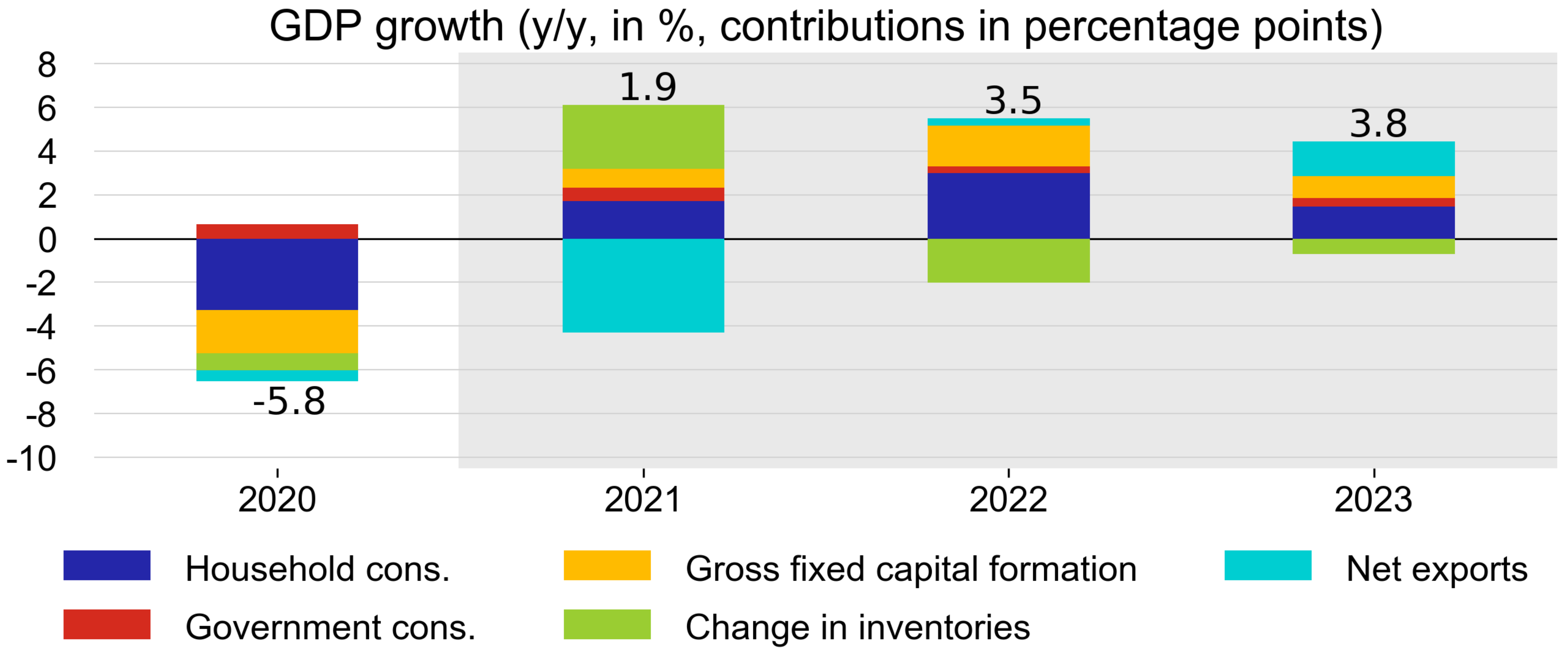
Nominal wages (y/y, in %)



- The decline in **employment** will subside at the end of the year, while the jobless total will keep falling slightly. Further decline in the **general unemployment rate** until mid-2022 will only be slight, mainly due to a downturn in industry.
- **Fundamental market wage growth** will rise in early 2022 as demand for labour gradually recovers further. It will be also supported by a further increase in the minimum wage and the partial pass-through of the escalating inflation to growth of labour costs.
- **Wages in non-market sectors** will grow at a slower pace in the years ahead than they did before the pandemic.
- Overall, the **tightness in the labour market** will increase again after the previous partial cooling.

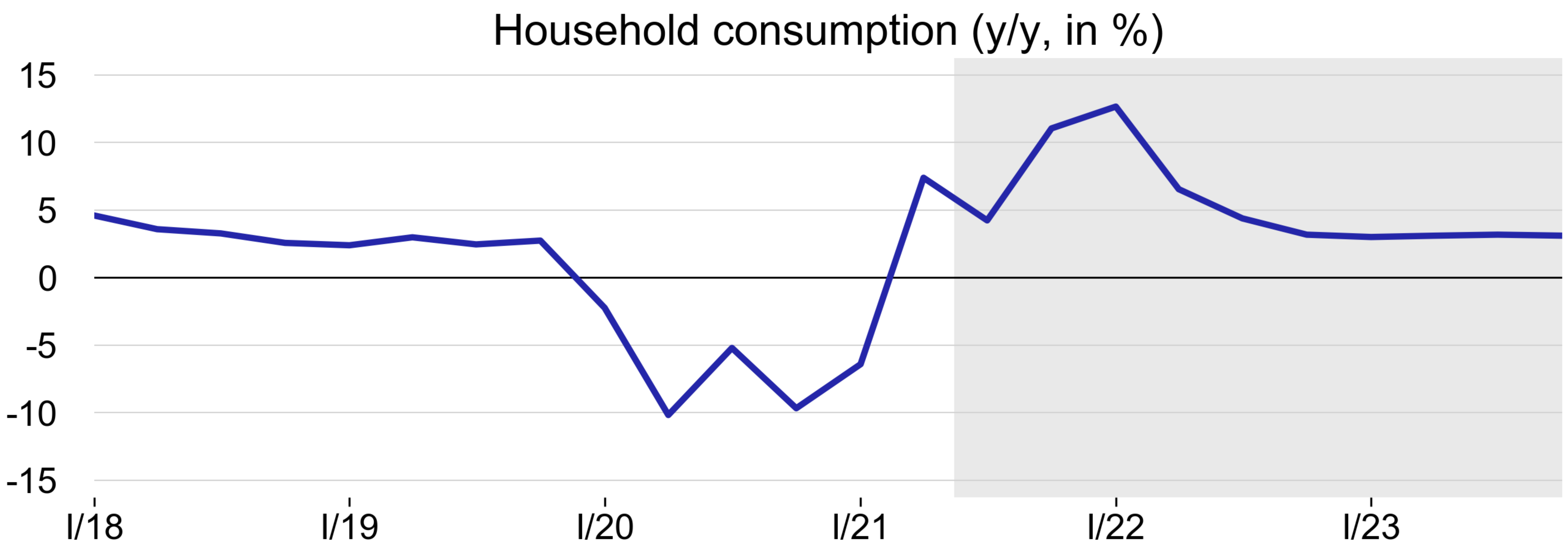
GDP Growth Forecast

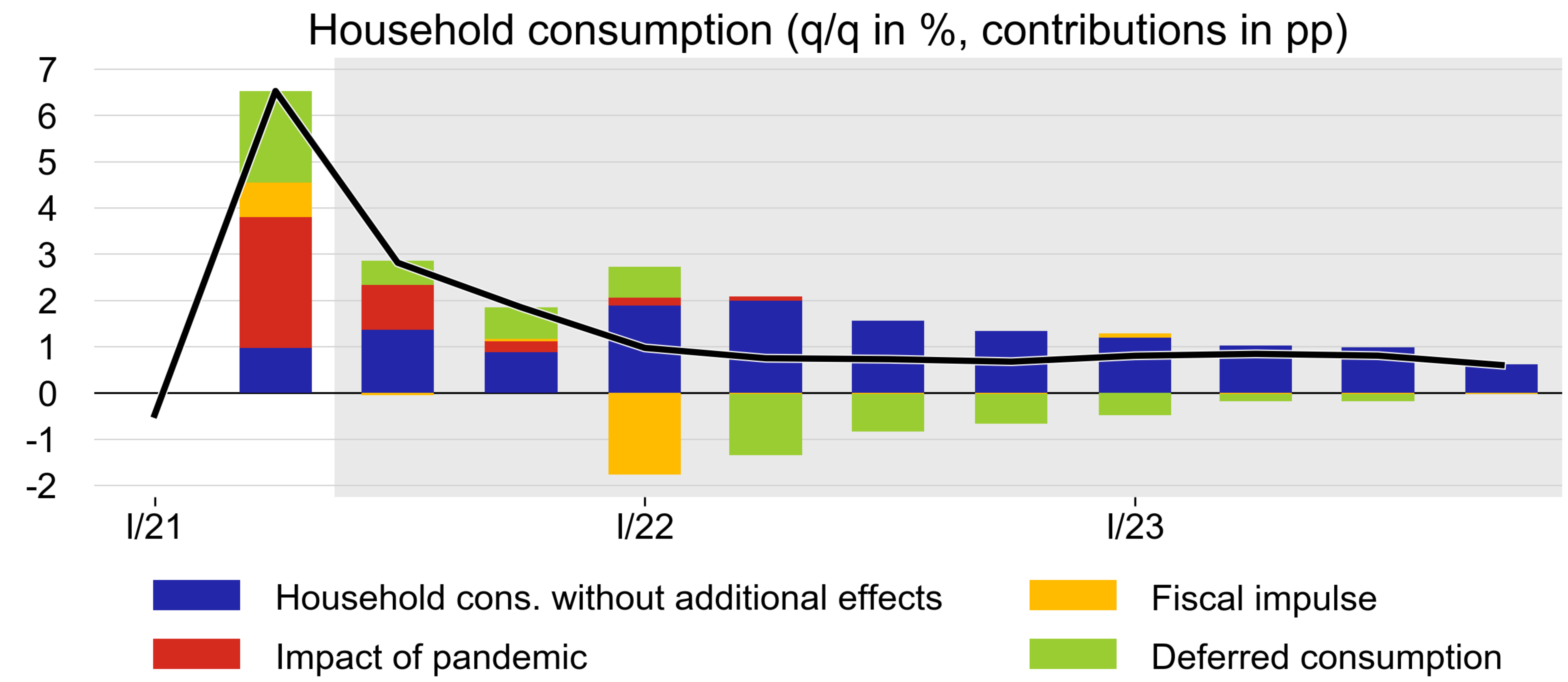




- The **economic recovery** will be hindered by persisting problems in global production and supply chains until the middle of next year, while the anti-epidemic measures will have no major economic impacts.
- Economic growth will remain visibly volatile and will be mainly driven by growth in **household consumption and investment**.
- GDP growth will be **close to 2% in 2021**. It will accelerate to **3.5% next year** and stay at a similar level in 2023.
- The economy is starting to exceed its **potential**, which it will return to from above in 2023.

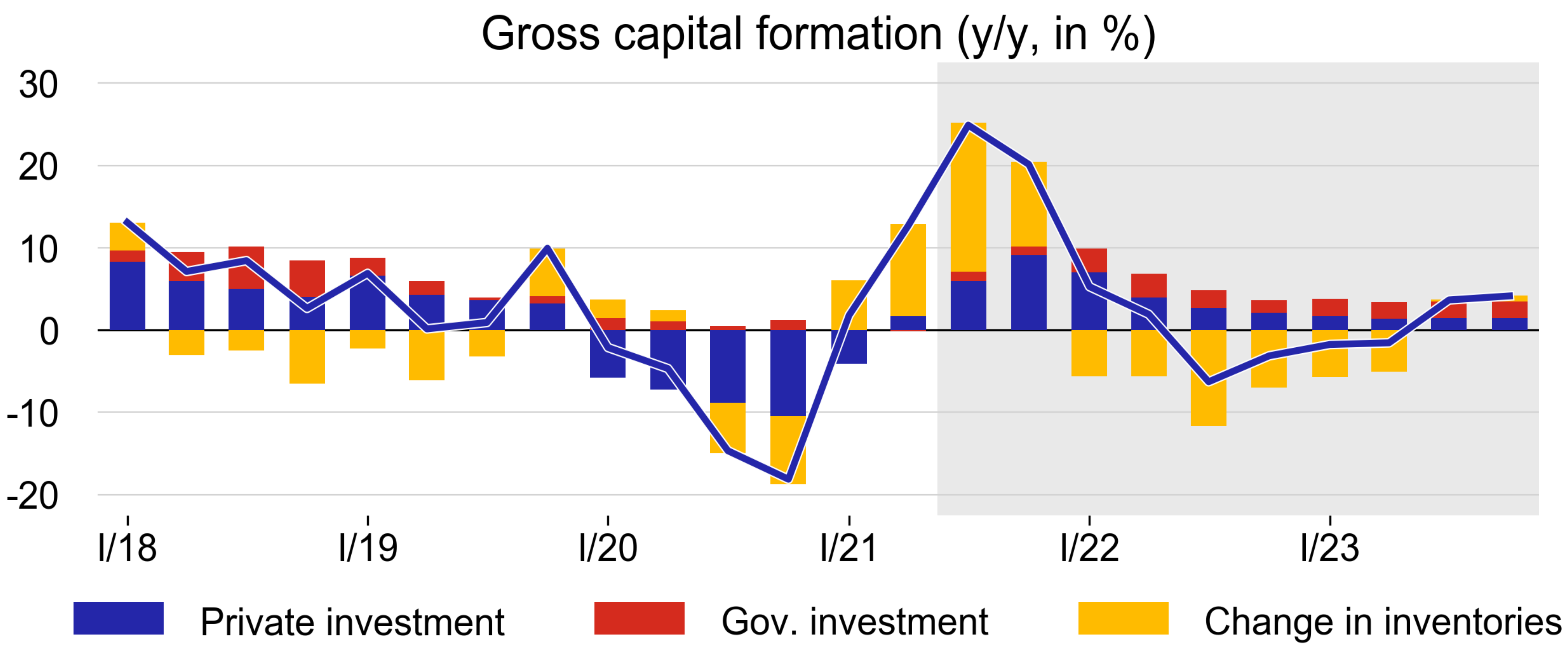
Household Consumption

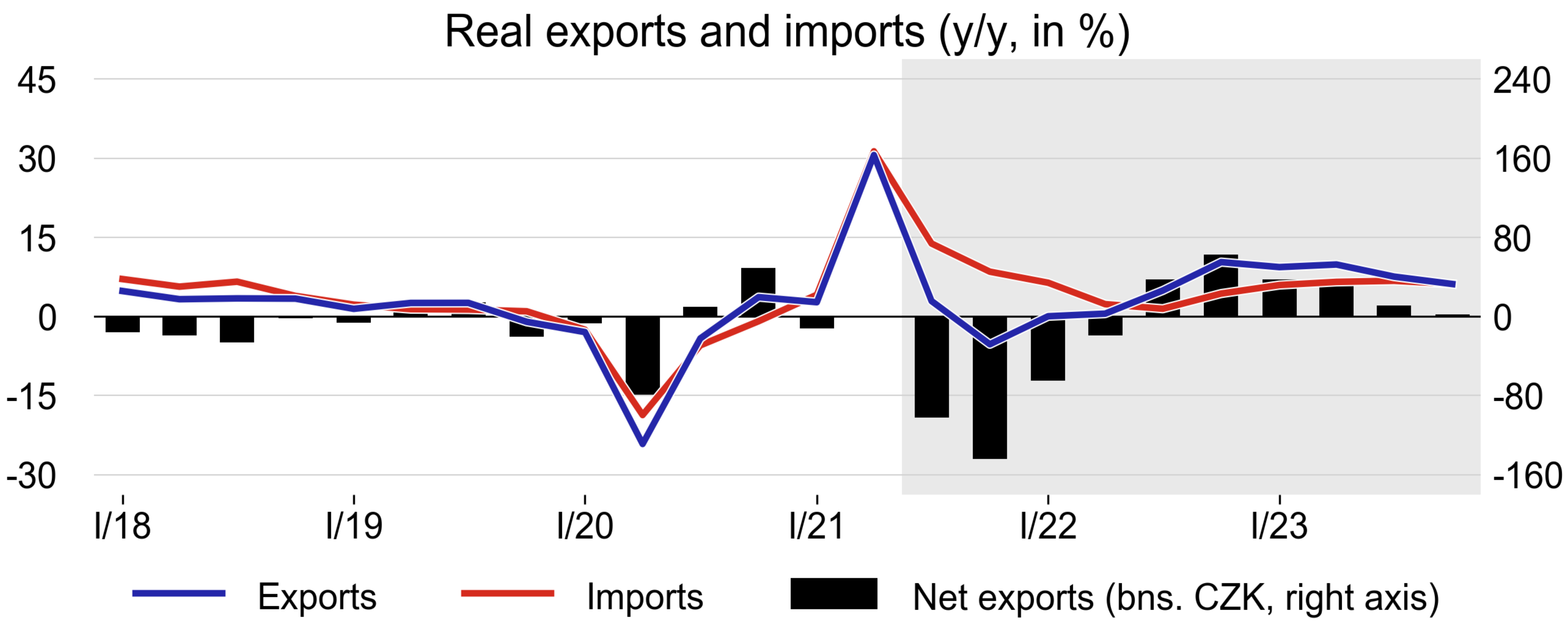




- **Household consumption** will rise rapidly. Its growth will be driven mainly by a renewed improvement in the labour market situation and spending of part of the forced savings created in the past on **deferred consumption**.
- Consumer sentiment and demand will be adversely affected by the termination of numerous fiscal support measures and persisting problems in supply chains. These will be reflected in shortages of some goods and increased uncertainty about the possible impacts of this situation on the labour market.
- Consumer sentiment and demand will also be negatively affected by high growth in energy prices.

Gross Capital Formation





- **Overall investment activity** will remain solid due to recovering external demand and increasing labour market tightness, despite persisting issues in production and supply chains.
- Growth in total investment will be volatile due mainly to **inventories**. Additions to inventories will remain high until mid-2022. The subsequent fading of supply disruptions will allow firms to complete and release inventories in progress.
- **Private investment** activity will be spurred as firms will try to substitute relatively expensive and scarce labour with capital.
- **Government investment** will also increase.
- Industrial shutdowns, component shortages and growth in inventories due to unfinished production will be reflected in falling **exports**. Due to a recovery in domestic demand, **imports** will continue to grow and **net exports** will be negative until mid-2022.

Exchange Rate CZK/EUR

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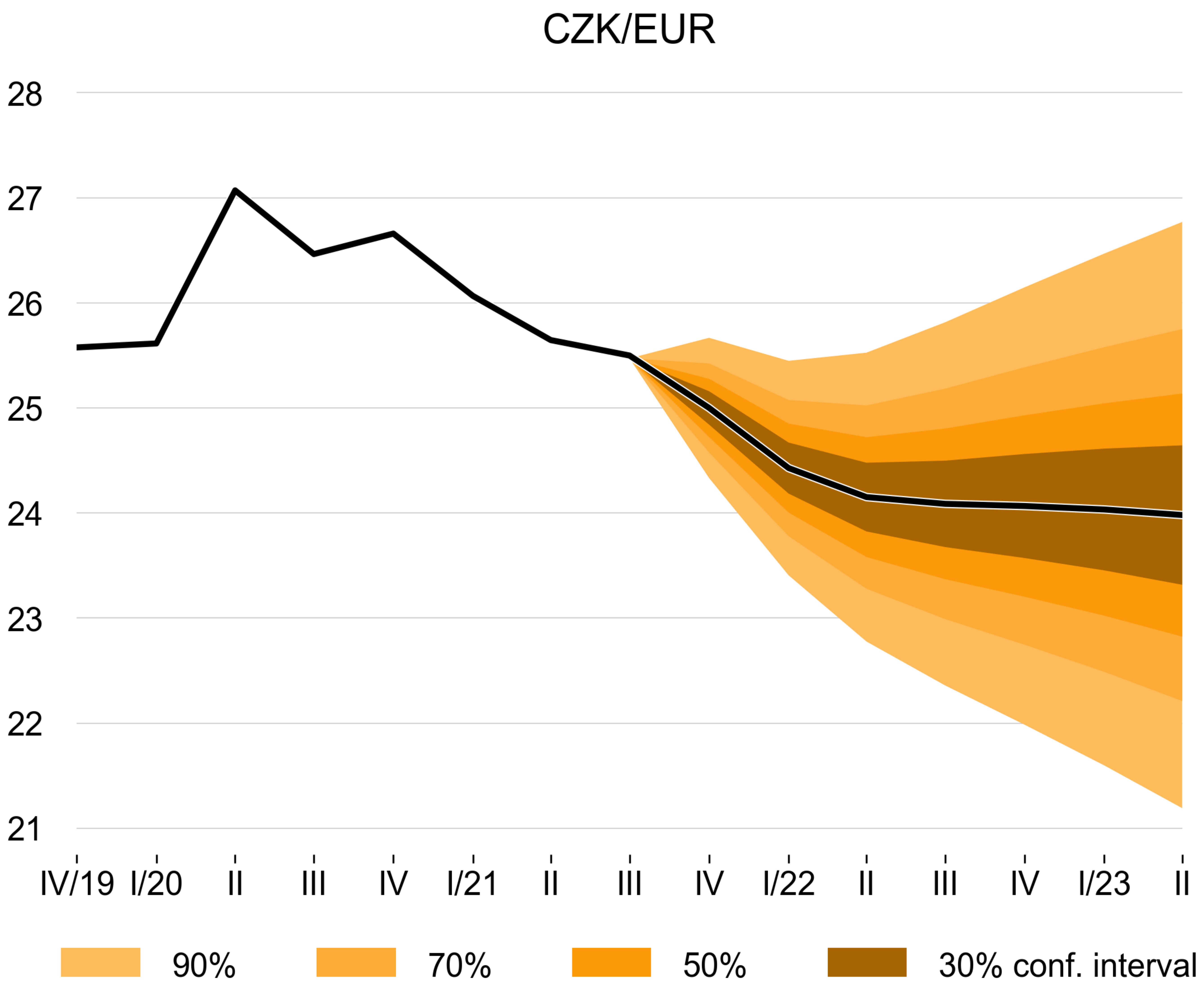

- We expect the **koruna** to strengthen to **CZK 25** to the euro on average in Q4.
- This will mainly reflect a rapidly widening positive interest rate differential vis-à-vis the euro area.
- The koruna will continue to firm next year, due among other factors to renewed export growth, which will reflect the fade-out of the previous problems in domestic industry.
- A gradual tightening of ECB monetary policy will have a modest opposite effect.
- The pace of appreciation will thus ease a little next year, and the koruna will be close to CZK 24 to the euro at the end of 2023.

Interest Rate Path (3M PRIBOR)

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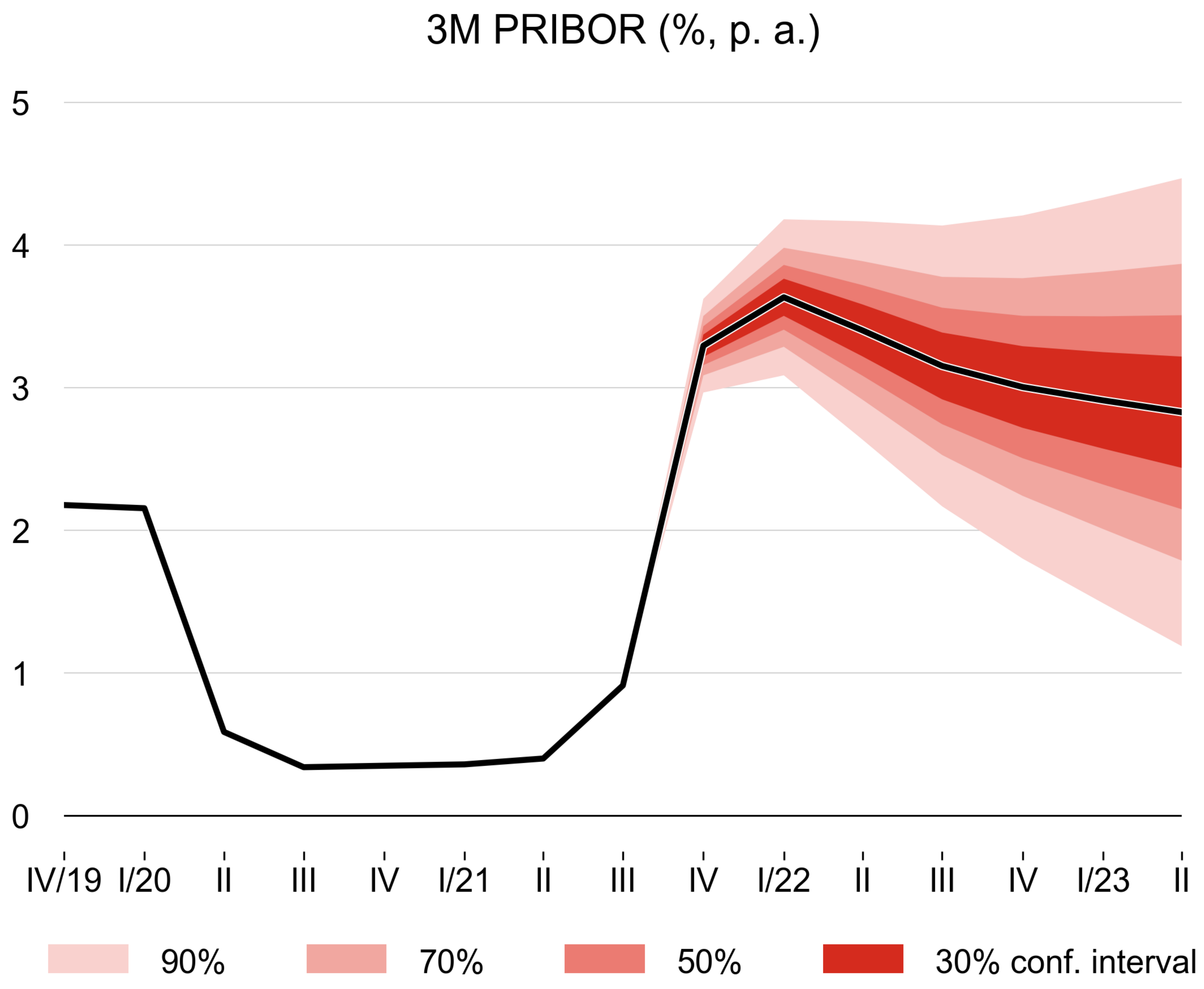
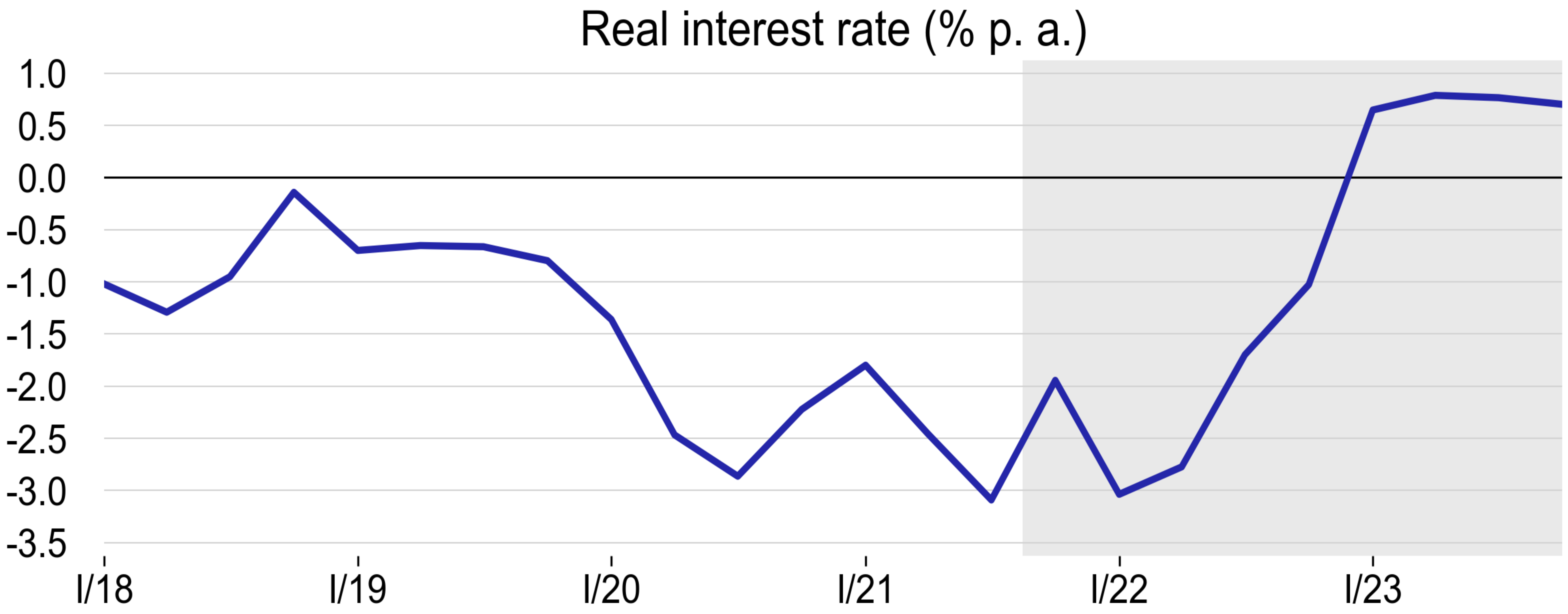
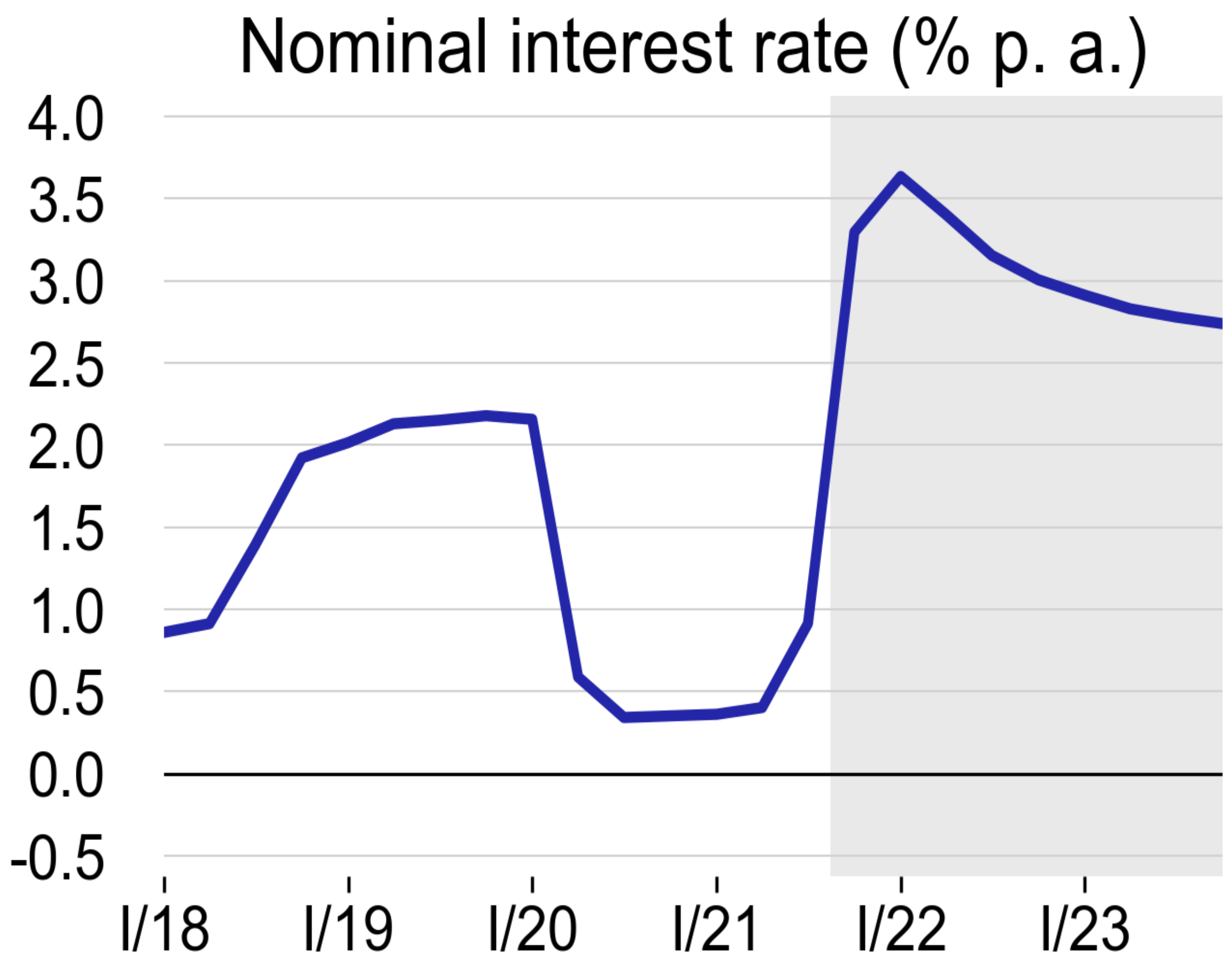
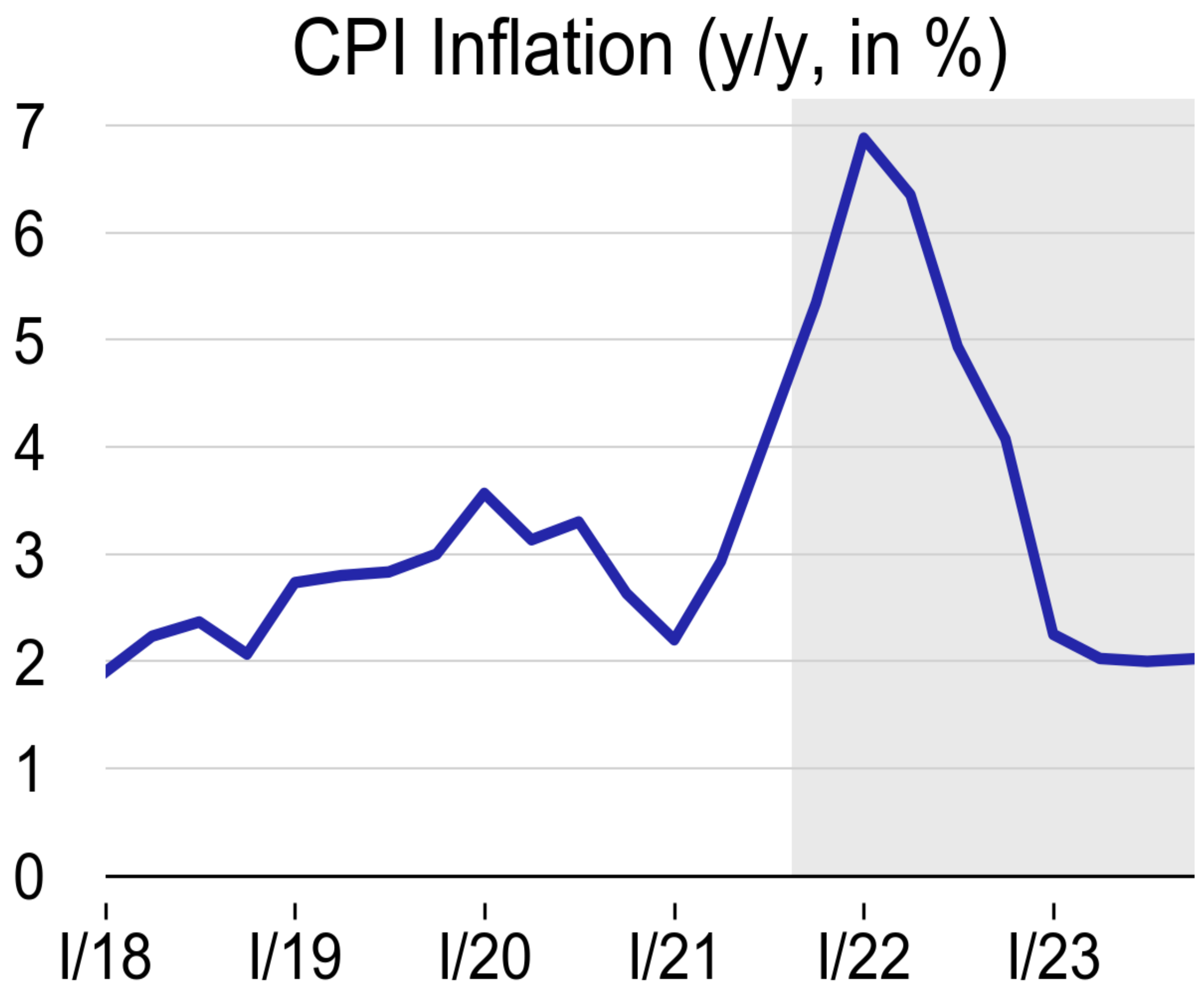


- Consistent with the forecast is a sharp rise in **market interest rates** at the end of this year and at the start of 2022.
- The sharp rise in interest rates is a reaction to the combination of strong domestic and foreign inflation pressures.
- The initial sharp rise in domestic interest rates will limit the impact of the current inflation pressures on inflation in the longer term, **ensuring the return of inflation towards the target** at the monetary policy horizon, i.e. in late 2022 and early 2023.
- The monetary policy response will also help **anchor inflation expectations**.
- During 2022, interest rates will start to decline gradually to their monetary policy neutral level of 3%, as inflation will start returning towards the target thanks to the previous monetary policy tightening.

Real Interest Rate







- The **ex-post real interest rate** will remain negative until the end of next year.
- This will be due to a fact that the growth in consumer prices will accelerate significantly in coming quarters, and thus, not even an increase in nominal interest rate consistent with the forecast will lead to a notable pick-up in real interest rate until the second half of next year.
- After the elevated price growth abates, the real interest rate will be positive in 2023, however, it will still remain below its long-term average.

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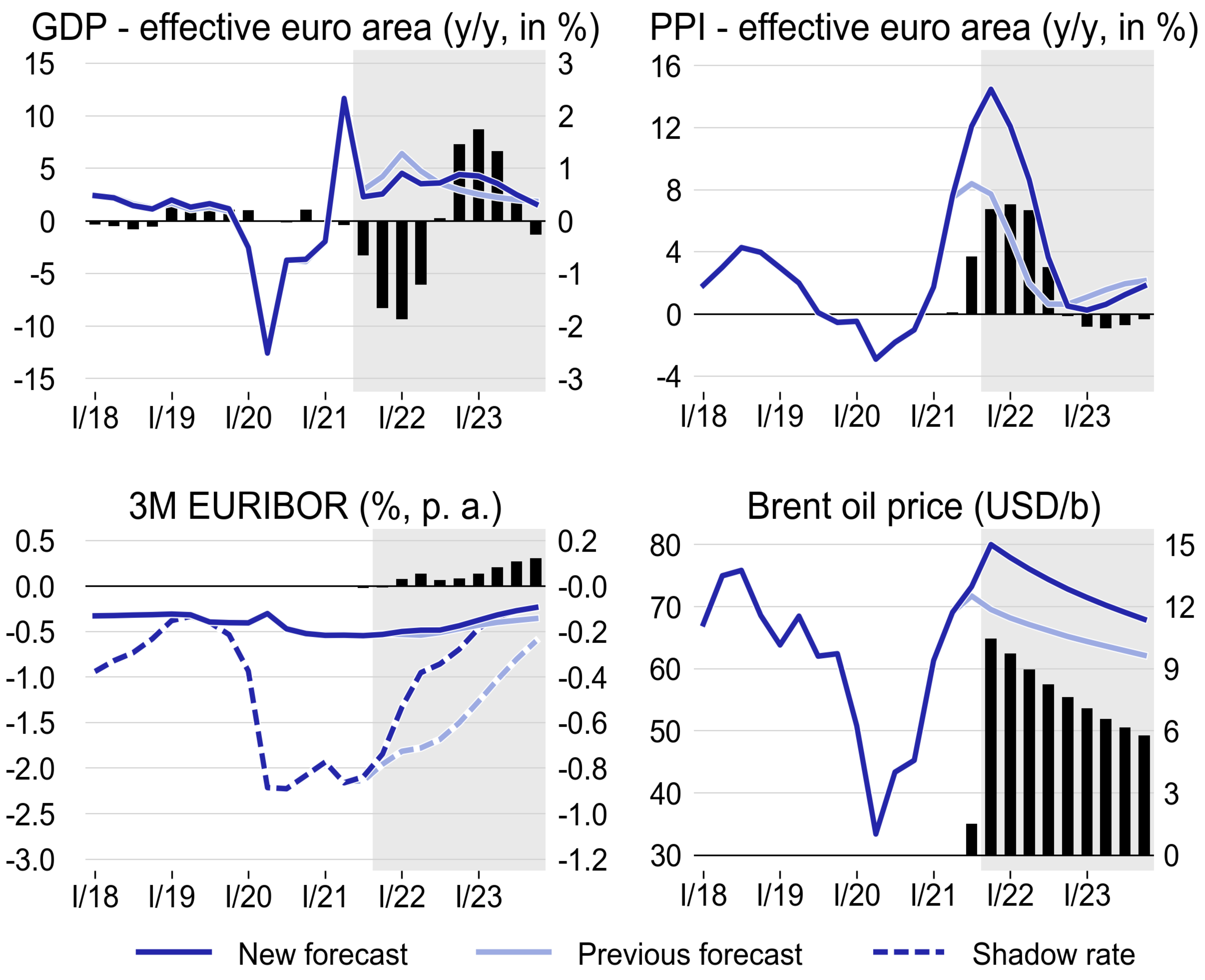
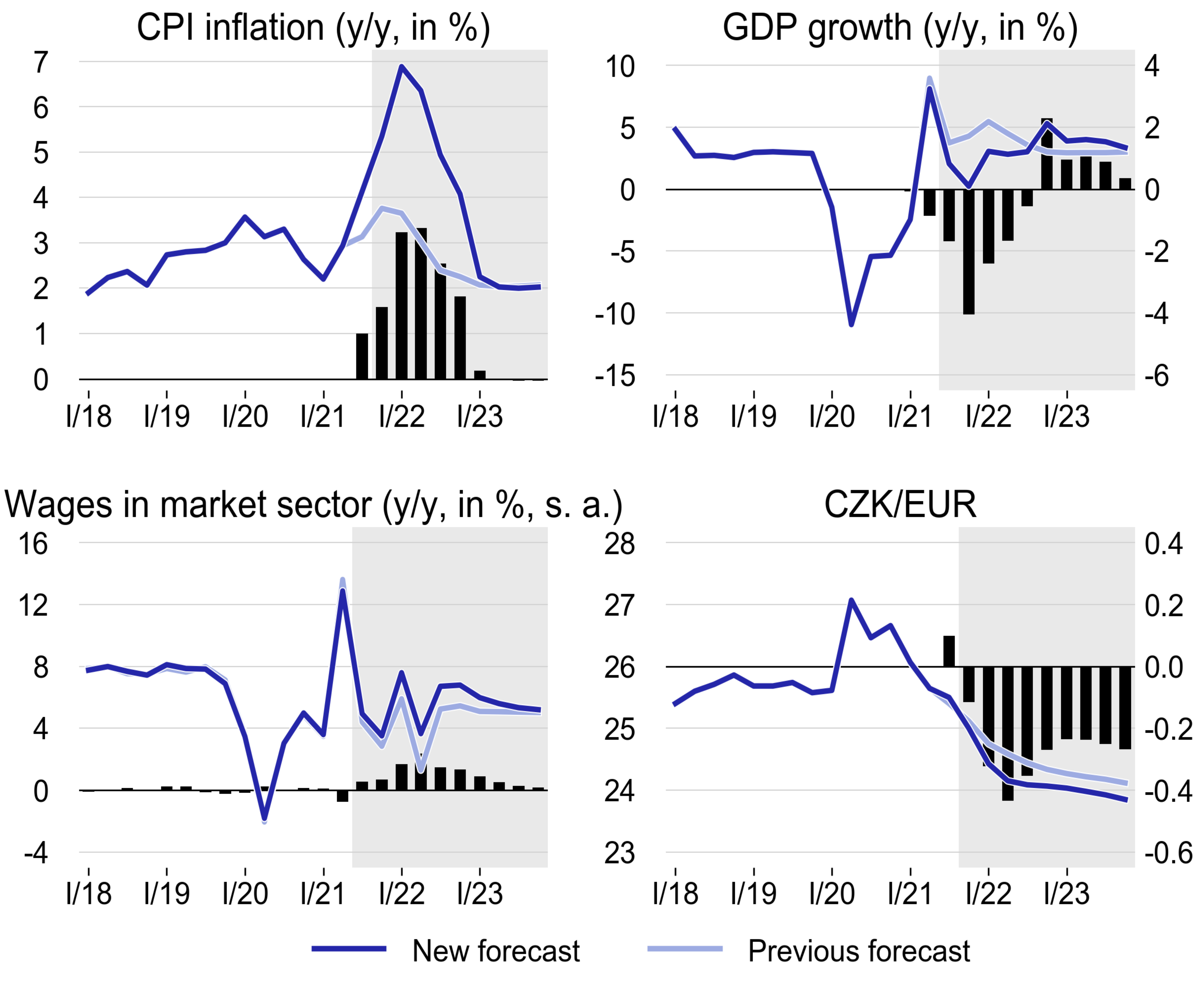
Comparison with Previous Forecast – Foreign Outlook



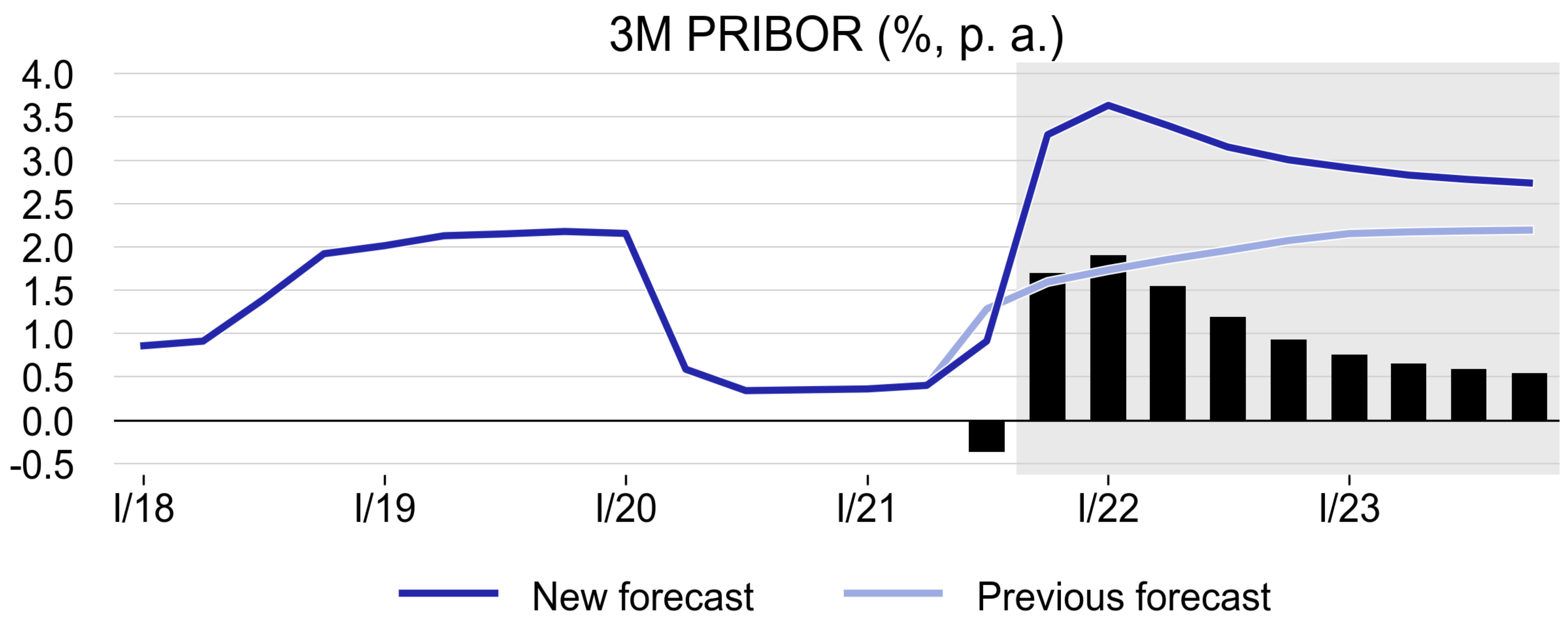
- Greater overloading of global supply chains and bigger shortfalls in industrial supplies are reflected in lower **foreign GDP growth** in 2021 and 2022.
- Persisting problems in supply chains amid solid demand, coupled with growth in energy commodity prices, are reflected in sizeable upward revision of the **producer price** outlook.
- The **Brent crude oil price** outlook has shifted distinctly higher due to reduced oil production, faster growth in demand for oil and high prices of alternative fuels.
- The slightly higher **3M EURIBOR** outlook for 2023 reflects higher market expectations regarding future inflation. The **shadow rate** is higher due to faster expected tapering of ECB's asset purchases.

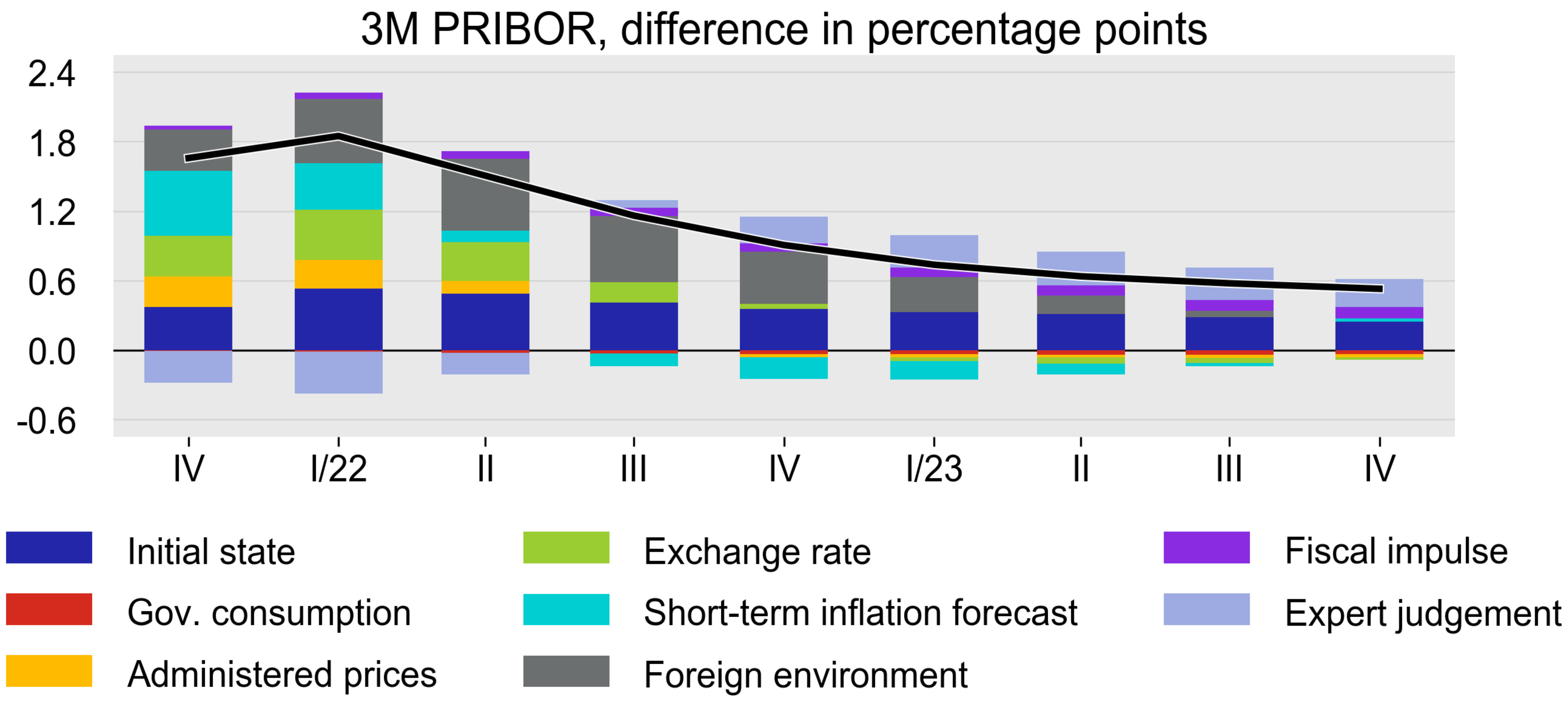
Comparison with Previous Forecast – Domestic Economy



- The upward shift of the **inflation** forecast is due to much faster growth in inflation abroad and stronger domestic demand, which have moved the core inflation outlook upwards considerably. The growth in fuel, food and administered prices are also revised upwards.
- The **GDP** forecast for 2021 and 2022 has been revised downwards due to longer and more severe supply chain disruptions.
- **Nominal wage growth** will increase next year due to a higher inflation outlook and greater labour market tightness. It will be also pushed higher by an expected bigger rise in the minimum wage.
- The firmer **koruna** mainly reflects a more rapidly widening positive interest rate differential vis-à-vis the euro area.

Comparison: Interest Rate Forecast

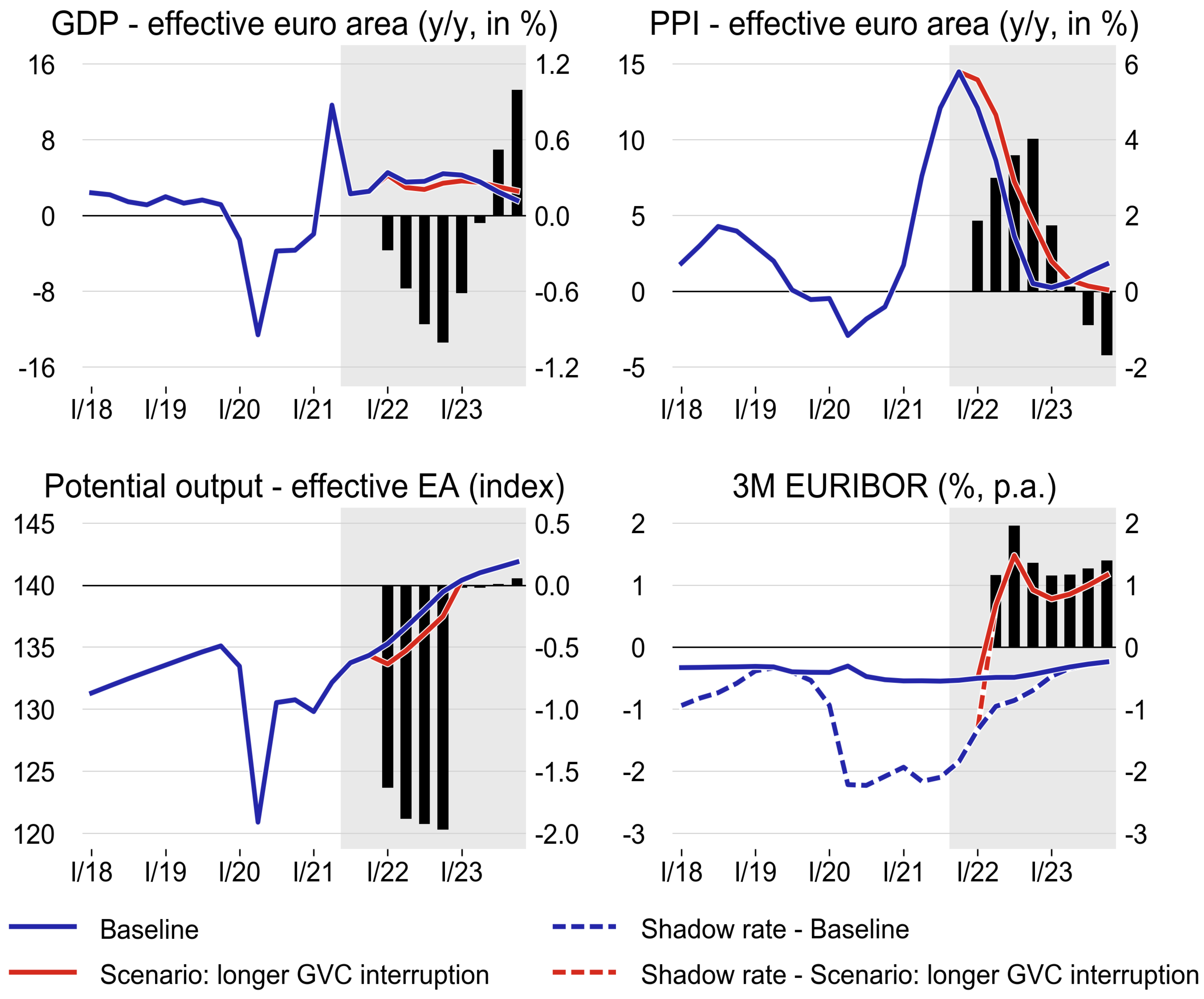




- The **interest rate path** has shifted markedly higher.
- The **initial state**, whose effect stems mainly from faster inflation this summer both at home and abroad, fosters higher rates.
- The **foreign outlook** – primarily reflecting much higher producer price inflation in the coming quarters and rather less accommodative ECB monetary policy – has the same effect.
- The higher rates are also due to the **short-term inflation** and **koruna exchange rate forecasts** and to brisker growth in **administered prices** than in the previous forecast.
- **Expert adjustments** reflect initially greater and longer-lasting problems in domestic industry and then a faster restart. Greater labour market tightness has an inflationary effect.

Presentation outline

Scenario: Longer lasting GVC disruption – Assumptions



- The scenario assumes stronger **global cost-push inflation pressures** – stemming from sharply rising prices and limited supply of production inputs from the start of 2022.
- Additional barriers to international trade and division of labour, caused by disruptions to supply chains, will lead to a drop in factor productivity and a temporary decline in the **economic potential**.
- A temporary drop in production and a decline in foreign trade will result in a downswing in **economic activity** in 2022.
- The scenario assumes a sharper increase in both **producer and consumer prices** in the euro area, including the price of oil, compared to the baseline scenario.
- Starting in 2022 Q2, the **ECB** will respond to the strong inflation pressures by first ending its asset purchase programmes and then raising interest rates.

Scenario: Longer lasting GVC disruption – Domestic Econ.

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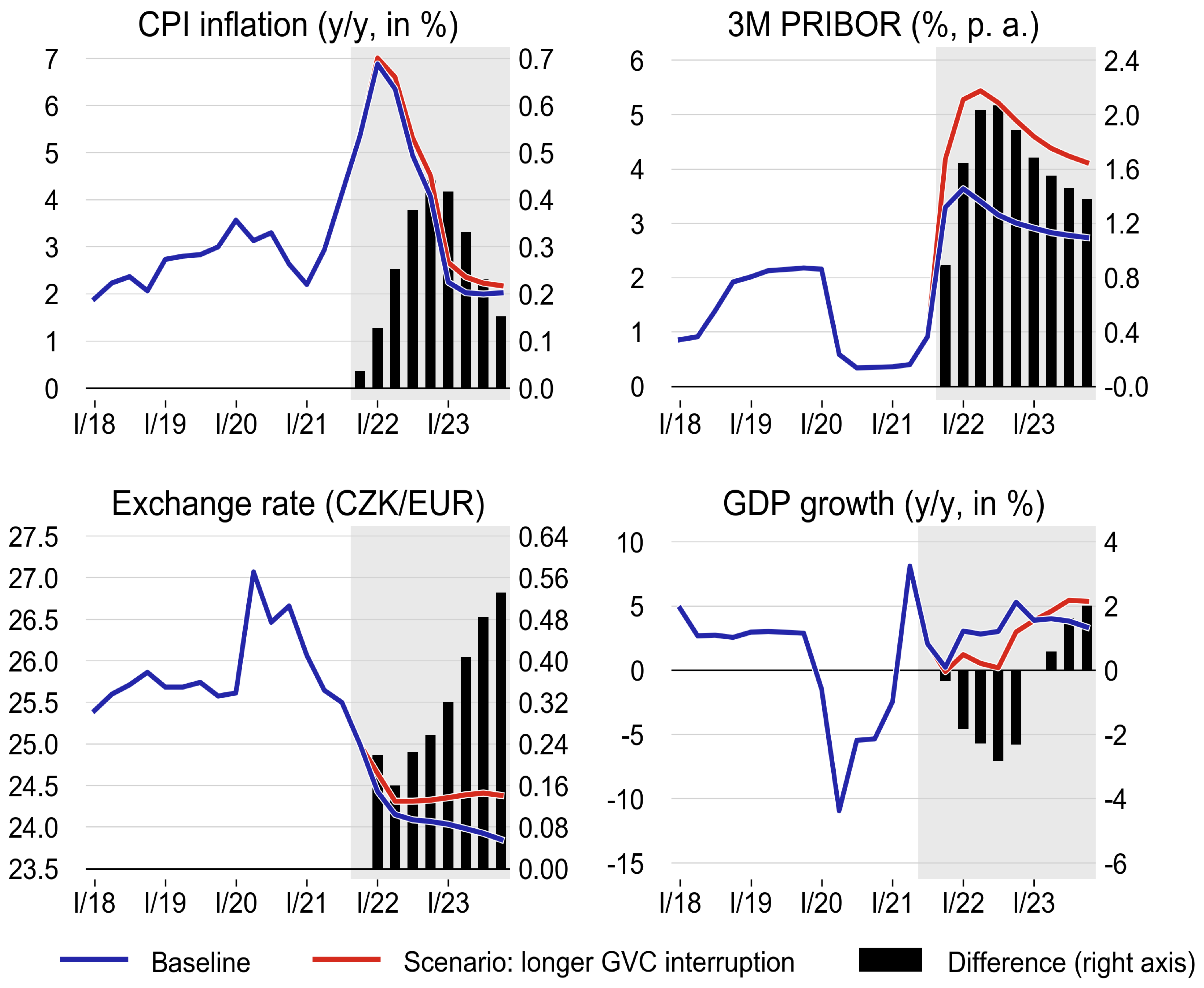
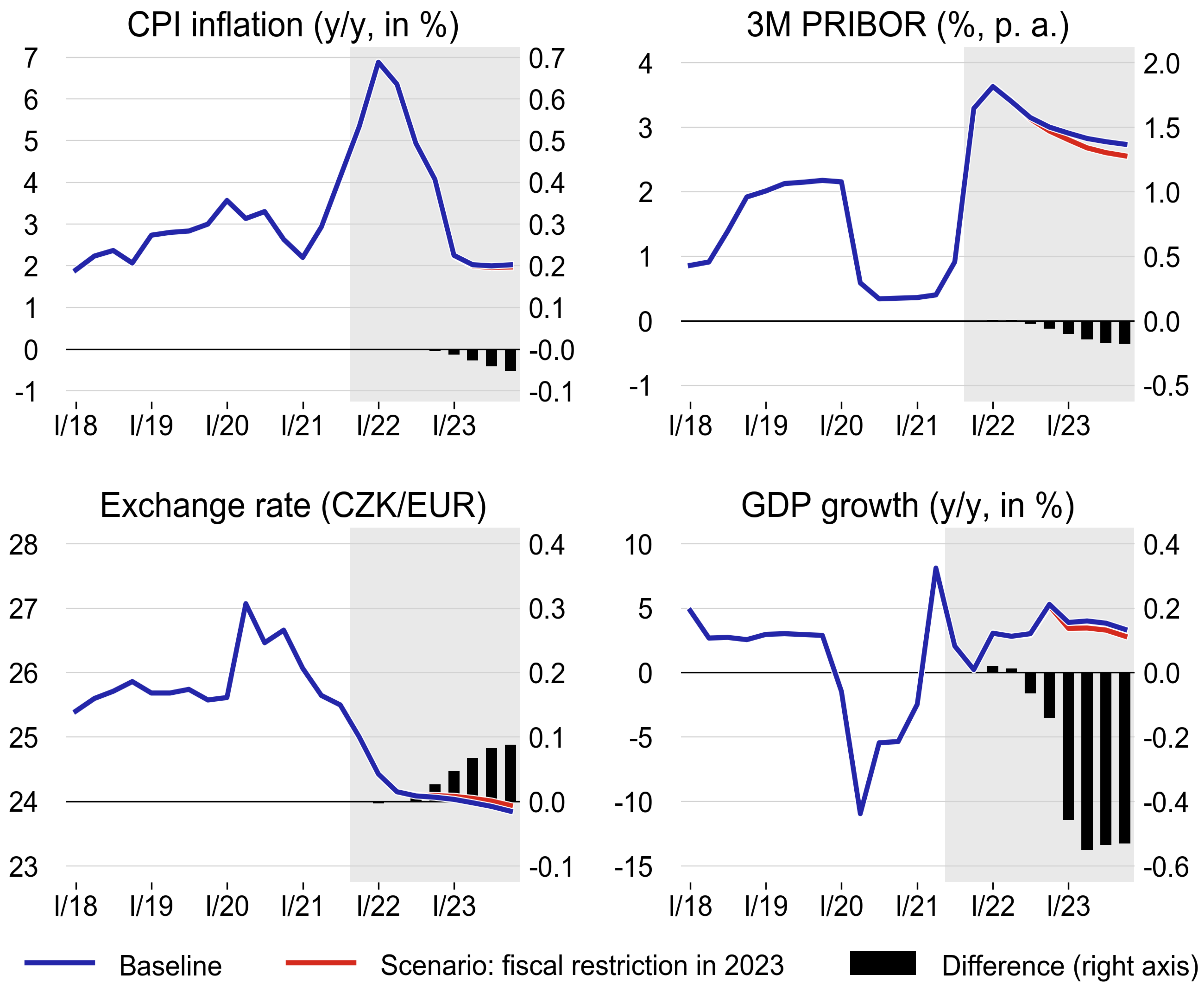


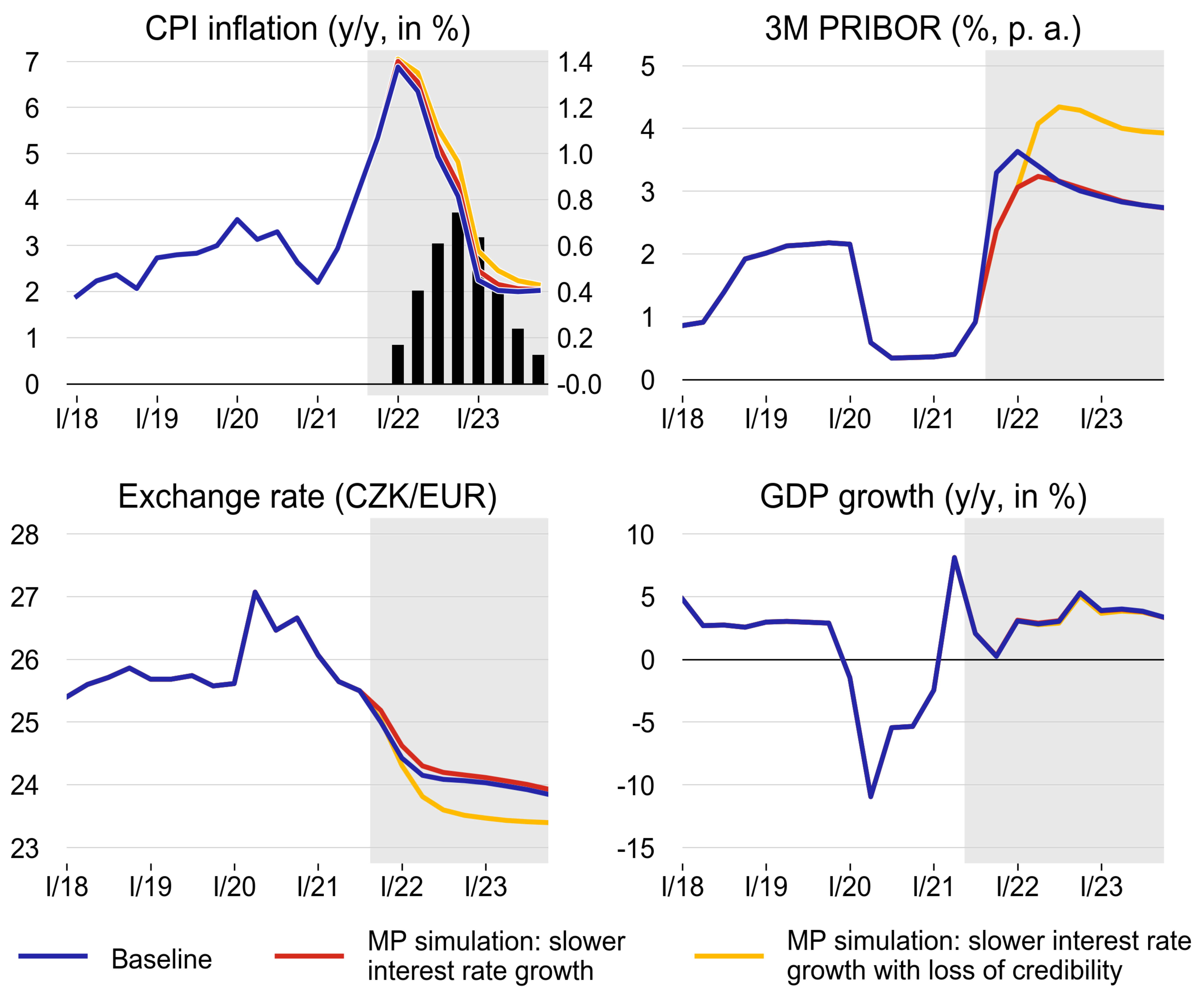
- The **domestic economy will grow** more slowly than in the baseline scenario. Moreover, exports will be hit harder than the decline in foreign economic activity would imply, as the share of industry is higher in the domestic economy than in our main trading partners.
- The overall **inflation pressures** in the domestic economy will be slightly higher, pushed upwards mainly by core foreign prices.
- In addition, lower foreign demand for Czech exports and more subdued domestic industrial production foster a **weaker koruna** than in the baseline scenario.
- The higher inflation pressures, less accommodative foreign monetary policy and weaker koruna against the euro together lead to a need for a **higher increase in domestic market interest rates** than in the forecast.

Scenario: Fiscal restriction in 2023



- Unlike the baseline scenario of the forecast, the fiscal scenario assumes a **public finance consolidation of 1% of GDP in 2023**. A hypothetical combination of measures on both the general government expenditure and revenue sides was considered.
- The scenario also assumes that the fiscal restriction will be partly expected by households.
- The generally **weaker domestic demand** due to fiscal consolidation results in lower GDP growth than in the baseline scenario.
- The lower domestic demand is reflected in **more muted inflation pressures**.
- The central bank responds to these developments with **easier monetary policy** than in the baseline scenario of the forecast, which is reflected in a rather **weaker** exchange rate of the **koruna**.

MP Simulations: Slower Interest Rate Growth



- The central bank raises interest rates by **0.50 pp at the November and December 2021 meetings and by 0.25 pp in February 2022** in both MP simulations. Subsequent development is endogenous.
- With **inflation expectations staying anchored**, **inflation** will be **only slightly higher** than in the baseline scenario.
- However, in the opposite case, when the inflation expectations in the economy gradually **diverge from the CNB's target and reach 3%** next year, the **inflation** will **overshoot the target more significantly**.
- Despite a subsequent **sharp correction** of the initial muted monetary policy response, which is expected by the markets from the start and fosters **stronger koruna**, **inflation remains elevated** and is not brought under control until the end of 2023, when the 2% target regains credibility.

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Thank you for your attention

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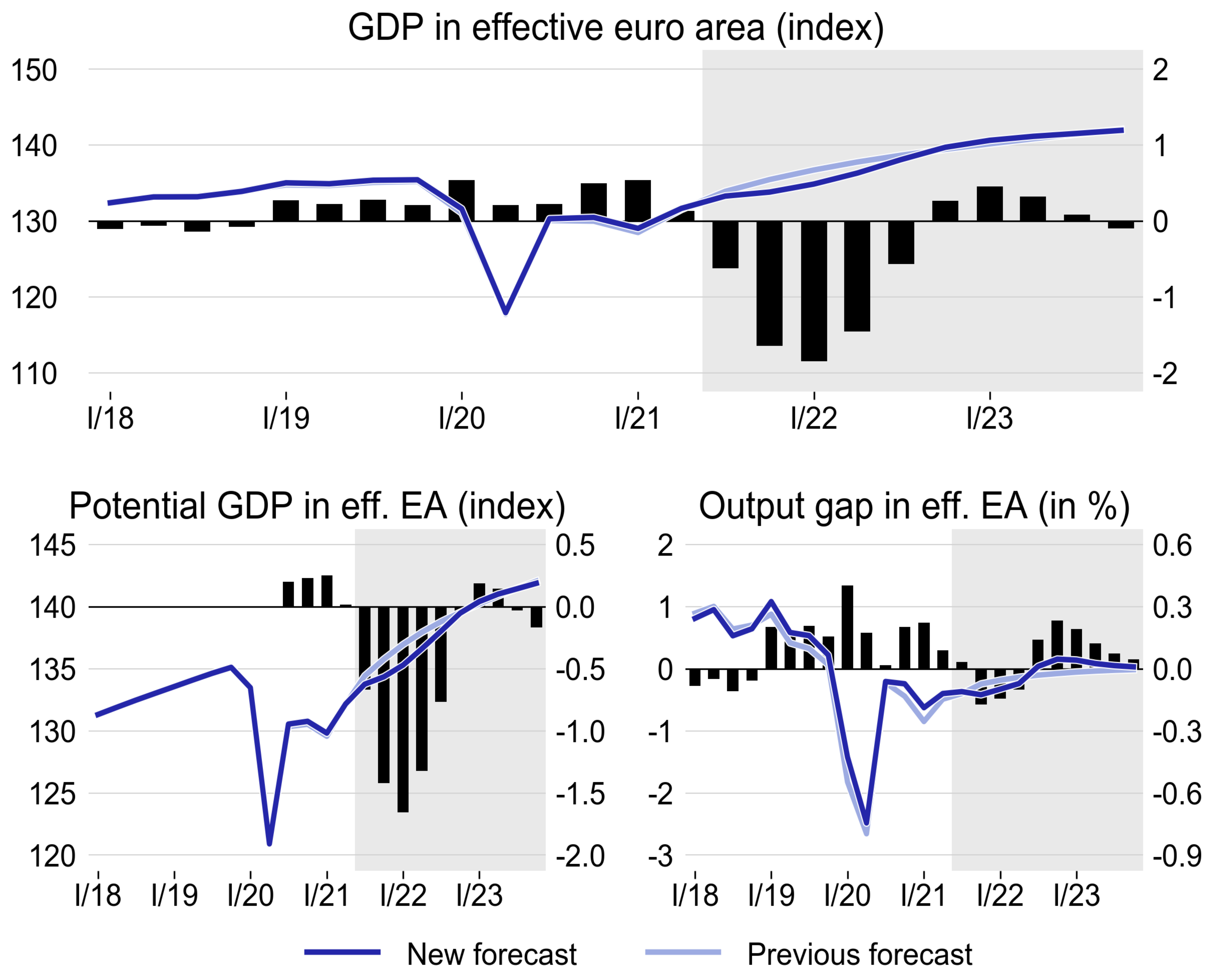
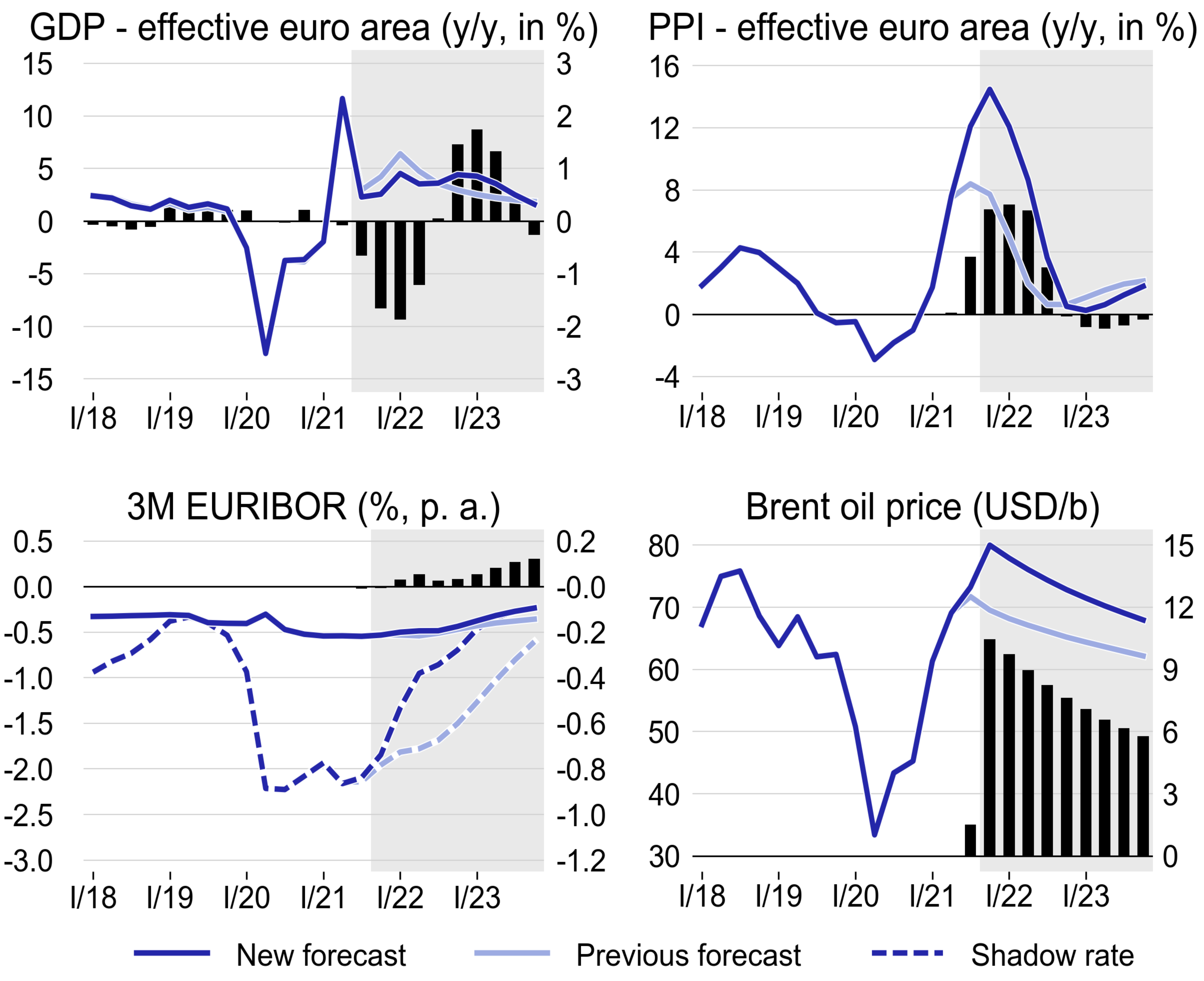
Backup

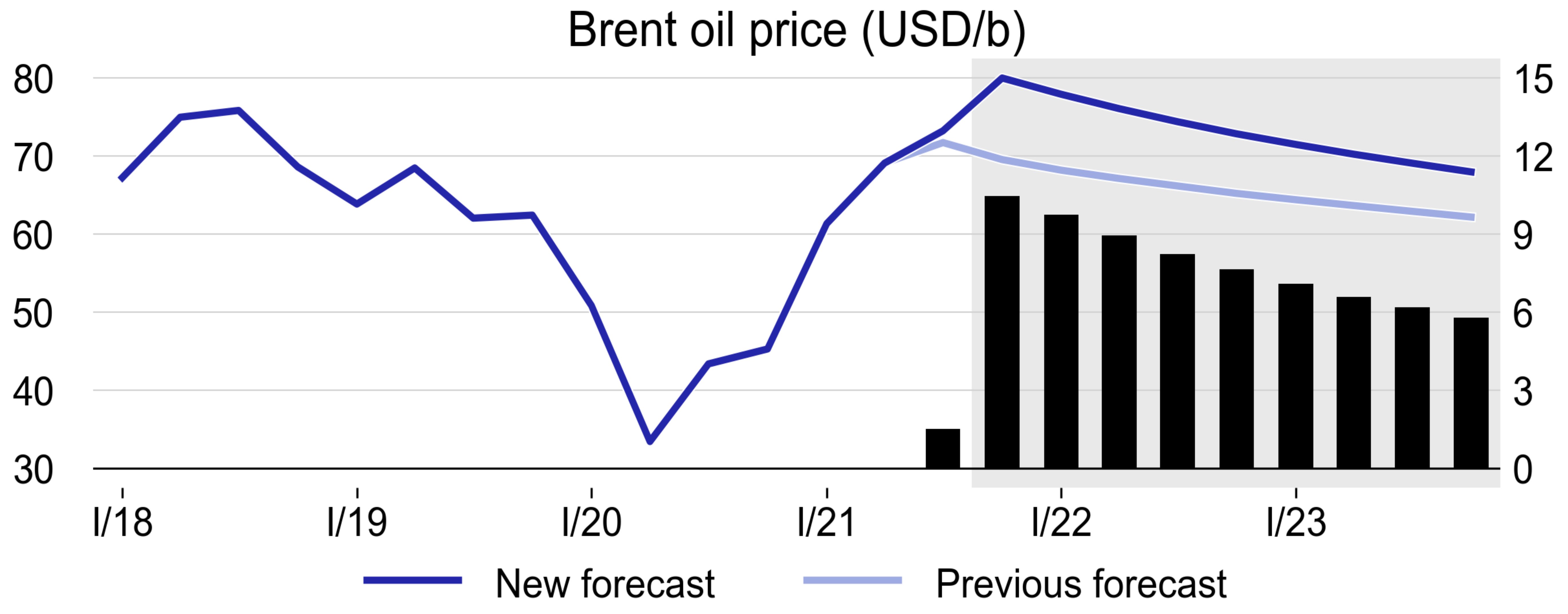
GDP in Effective Euro Area: Comparison

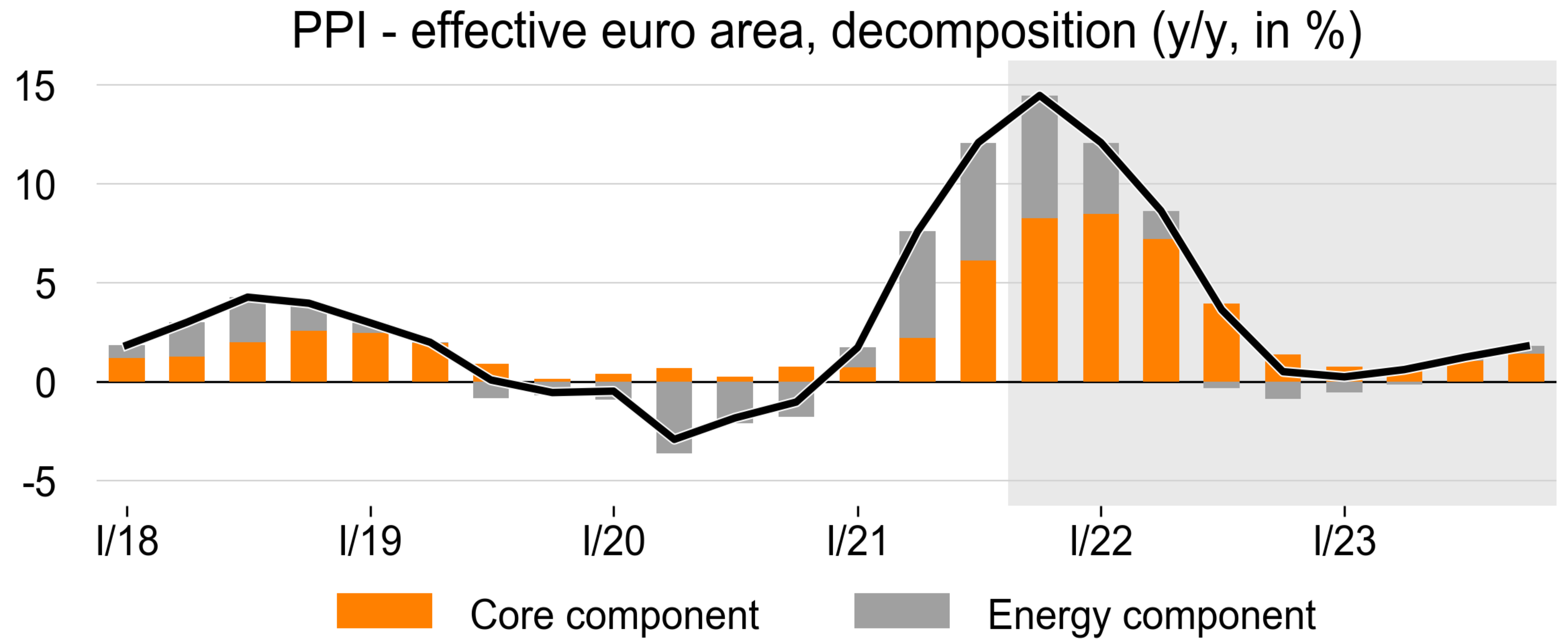


Foreign Outlook: Comparison

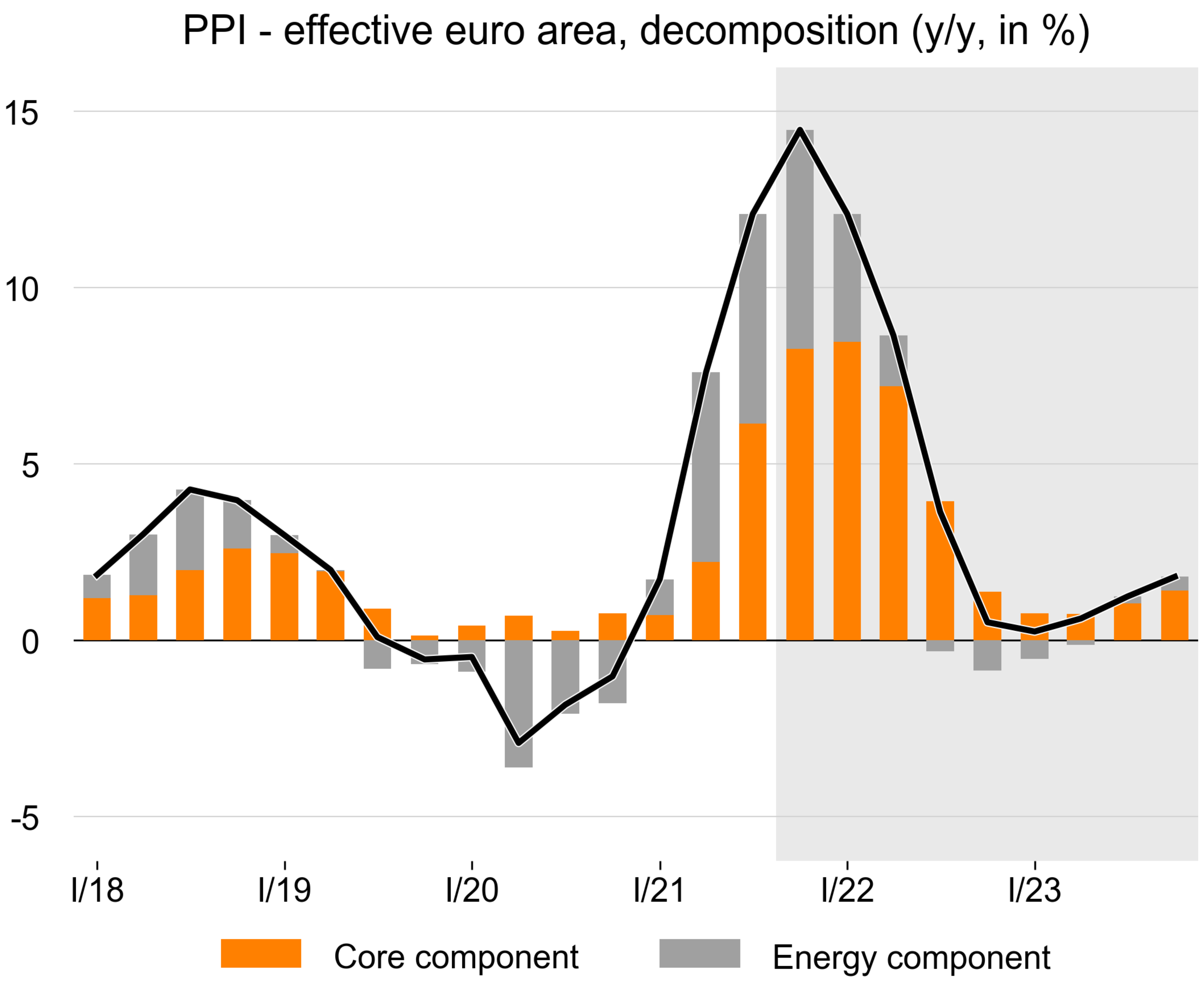


PPI in Effective Euro Area: Decomposition

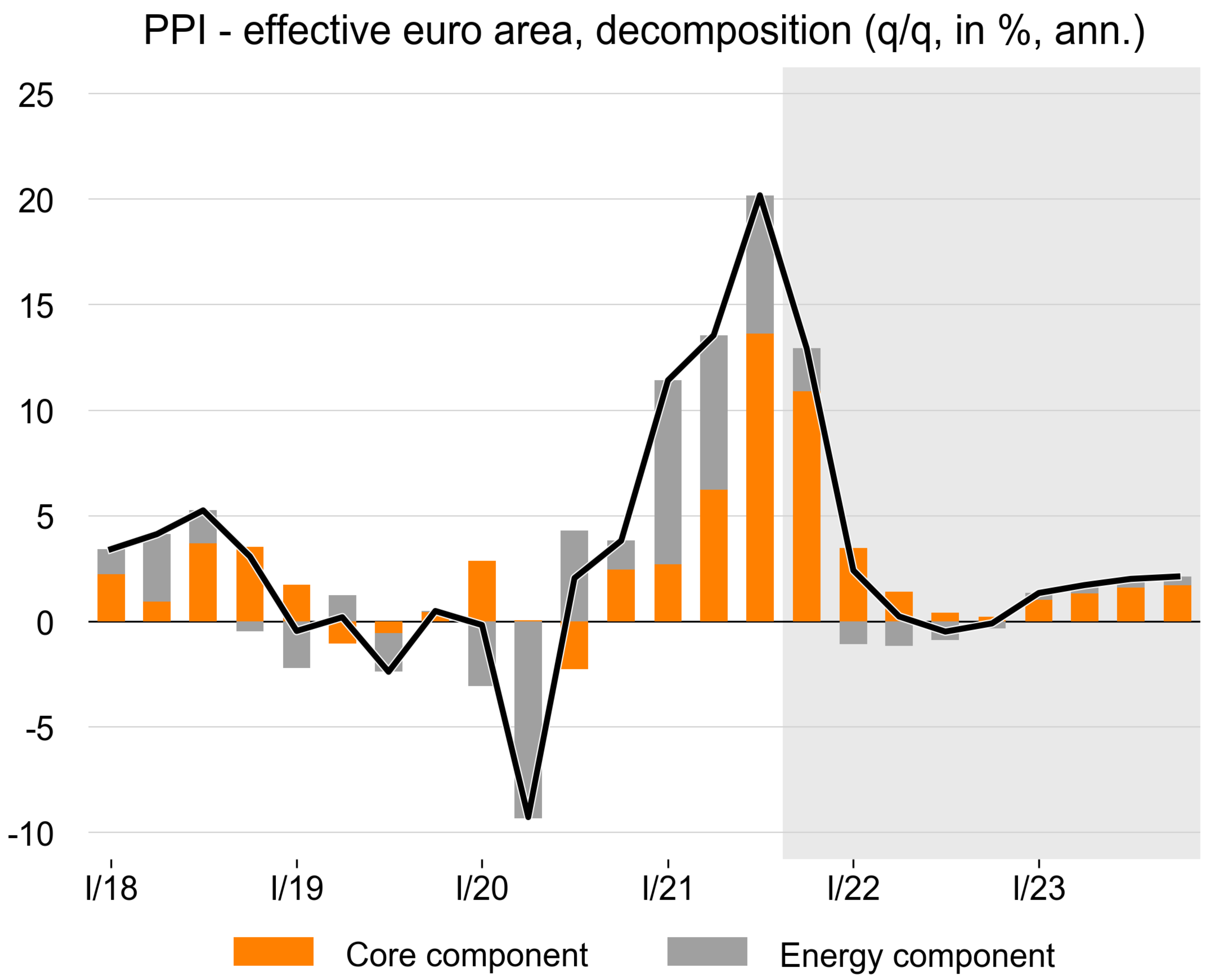




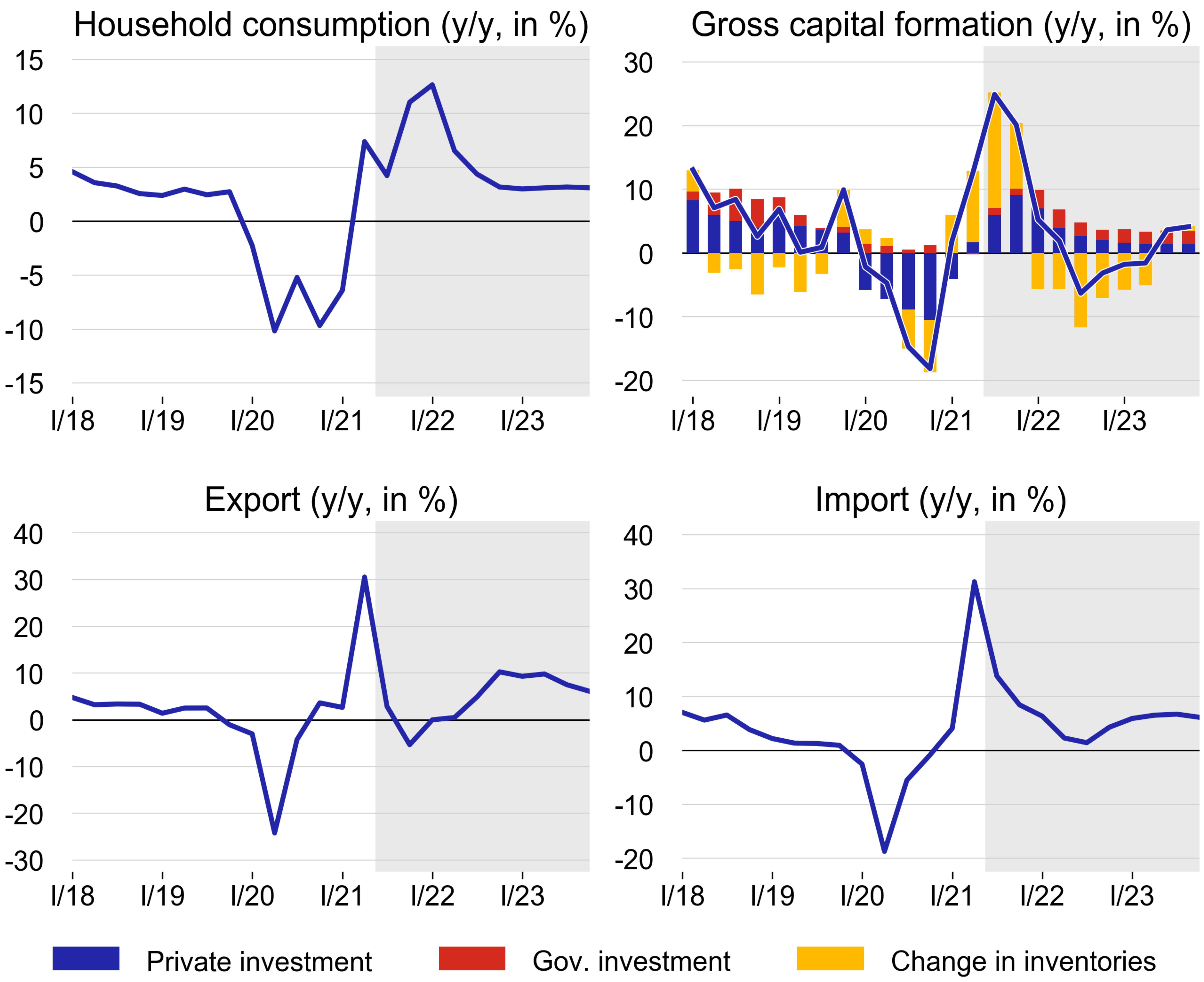
PPI in Effective Euro Area: Decomposition



PPI in Effective Euro Area: Decomposition



Aggregate Demand Components



GDP Growth (QoQ)

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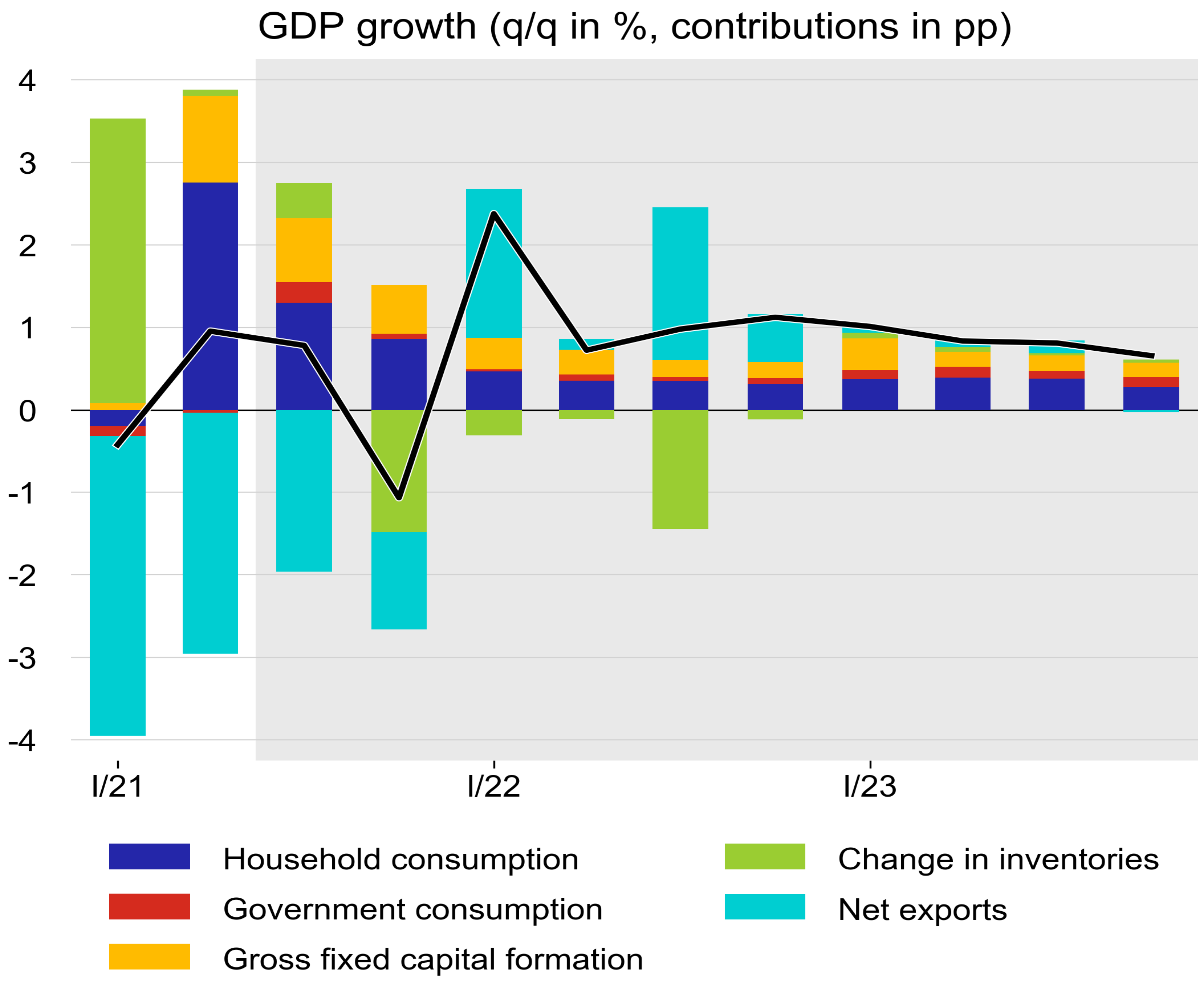
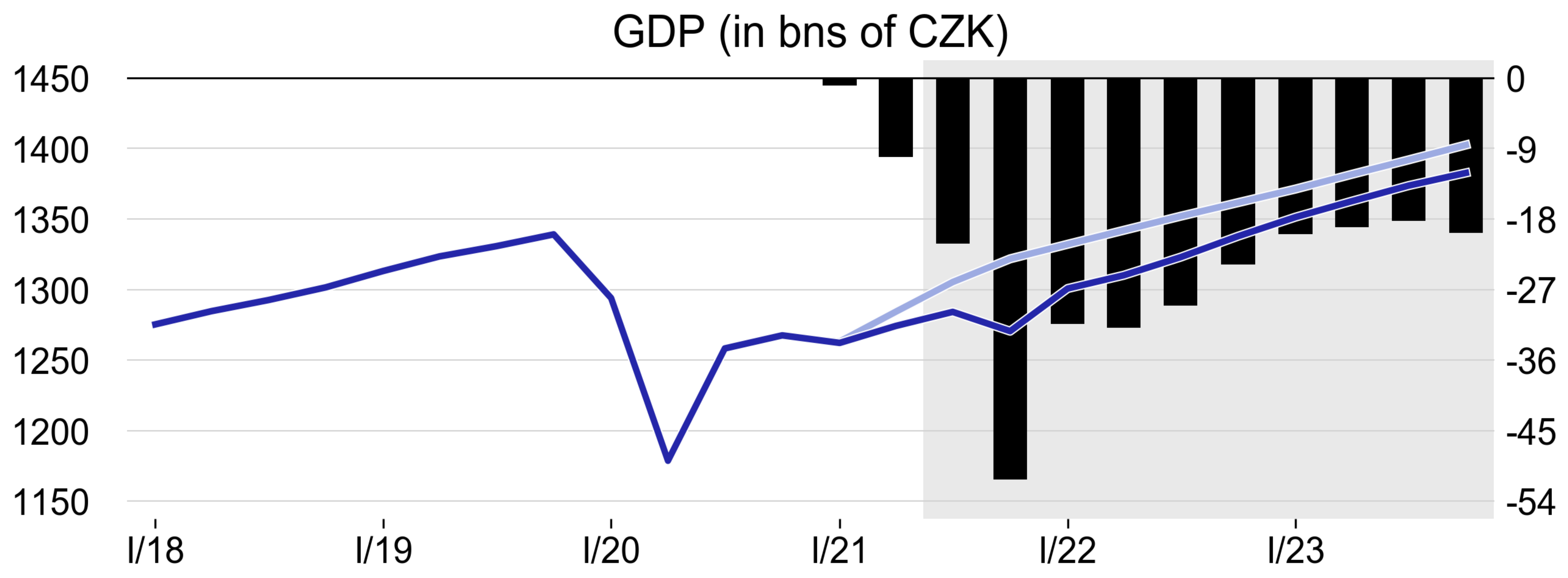
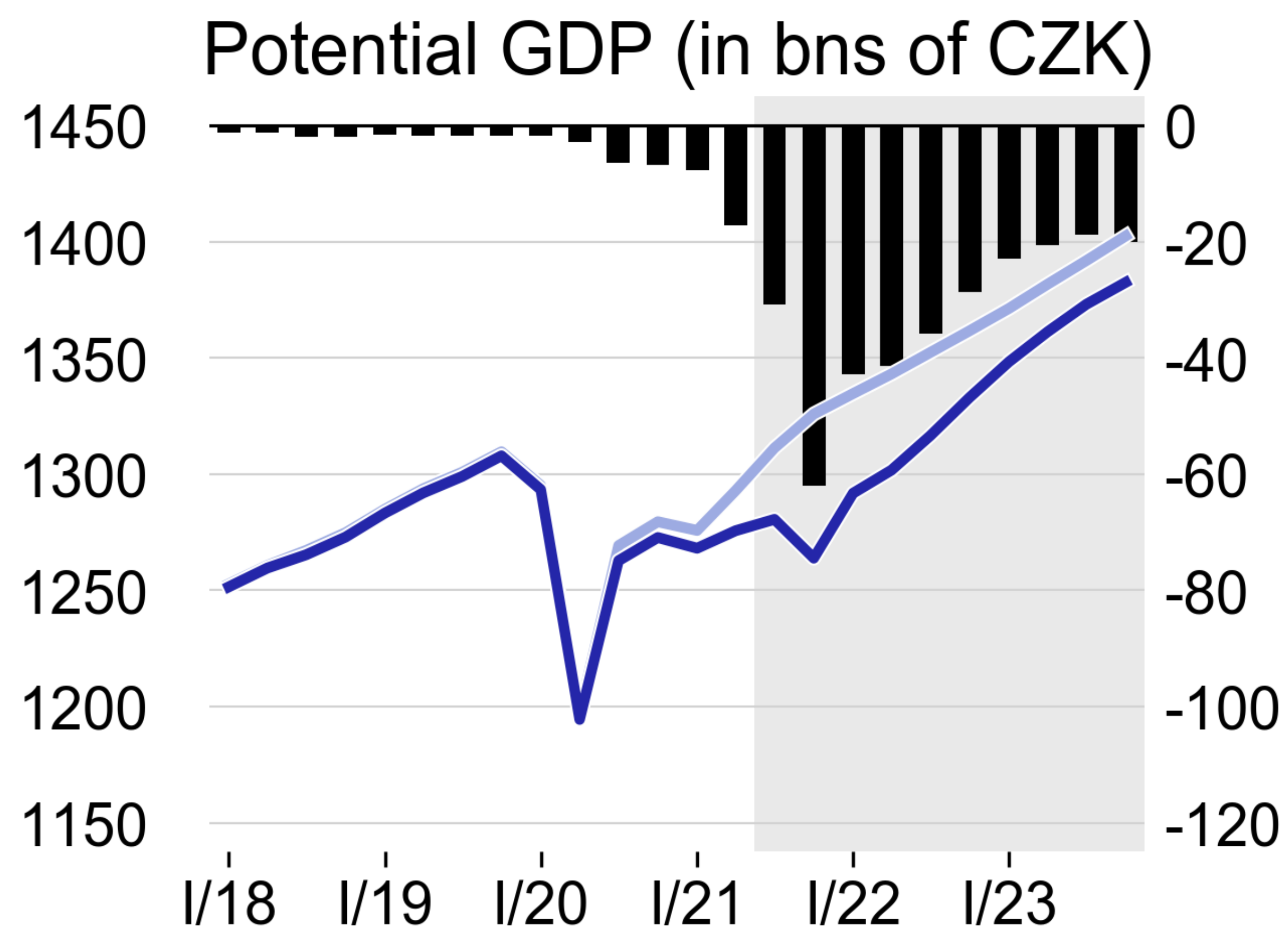
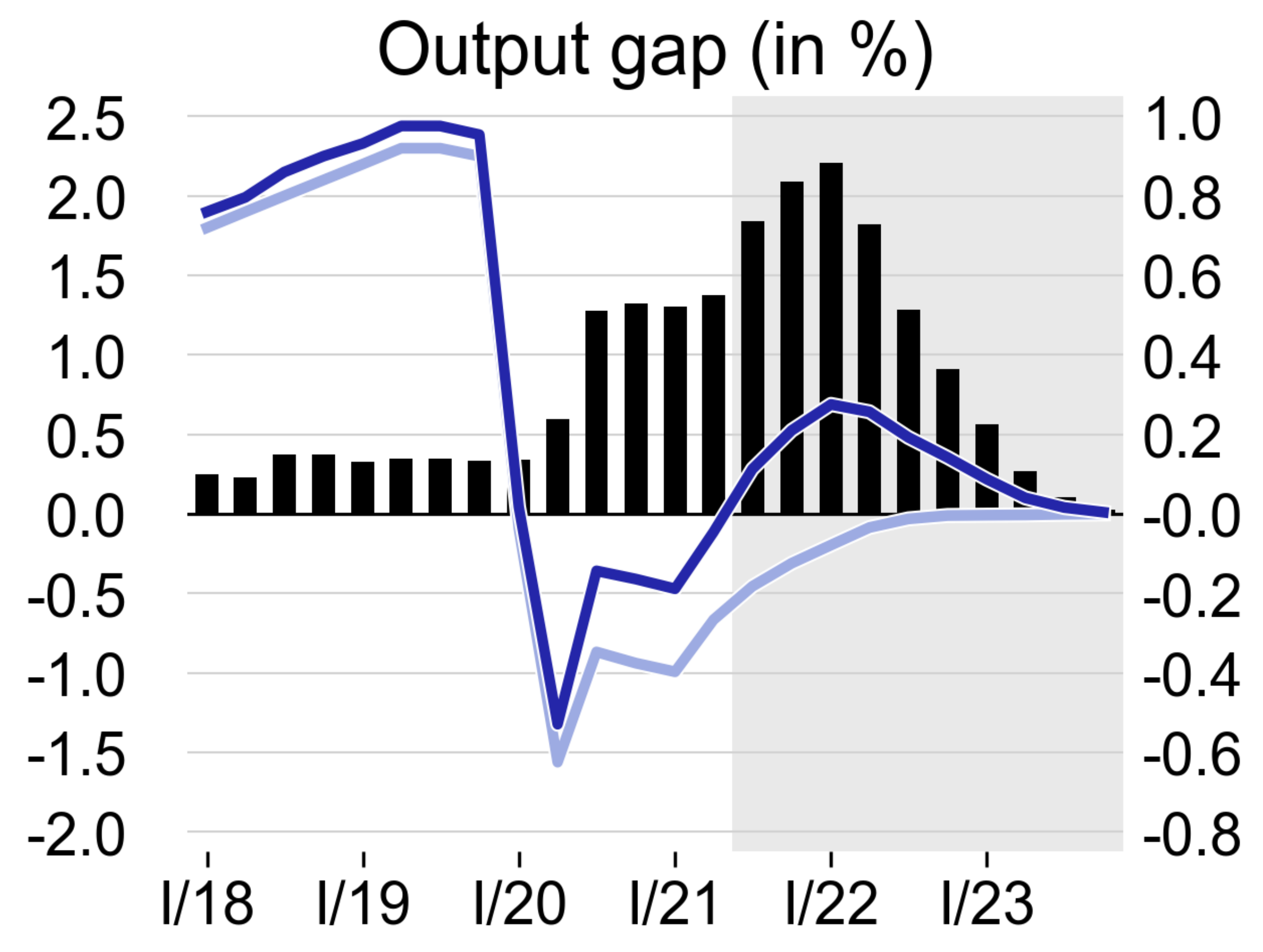


Domestic GDP: Comparison

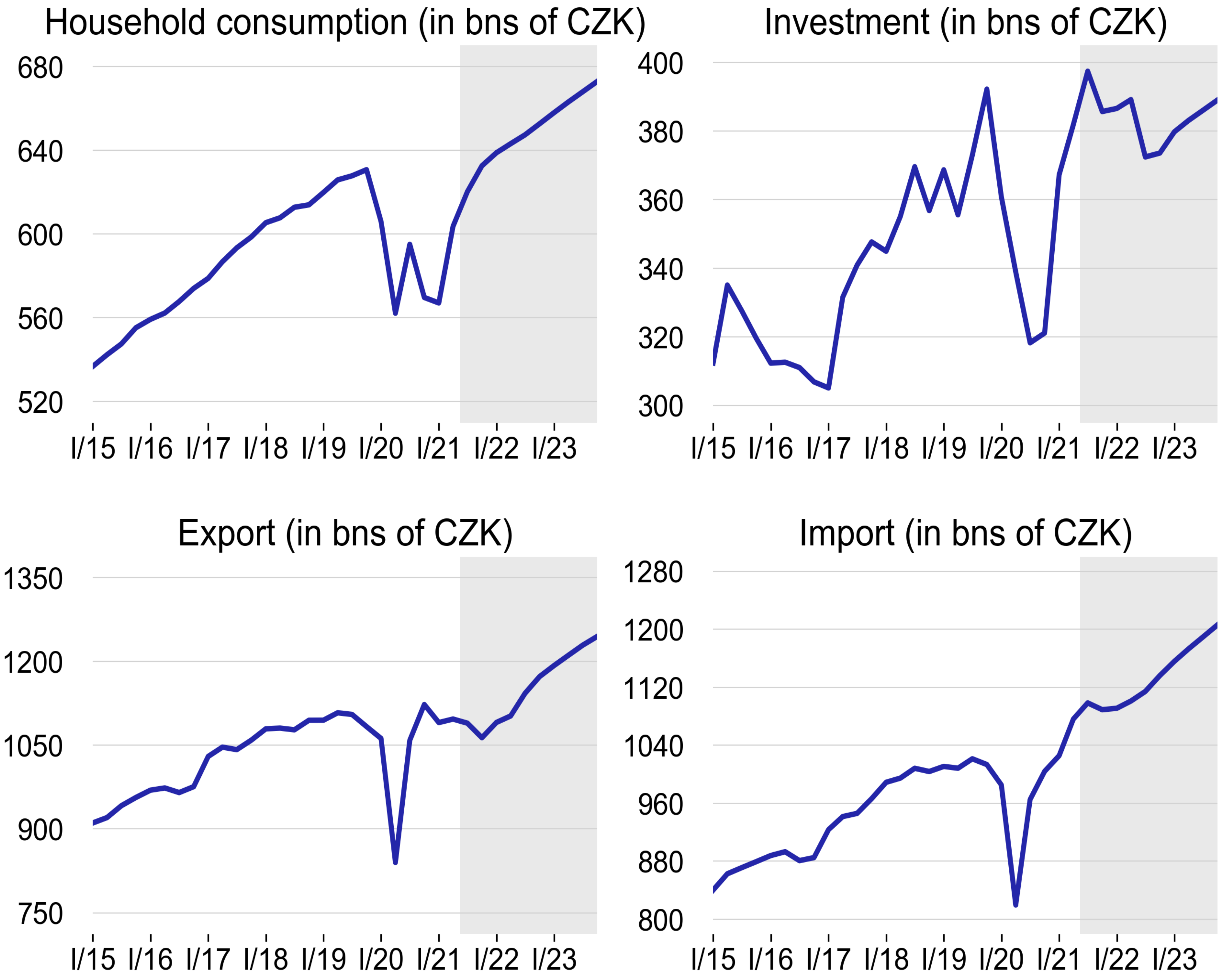




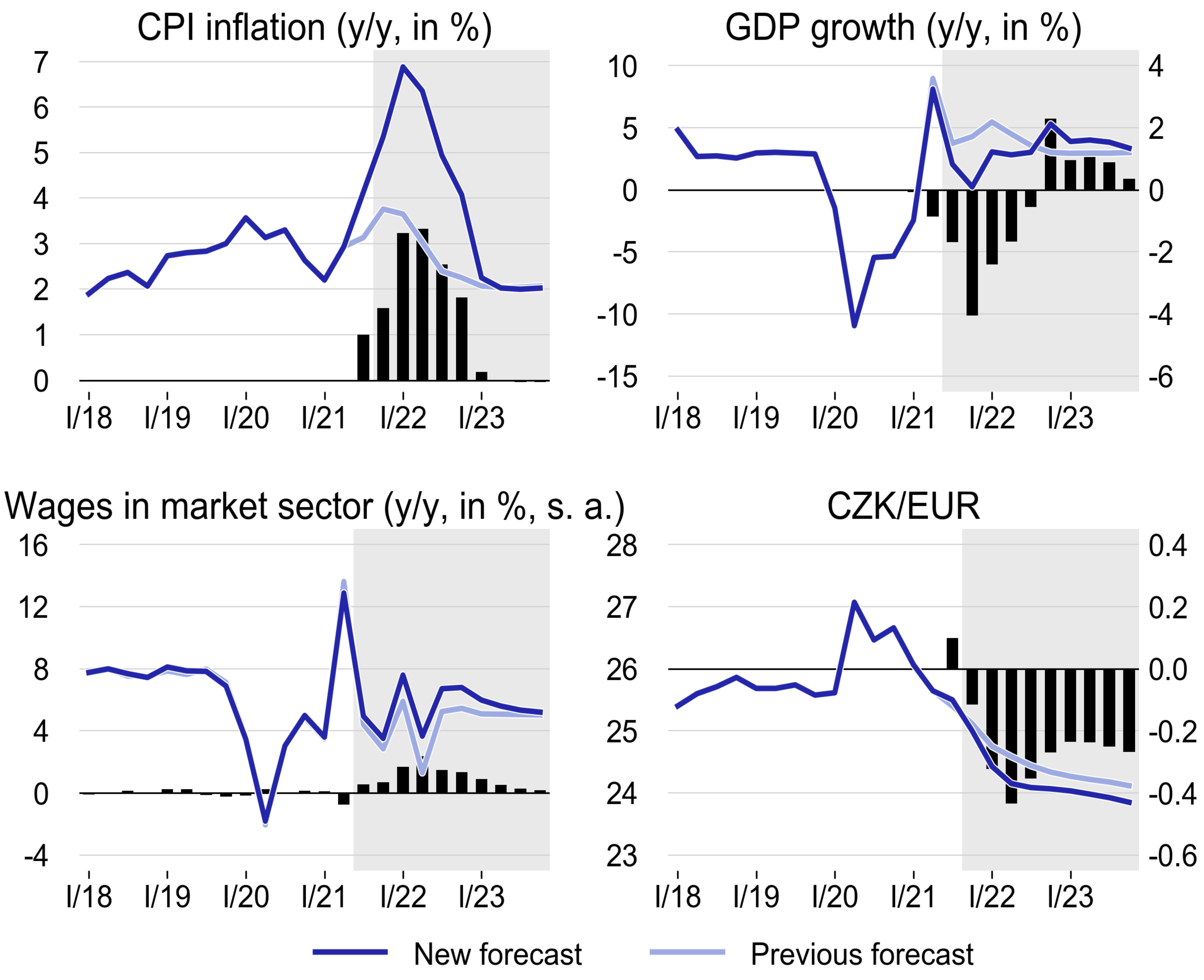


New forecast Previous forecast

Aggregate Demand



Comparison with Previous Forecast



Fiscal Policy

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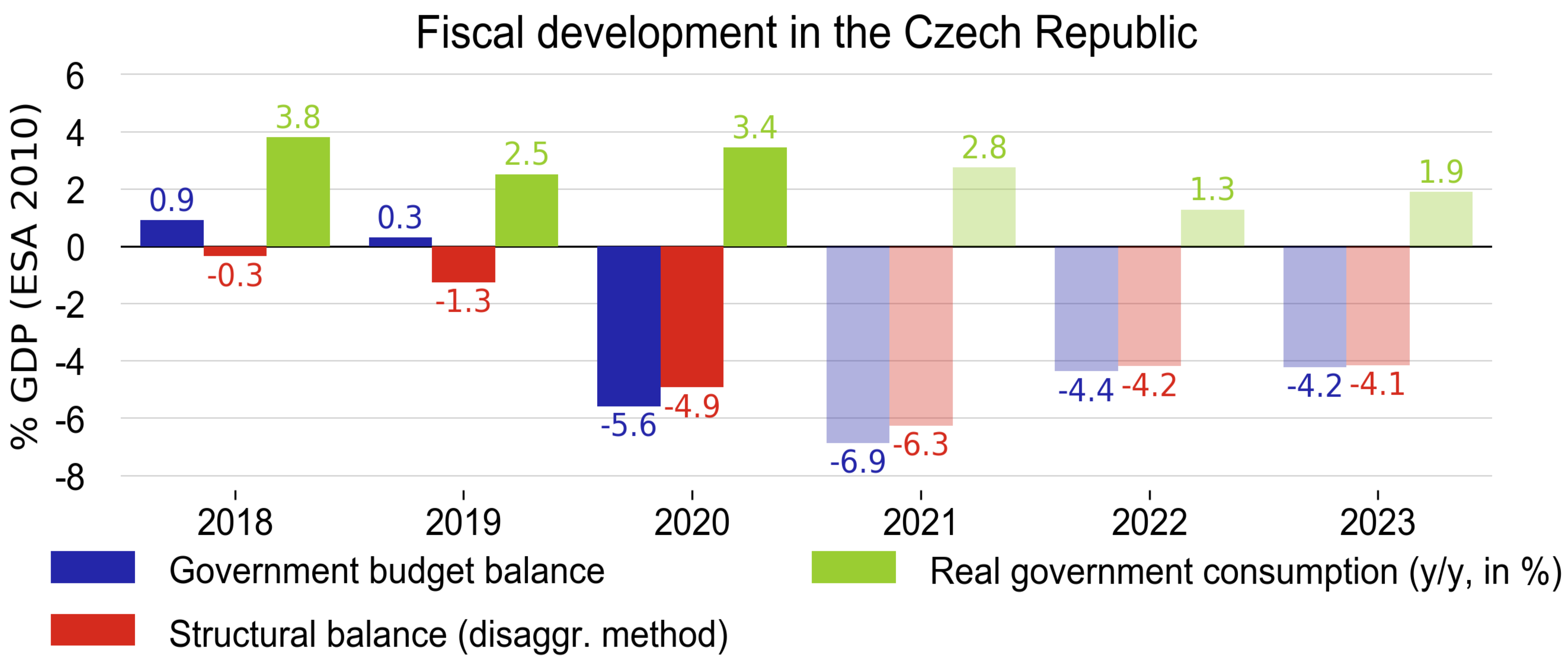
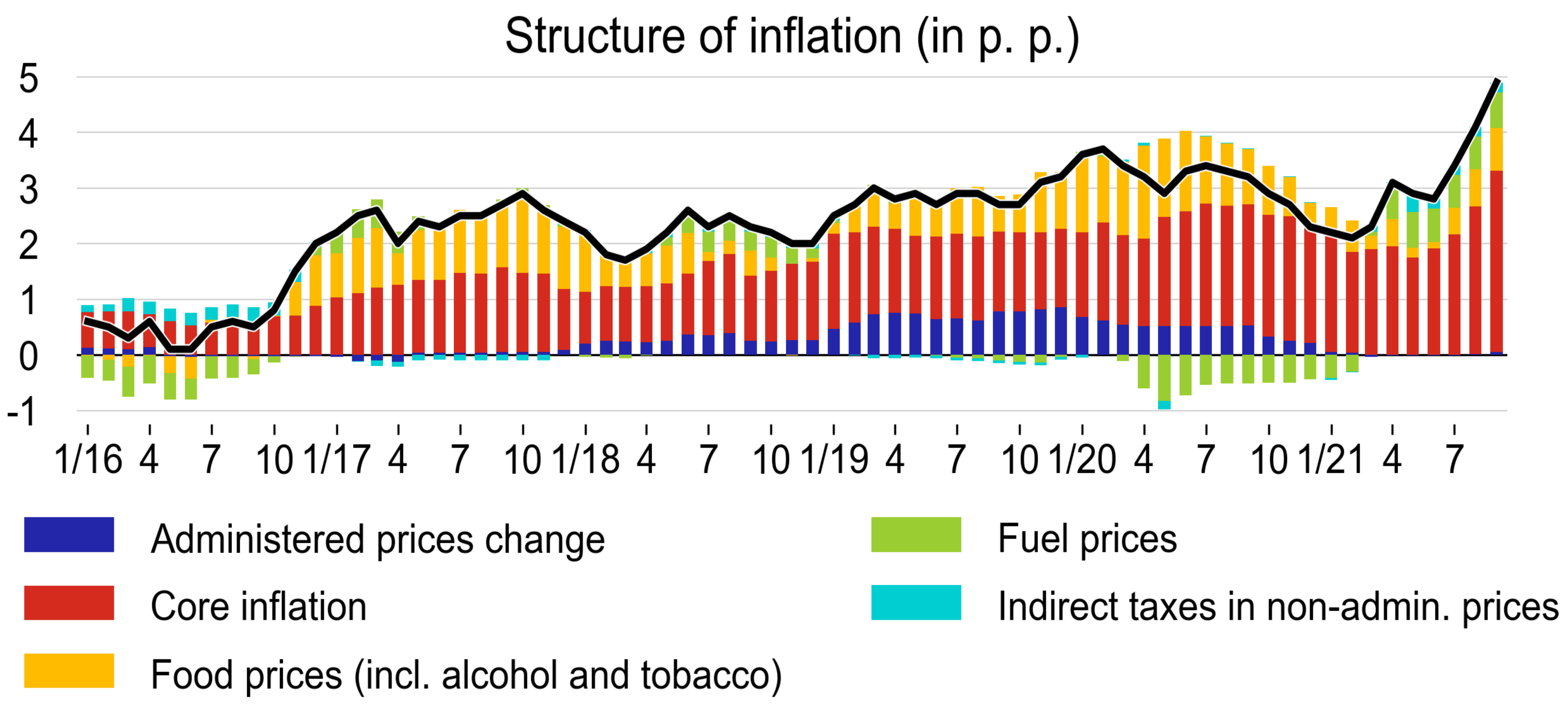
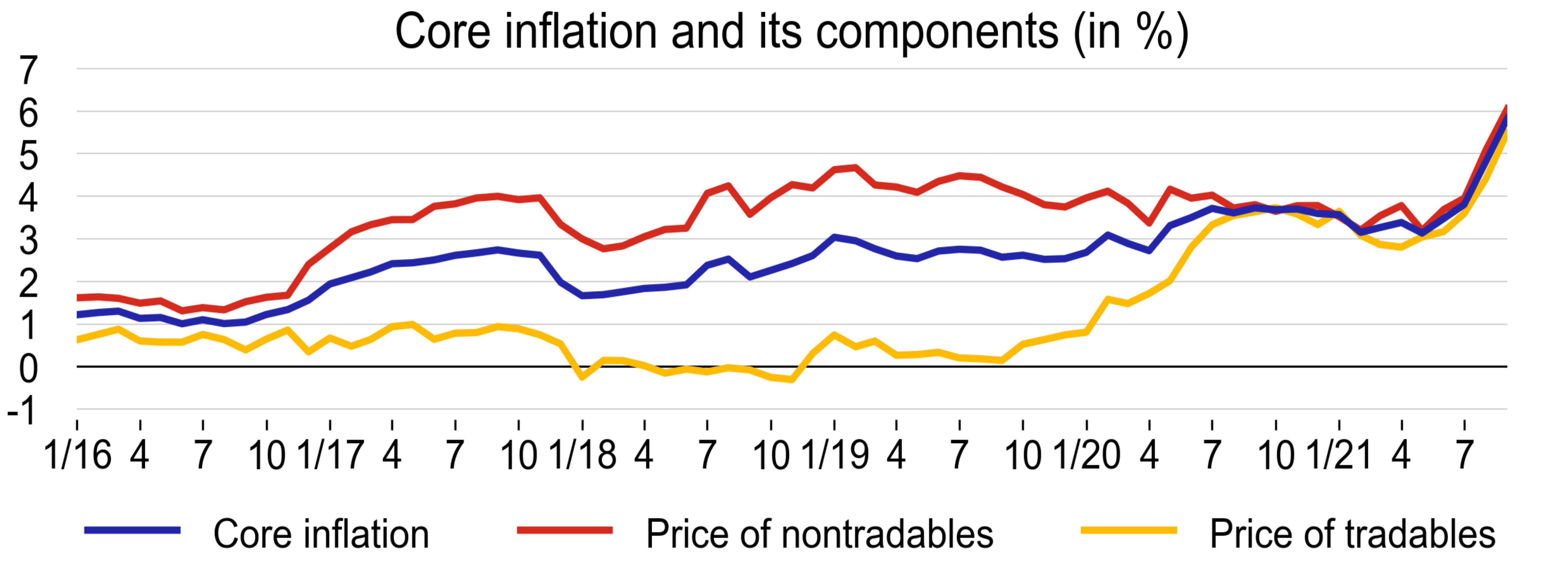


Fiscal impulse (contributions to GDP growth in percentage points)

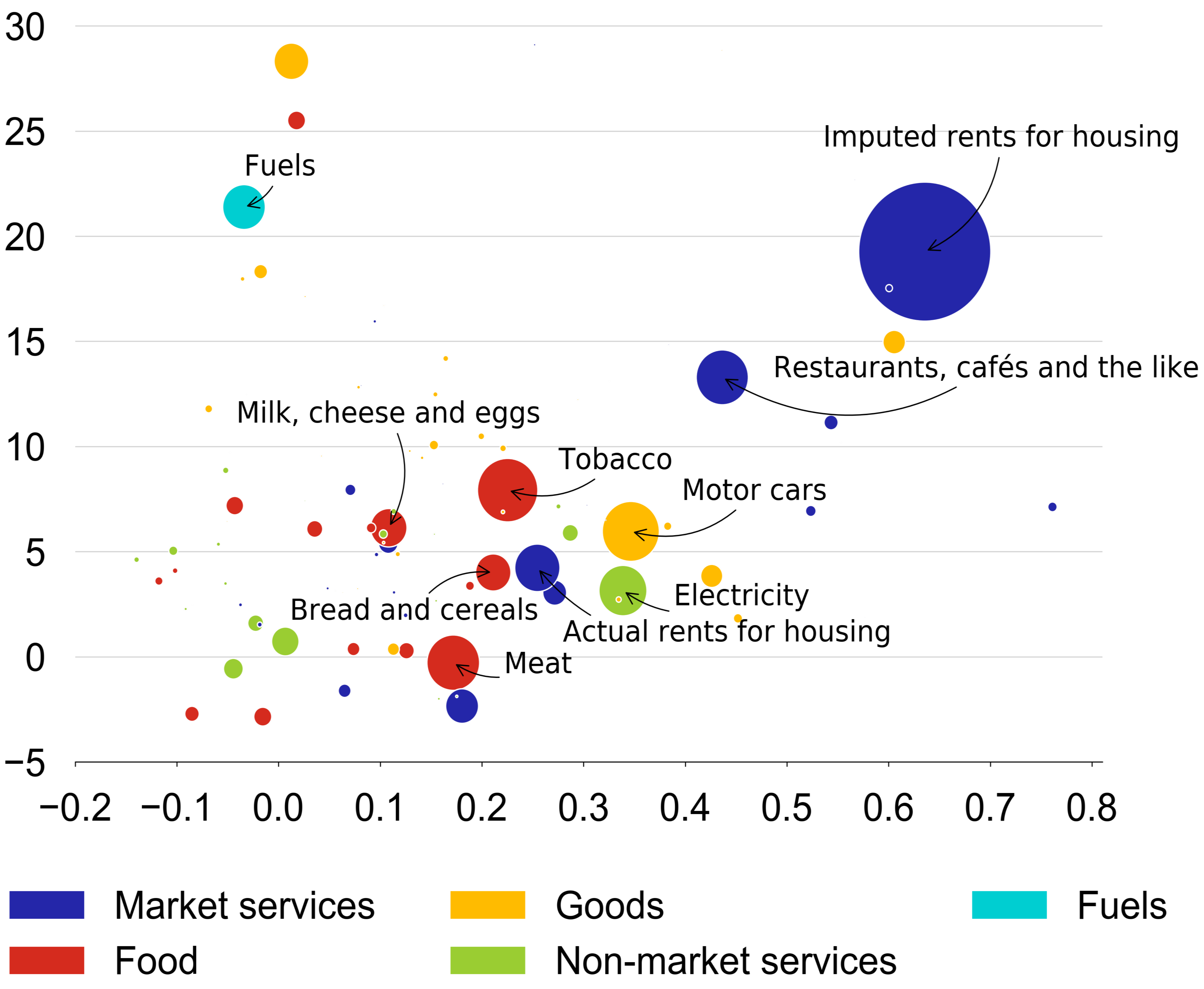
	2020	2021	2022	2023
	actual	forecast	forecast	forecast
Fiscal impulse	1.5	0.6	-0.5	0.0
of which impact through:				
Private consumption	1.3	0.4	-0.6	0.0
Private investment	0.1	0.1	-0.2	0.0
Government investment, domestic	0.0	-0.1	0.0	0.0
Government investment, EU funded	0.1	0.2	0.3	0.1

Structure of Inflation



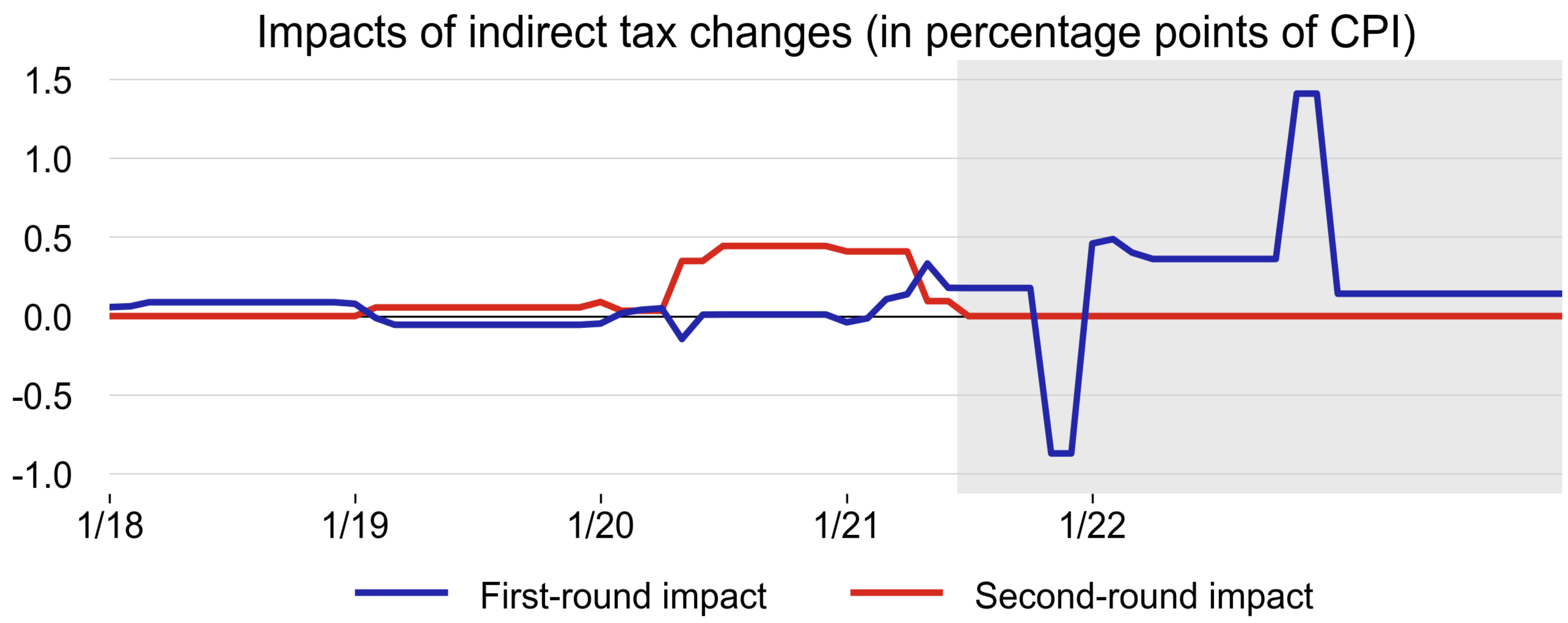


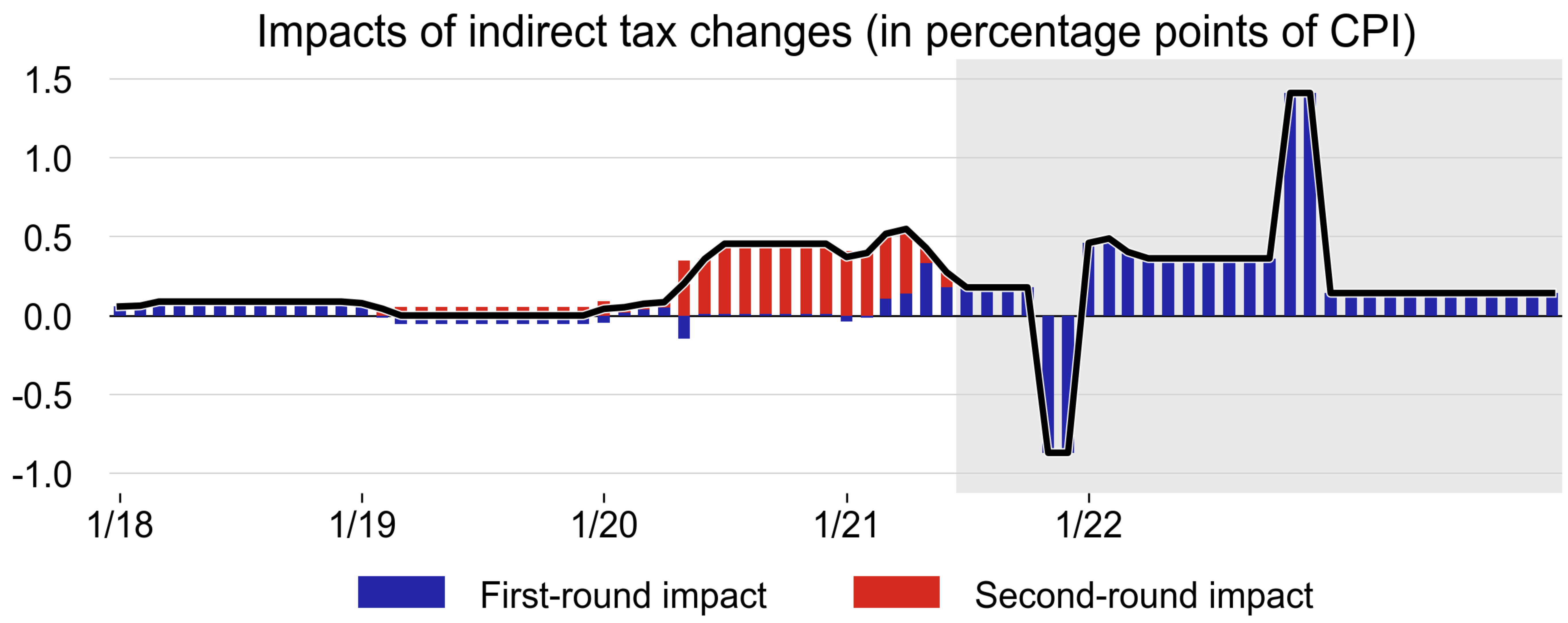
Domestic factors and inflation in 2021 Q3



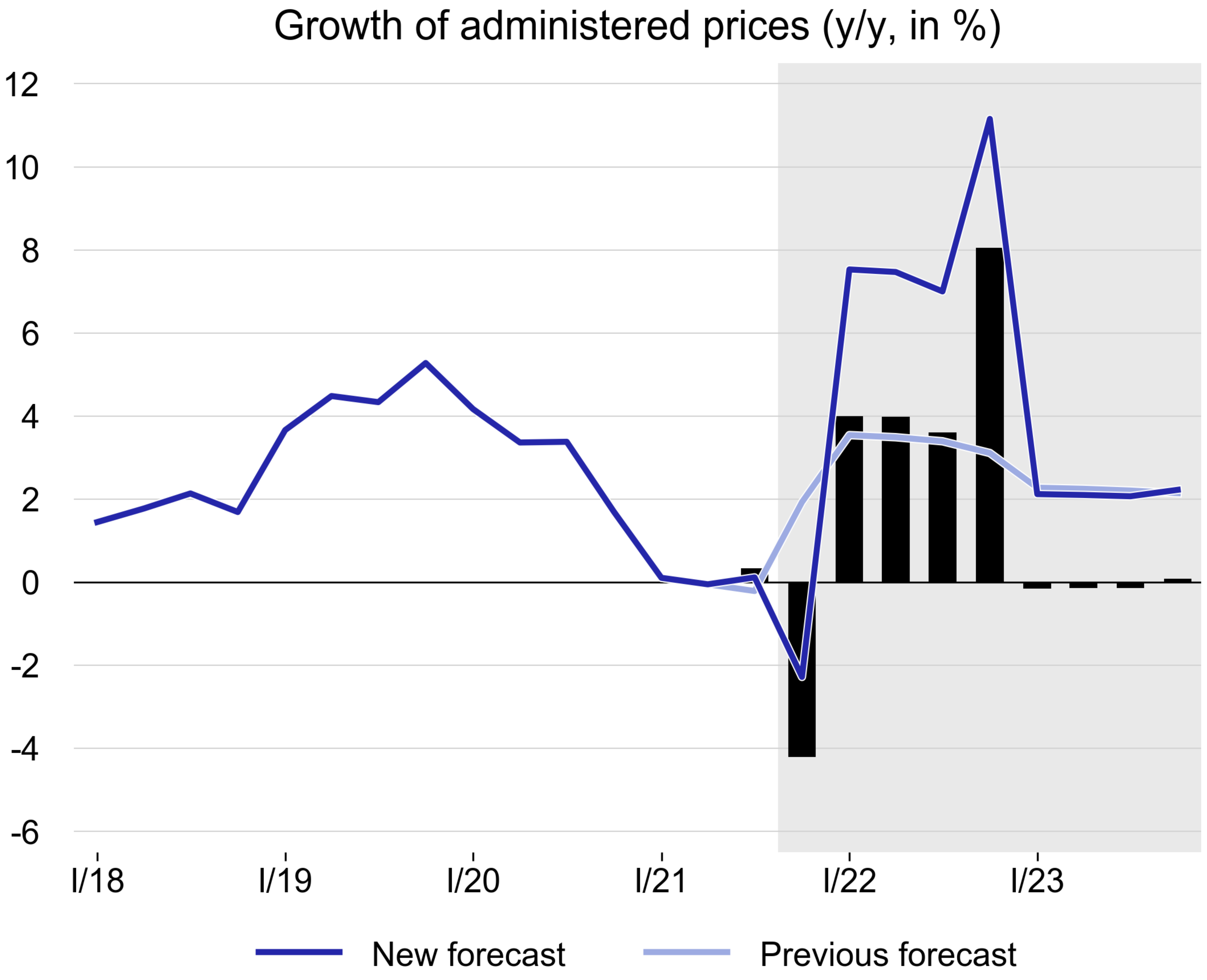
- x-axis: correlation with the LUCI indicator
- y-axis: annualised q-o-q price growth in % in 2021 Q3
- colour of bubble corresponds to inclusion in analytical group
- size of bubble corresponds to weight of category

Indirect Tax Changes: Comparison

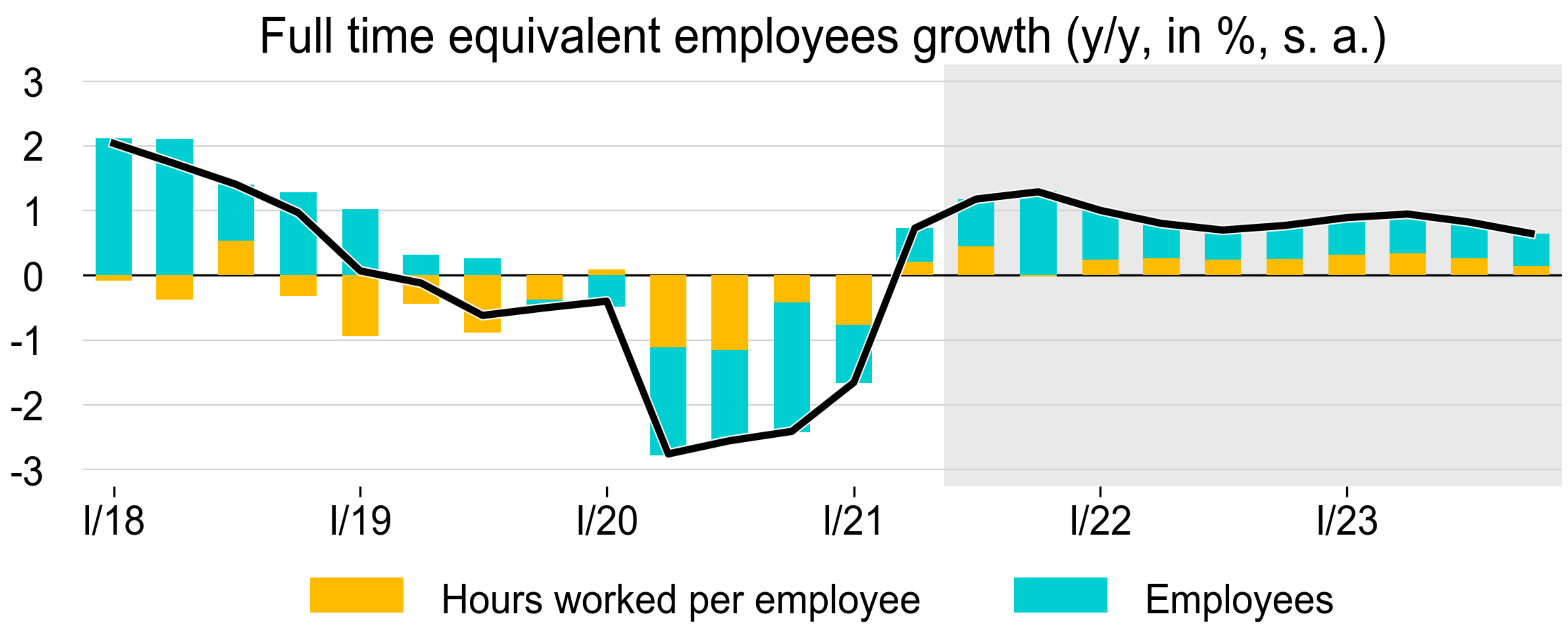


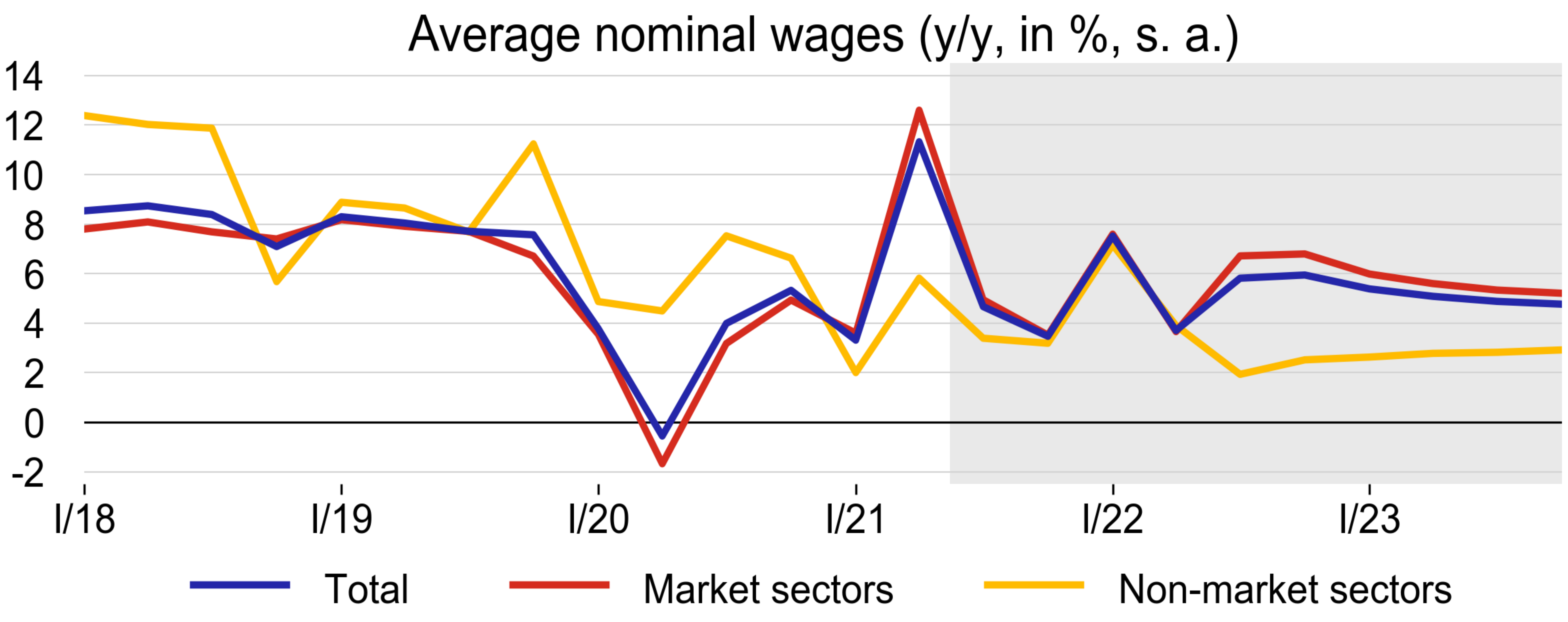


Administered Prices: Comparison

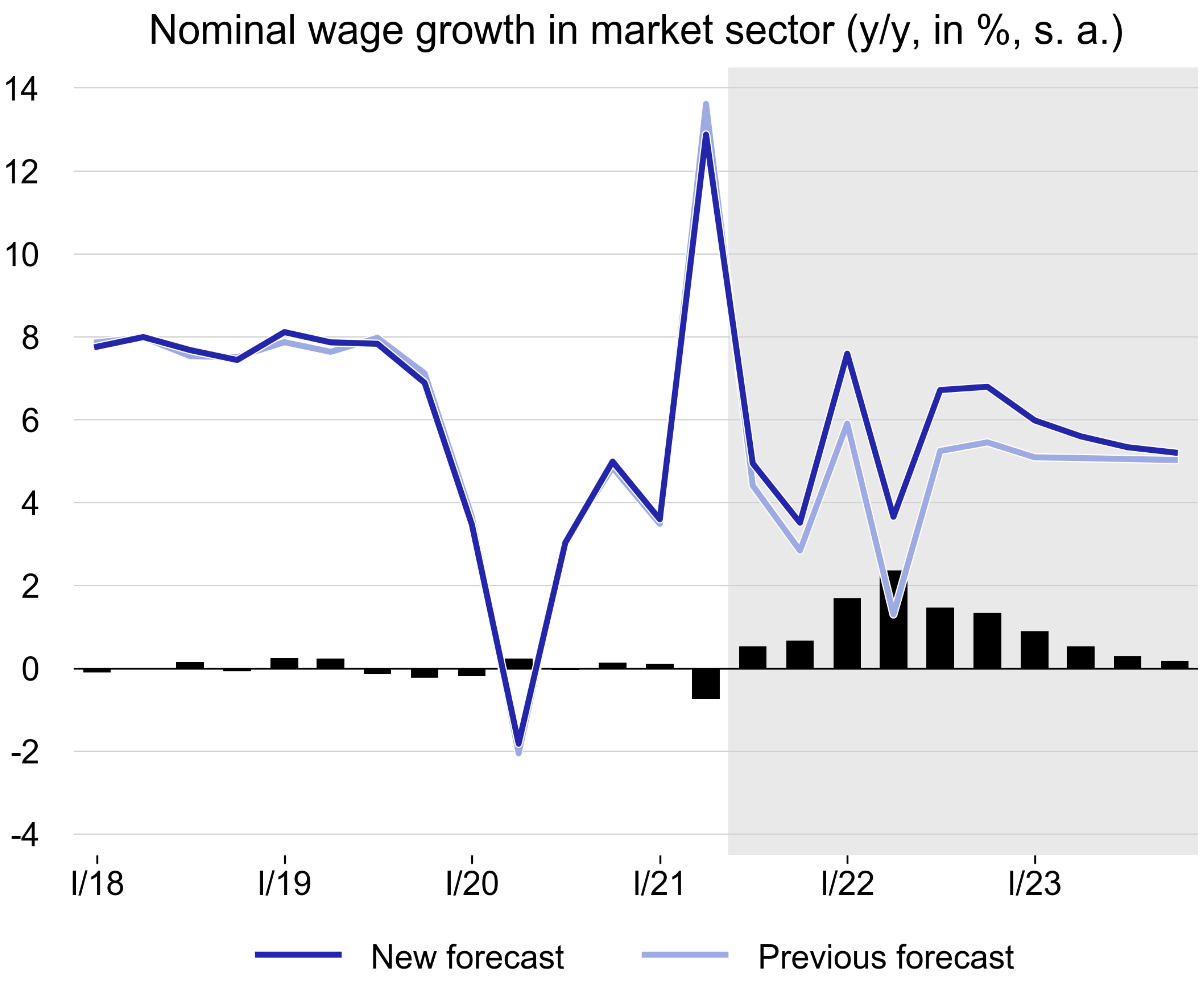


Labour Market

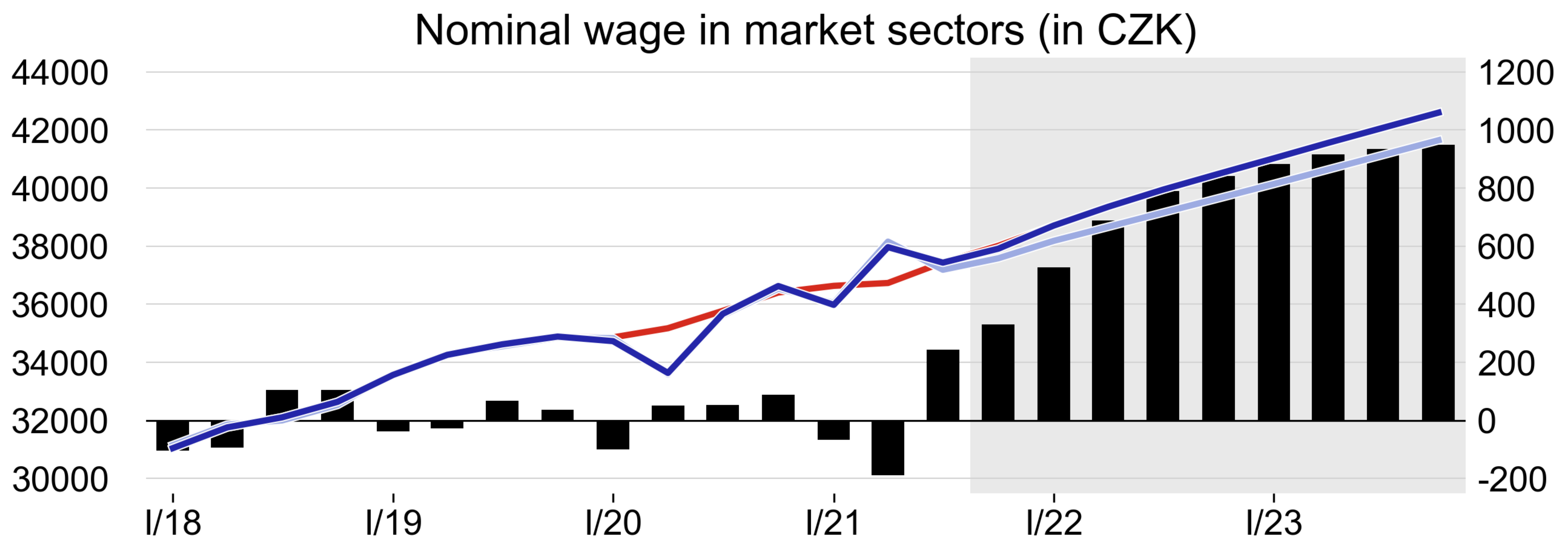


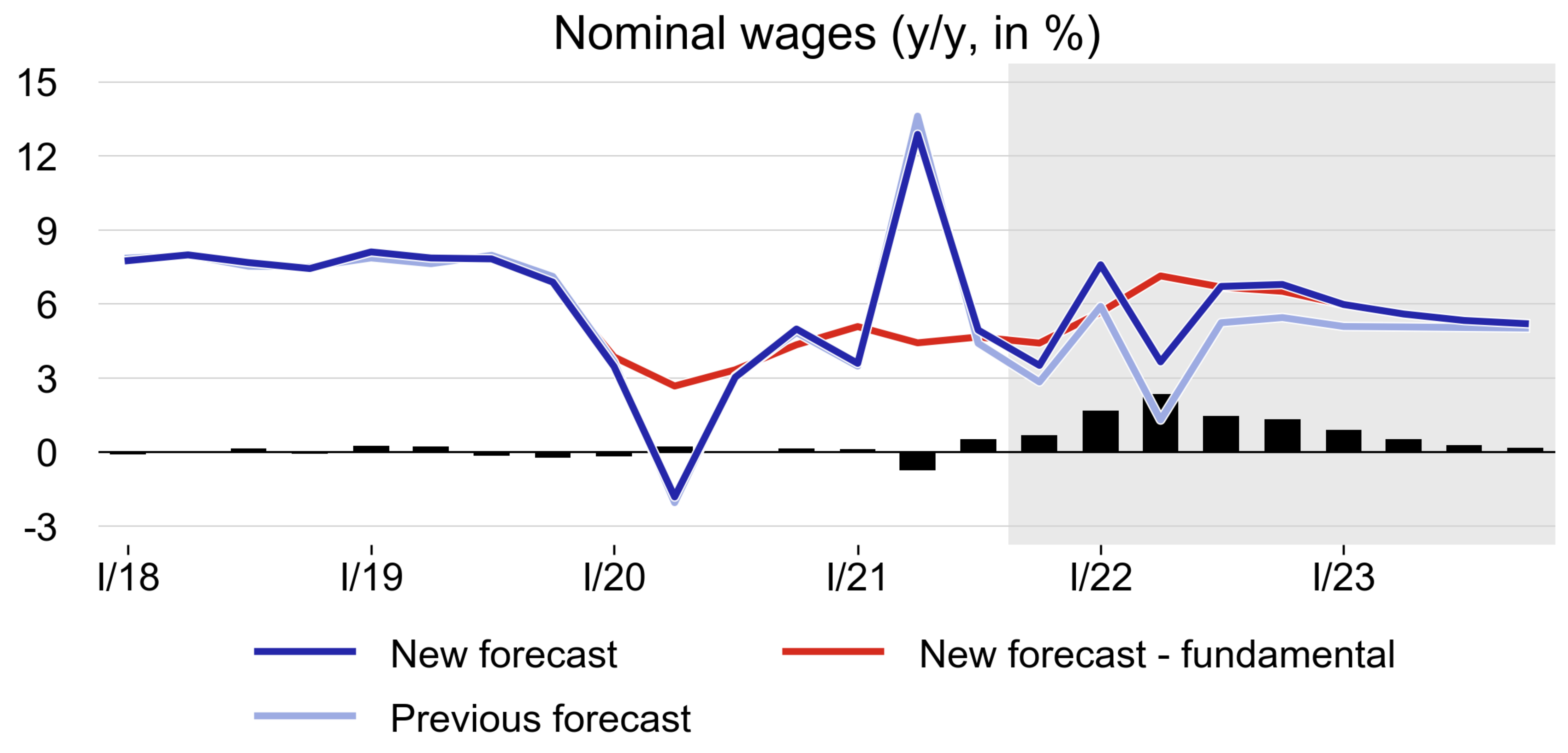


Wages in Market Sector: Comparison

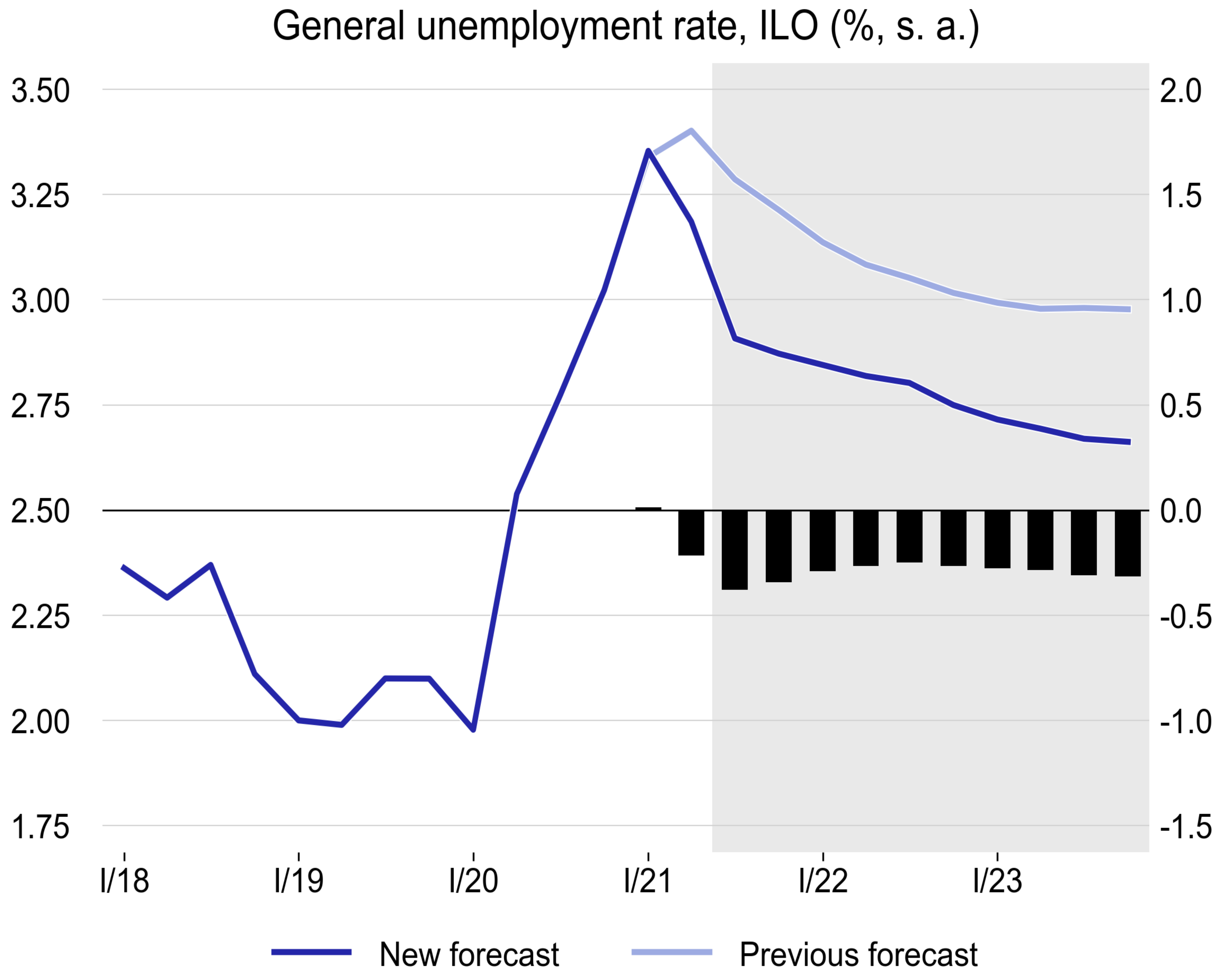


Nominal Wages: Comparison

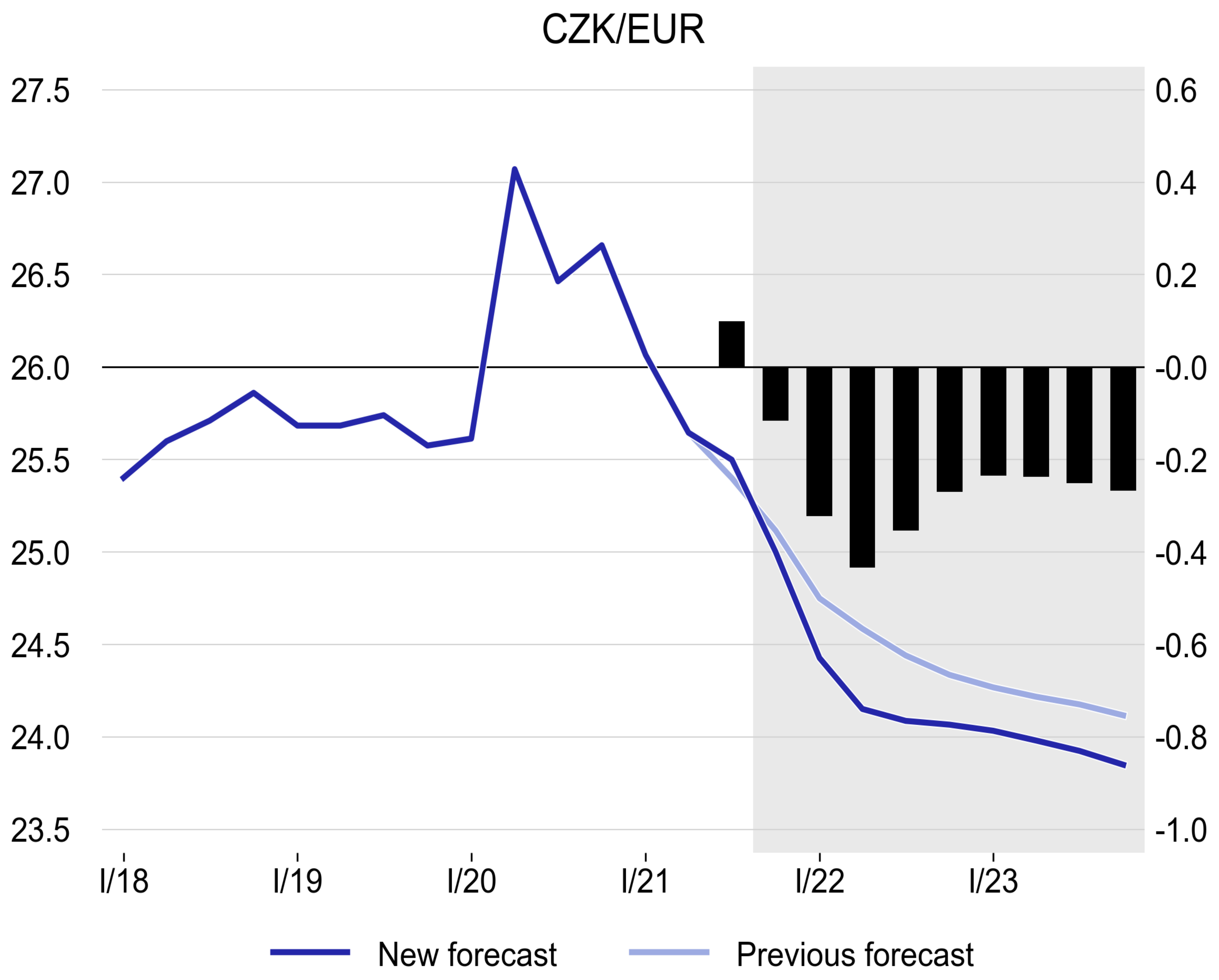




Unemployment Rate: Comparison



Exchange Rate: Comparison



Interest Rate: Comparison

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