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**Research Report**

## Inflation and counter-inflationary policy measures: The case of France

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# STUDY

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## INFLATION AND COUNTER-INFLATIONARY POLICY MEASURES:

### THE CASE OF FRANCE

Mathieu Plane<sup>1</sup> and Gaston Vermersch<sup>2</sup>

#### ABSTRACT

French consumer price inflation rose by 6.2% in September 2022 as compared to September 2021, against 10% in the euro area. Inflation rose less rapidly in France than in the euro area primarily due to a less rapid rise in energy prices: energy prices contributed to raise annual inflation by 1.9 percentage points in France as compared to 4.4 at the euro area level, partly because the economy is less reliant on gas than other euro area economies, but even more due to significant fiscal measures. The “tariff shield” on gas and electricity prices introduced at the end of 2021 and the rebate on fuel prices have strongly limited inflation. The fact remains that the French economy has been hit by a huge energy shock of the size of the first oil shock in 1974. This energy shock is mainly absorbed by government finances, through substantial fiscal measures (3.3 percent of GDP in 2022-23), but also by employees who are suffering a record fall in real wages (-2.2% in real terms in the second quarter of 2022 as compared to a year earlier). Profit margins have remained rather stable since the last quarter of 2021, mainly because real wages cuts have offset productivity losses. According to our estimates energy price inflation by itself would reduce French GDP by 1.4 percentage points in 2022 and 3.3 in 2023, but fiscal measures introduced to counter the impacts of the energy crisis will soften the economic shock by 0.8 percentage points of GDP in 2022 and 1.5 in 2023.

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# INFLATION AND COUNTER-INFLATIONARY POLICY MEASURES: THE CASE OF FRANCE<sup>1</sup>

Mathieu Plane<sup>2</sup> and Gaston Vermersch<sup>3</sup>

## Abstract

French consumer price inflation (as measured by the HICP) rose by 6.2% in September 2022 as compared to September 2021, against 10% in the euro area. Inflation rose less rapidly in France than in the euro area primarily due to a less rapid rise in energy prices: energy prices contributed to raise annual inflation by 1.9 percentage points in France as compared to 4.4 at the euro area level. Energy price inflation is lower in France partly because the economy is less reliant on gas than other euro area economies, but even more due to significant fiscal measures. The “tariff shield” on gas and electricity prices introduced at the end of 2021 and the rebate on fuel prices have strongly limited inflation. The fact remains that the French economy has been hit by a huge energy shock of the size of the first oil shock in 1974, i.e. amounting to around 3% of GDP. This energy shock is mainly absorbed by government finances, through substantial fiscal measures (3.3 percent of GDP in 2022-23), but also by employees who are suffering a record fall in real wages (-2.2% in real terms in the second quarter of 2022 as compared to a year earlier). Profit margins have remained rather stable since the last quarter of 2021 when inflationary pressure became visible, mainly because real wages cuts have offset productivity losses. In 2023, we expect nominal wages to accelerate (+3.4% in 2022 and +3.8% in 2023), which would remain below inflation (5.3% in 2022 and 5% in 2023). According to our estimates energy price inflation by itself would reduce French GDP by 1.4 percentage points in 2022 and 3.3 in 2023, but fiscal measures introduced to counter the impacts of the energy crisis will soften the economic shock by 0.8 percentage points of GDP in 2022 and 1.5 in 2023.



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Editorial responsibility for this report: IMK.

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Data as available on 21 October 2022.

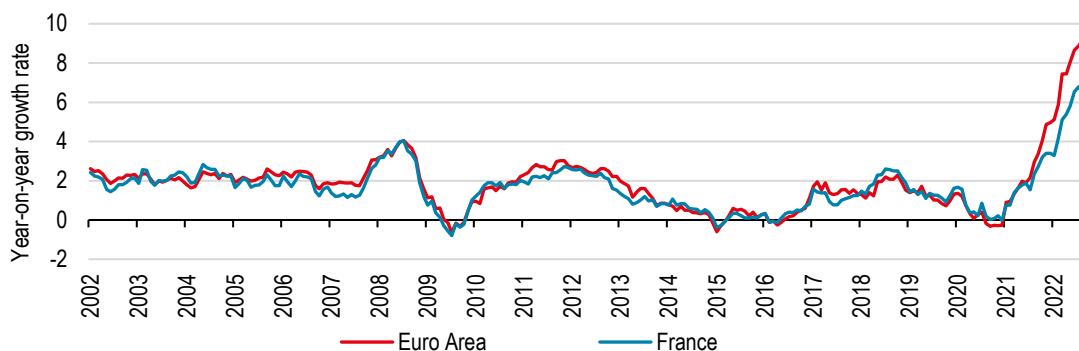
## Inflation is back: France in EU comparison

French annual inflation (as measured by the HICP, Eurostat release) was 3.8 percentage points below euro area HICP in September 2022: annual inflation was 6.2% for France and 10.0% in the euro area (Figure 1). Such a gap is unprecedented.

Consumer price inflation has never been as high since the launch of the euro, well above the previous peak of 4% reached in August 2008 in France and the euro area. Inflation has breached the 2% inflation target since July 2021 in the euro area and since August 2021 in France. Besides, inflation started to accelerate earlier in the euro area (November 2021) than in France (February 2022).

**Figure 1: Overall HICP**

in %



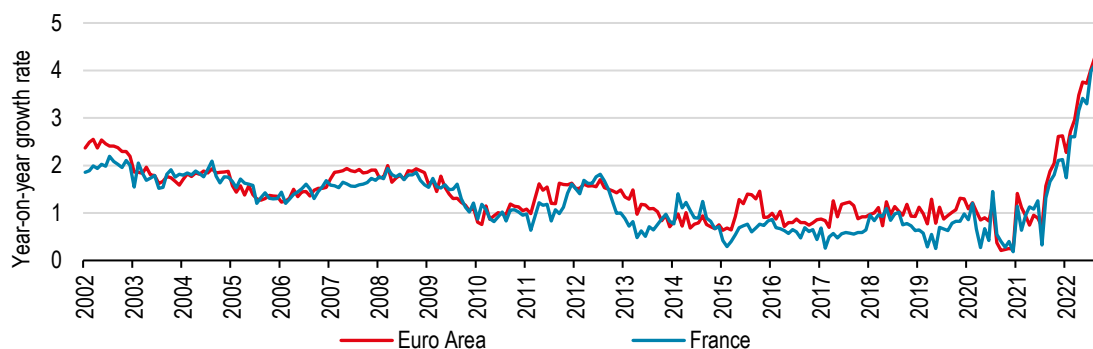
Source: Eurostat.

## Underlying inflation is slightly lower in France than in the euro area

In this paper, underlying inflation is defined as HICP excluding energy, food, alcohol, and tobacco. Annual underlying inflation was less pronounced in France (3.7%) than in the euro area (4.8%) in September 2022 (Figure 2). The underlying component contributed 59% of total inflation in France in September 2022, against 48% in the euro area. The difference in terms of the inflation rate between France and the euro area is therefore principally due to the volatility of energy and food, but also to a weaker diffusion of inflation to the core index.

**Figure 2: Core HICP**

in % (excluding energy, food, alcohol and tobacco)



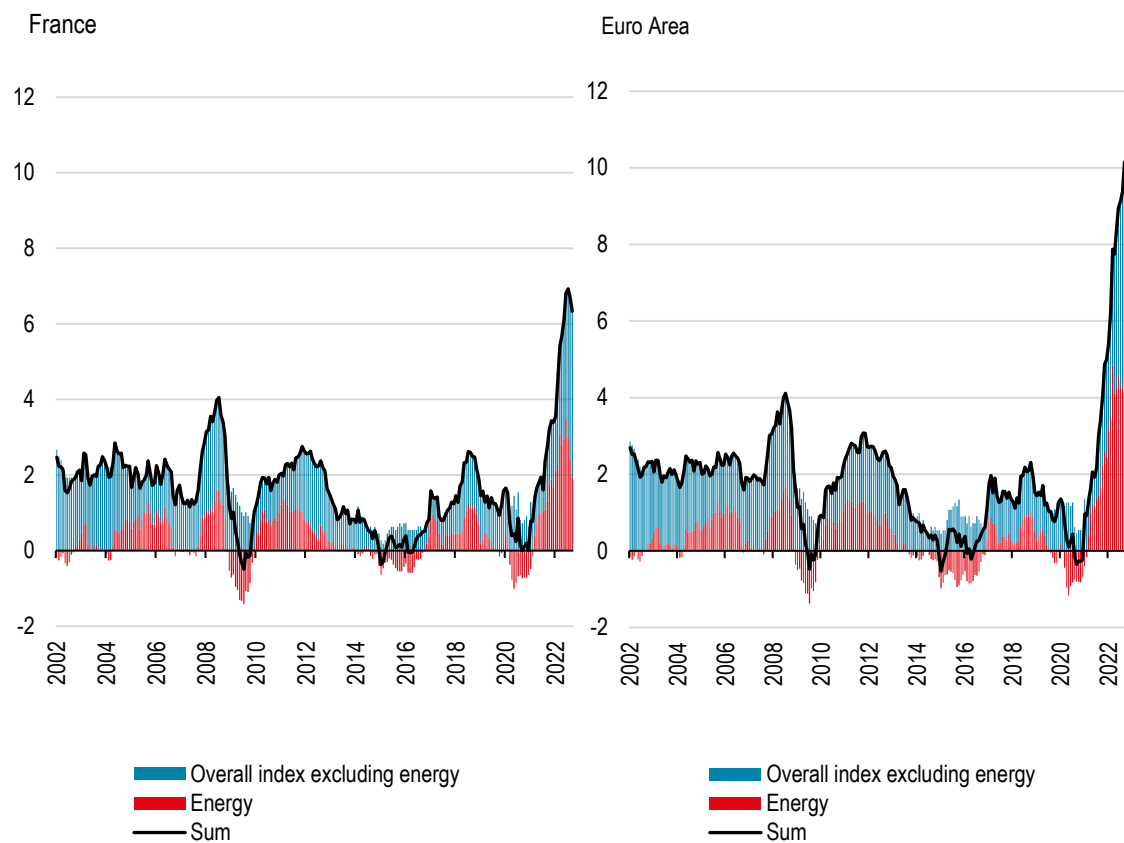
Source: Eurostat.

## Energy price inflation is much lower in France than in the euro area

In September 2022, energy consumption prices were 19% higher than twelve months before, against 41% in the euro area. Accounting for the share of energy in consumption, energy prices contributed to increase the all-items HICP by 4.4 percentage points in the euro area and by just 1.9 percentage points in France (Figure 3). Among EU countries, the contribution of energy prices to overall inflation is much lower in France than in Germany (5.3 percentage points) or even Italy (4.3 percentage points).

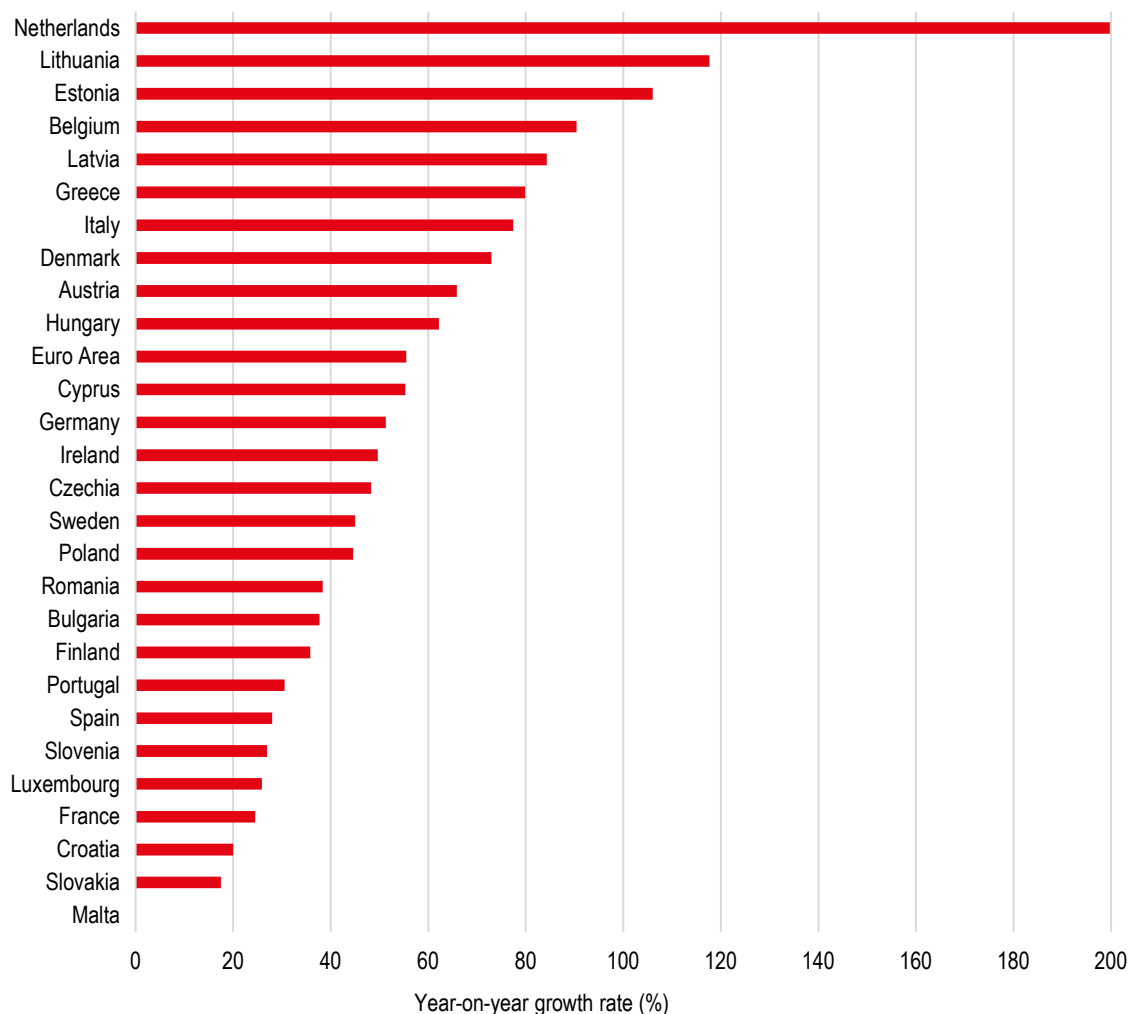
In terms of the “gas, electricity and fuel” component in the HICP, France ranks 3<sup>rd</sup> in the EU countries with the lowest energy inflation (Figure 4). In September 2022, the annual inflation rate of this component stood at 25% in France and at 56% for the Euro Area average. Slovakia has the lowest “gas, electricity and fuel” year-to-year inflation (+18%), followed by Croatia (+20%). On the opposite, prices of this component are more than doubled since September 2021 in 3 countries.

**Figure 3: Energy and non-energy HICP components**



Sources: Eurostat, authors' calculations.

**Figure 4: HICP, electricity, gas, and fuel component in September 2022**

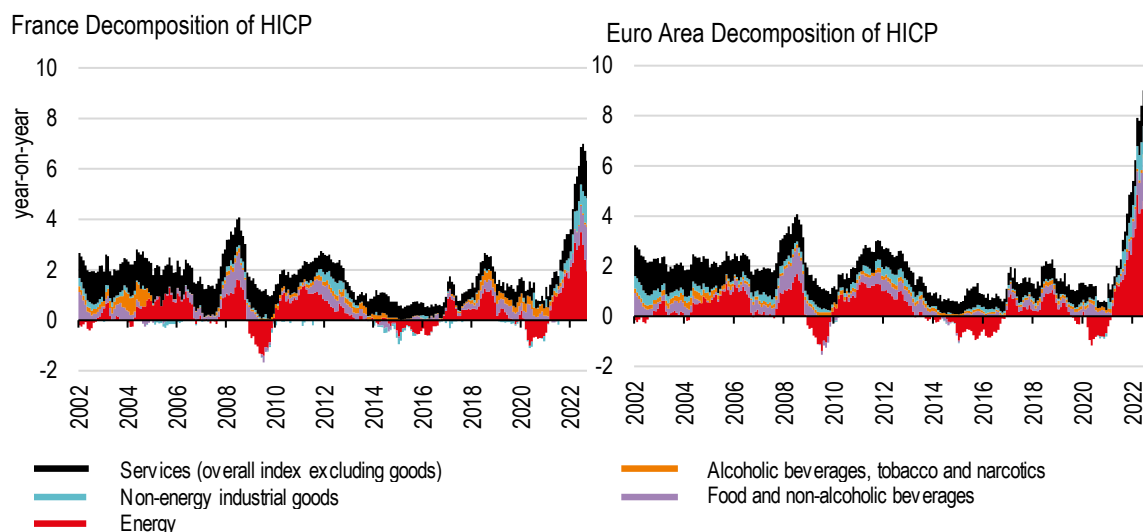


Source: Eurostat.

### Food inflation also is lower in France than in the euro area

Food inflation (excluding alcohol) is also higher in the euro area than in France (Figure 5). In September 2022, food inflation was 3.2 percentage points higher in the euro area (13.8% on an annual basis) than in France (10.6%). Similarly, tobacco and alcohol inflation are 2 percentage points higher (4.1% versus 2.1%). The difference is slightly smaller for non-industrial energy goods (5.5% in the euro area versus 4.2% in France). Furthermore, inflation is slightly less rapid in services in France than in the euro area (3.4% versus 4.3%).

**Figure 5: Components of HICP**  
in %, from January 2002 to September 2022



Sources: Eurostat, authors' calculations.

### Household energy consumption is more electricity intensive and less reliant on gas in France than the euro area average

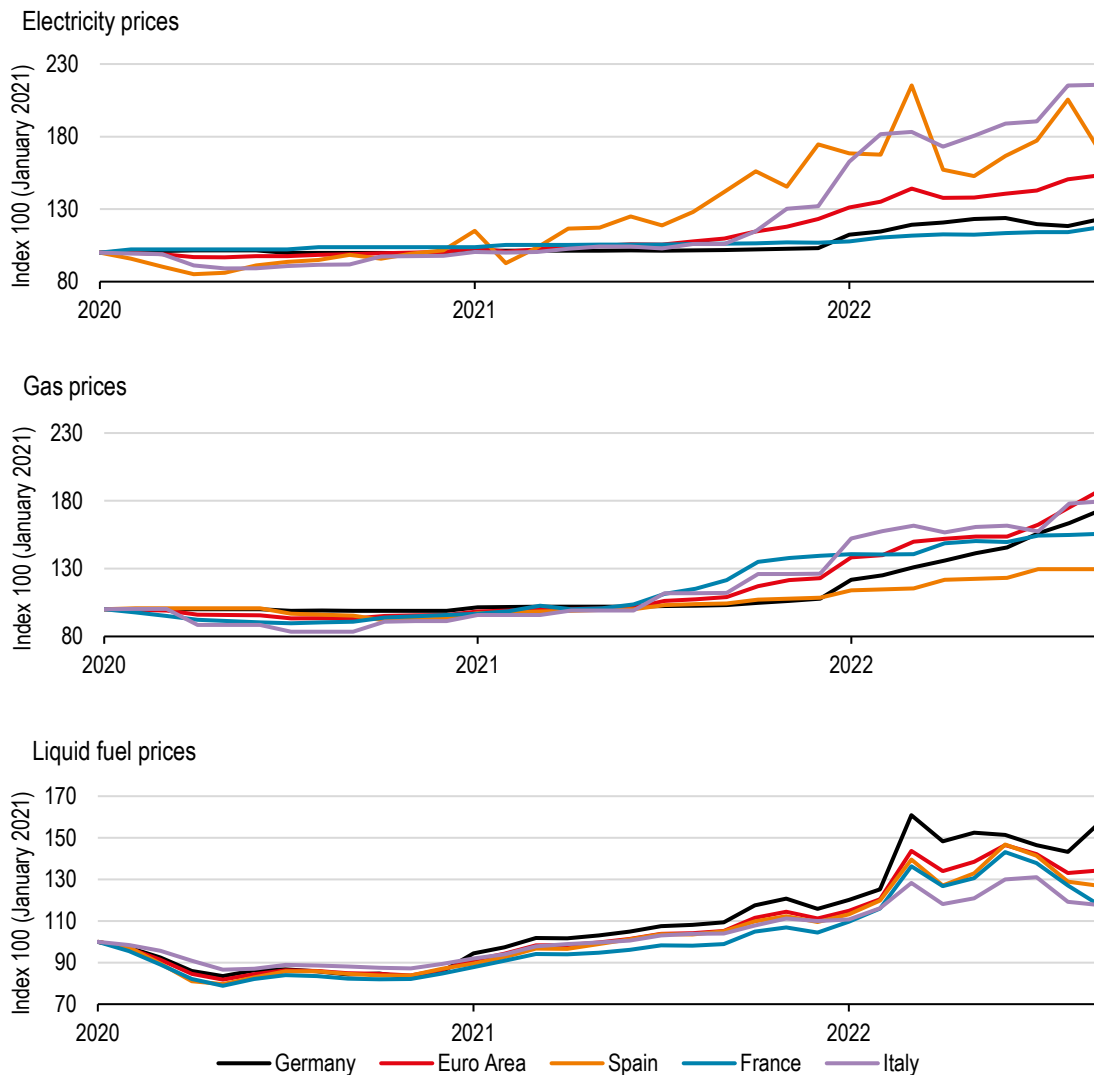
Energy inflation is less rapid in France than in other EU countries because France households' consumption is less reliant on gas (Figure 6). In 2022, German and Italian households are more reliant on gas (24% of their energy consumption for both) than France (18%) and the euro area (20%). Spanish and French households are more reliant on electricity (respectively 32% and 31%) than German or Italian households (25% each). Besides, Italy and Spain are more reliant on liquid fuels (50%), than Germany and France (44% and 46%).

Thus, France ranks among EU countries having the lowest contribution of energy prices to the increase of price index.

### The inflation impact of fiscal measures introduced to cap energy prices

In September 2022, electricity prices were only 11% higher than twelve months earlier in France, as opposed to 40% on average in the euro area and 103% in Italy. Thus, the rise in electricity prices has contributed to 17% of total energy inflation in France, while it contributed to 33% of energy inflation in Spain, where reliance on electricity is similar to France. Electricity prices have contributed just 0.3% to the annual HICP rate in France, as compared to 1.2 percentage point in the euro area, and 2.5 percentage points in Italy. The French "tariff shield" (*"bouclier tarifaire"*) on electricity has therefore strongly contained and smoothed out electricity prices (Figure 6). On the contrary, Spain initially experienced sharp increases in electricity prices in 2021 before derogating from the European energy market from April 2022.

**Figure 6: Index of energy prices**  
from January 2020 to September 2022



Sources: Eurostat, authors' calculations.

Gas prices were 29% higher in September 2022 than twelve months before in France, as compared to 72% on average in the euro area. Only Spain, where gas reliance is much smaller, has succeeded to contain gas inflation to 24%. Gas inflation contributed to increase HICP by 0.5 percentage point in France as compared to 2 in Germany, and 1.6 in the euro area.

The “tariff shield” (*“bouclier tarifaire”*) introduced at the end of 2021 by the French government is a mechanism freezing regulated sales tariffs for gas and limiting the rise regulated sales tariffs for electricity (for more details, see below). This tariff shield has significantly limited the rise in gas and electricity prices in France as compared to the other EU countries.

The introduction of a discount on fuel prices does not translate one-to-one into an advantage in terms of inflation for France as most EU partners have introduced fiscal measures in 2022 to face rising oil prices. Although energy reliance on liquid fuels is



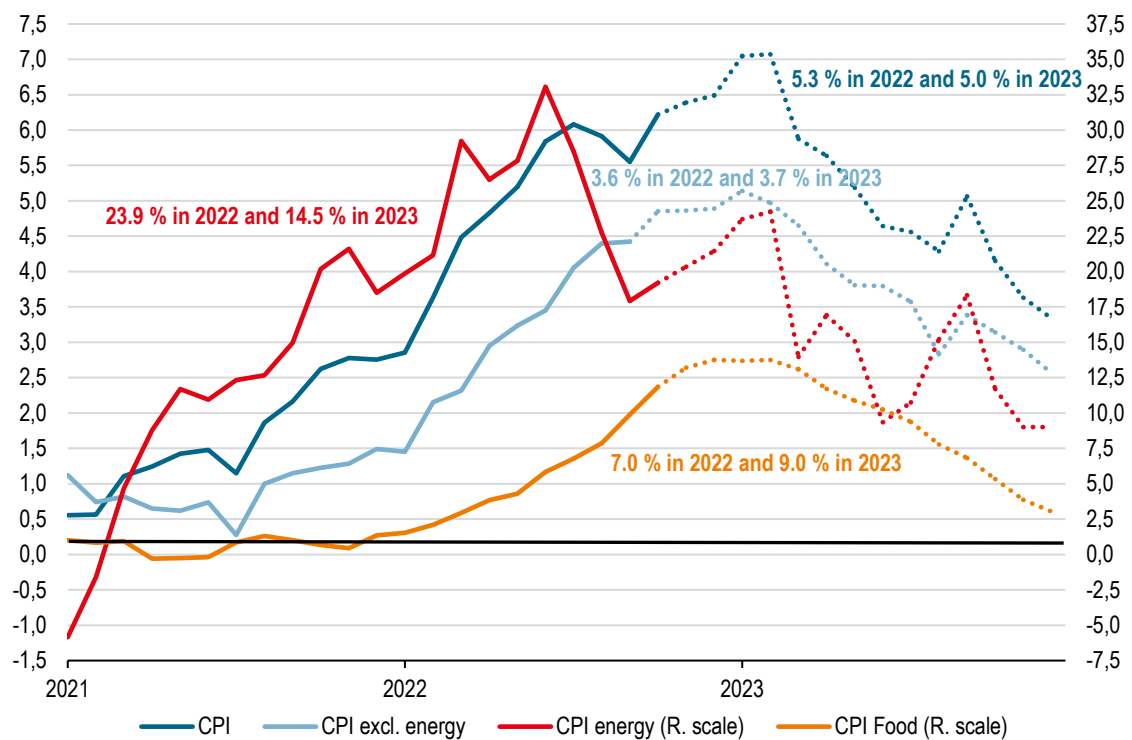
lower in France than in the euro area, the liquid fuel component contributed to 0.9 percentage point of HICP in France in September 2022 compared to 1.4 percentage point in the Euro Area. Only Italy has a lower 0.6 percentage point contribution of liquid fuels to HICP.

### French inflation expected to rise by 5.3% in 2022 and 5% in 2023

Accounting for second-round effects linked to minimum wage indexation and to nominal wage growth (under a price elasticity at 0.5<sup>4</sup>), we expect non energy inflation to rise by 3.8% in 2022 and 4.5% in 2023.

Total inflation is forecast to rise by an average 5.3% in 2022 and 5% in 2023. It should be noted that the abolition of the contribution for public broadcasting will lower the CPI by 0.25%, and contribute to moderate inflation at the end of 2022. Under the effects of higher gas and electricity prices in early 2023 and the abolition of the fuel discount at the end of 2022, French inflation is expected to peak at close to 7% in January-February 2023, decelerating towards 3.5% in the following months (Figure 7).

**Figure 7: Forecast CPI, CPI excluding energy and CPI energy**  
in %, year-on-year



Sources: Insee, authors' calculations.

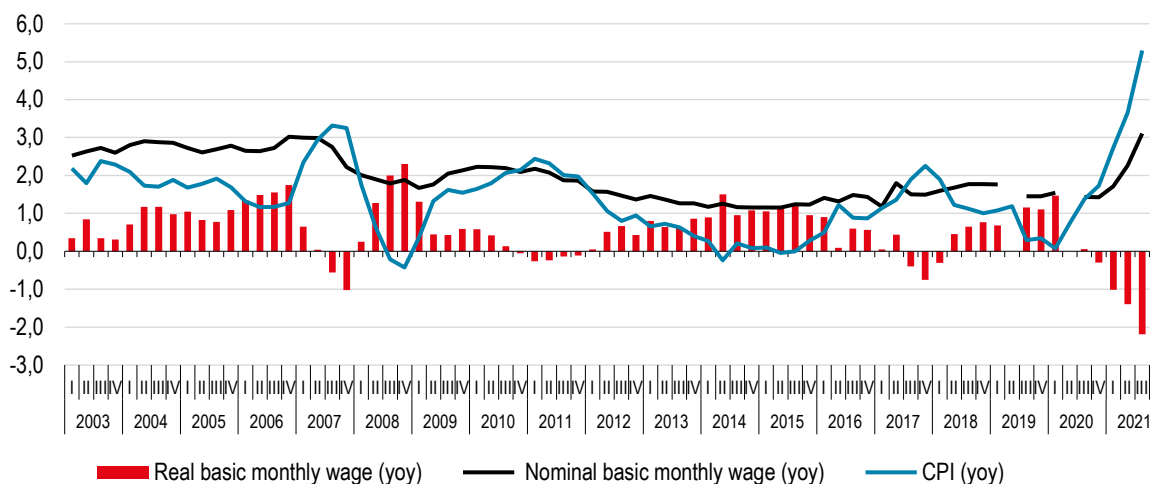
<sup>4</sup> Ceteris paribus, a price increase of 1% leads to a nominal wage increase of 0.5%. That means that there is no unitary indexation of nominal wages on inflation.

## Nominal wages rising less rapidly than inflation

The basic monthly wage<sup>5</sup> ('Salaire mensuel de base', SMB) is usually less volatile than consumer prices. In the last two decades, the SMB grew by an average annual 2.1% in nominal terms, while consumer prices rose by an annual 1.4%, implying annual real wage growth of 0.7%.

Since the start of the COVID19 crisis, the SMB and inflation have both risen by an average annual rate of 1.8%, leading to real wage stagnation. But two subperiods may be considered: from early 2020 to the third quarter of 2021 the SMB rose by 1.5% (m/m-12) while consumer prices grew by 0.8%, implying real wages growing in line with their trend; starting from the 3rd quarter of 2021, inflation accelerated from 1.7% to 5.3% in the 2nd quarter of 2022 (Figure 8). The SMB started to accelerate from the end of 2021, from 1.5% to 3.1% in the 2nd quarter of 2022, less rapidly than inflation. Real wages hence significantly fell in the last three quarters (-1.6% on average, q/q-4), down to -2.2% in the second quarter of 2022, i.e. the worst figure since the end of the 1990s, despite the highest nominal wage growth for more than 20 years.

**Figure 8: Basic monthly wage and CPI**  
in %, year-on-year



Sources: DARES, Insee, authors' calculations.

## Wage bargaining and expected wage increases

According to a survey by the Banque de France in June 2022, wage bargaining at industry level has led collectively agreed wages to increase by an average 3% (against 1% the last few years). In some industry sectors, such as in the automobile industry, wages increased by 4.5% in April 2022. Conversely, in sectors where wage agreements had been concluded earlier (chemical industry, pharmaceutical industry, furniture sales,...) wages grew more slowly, by around 2.5%.

<sup>5</sup> The basic monthly wage is calculated with a constant skills structure, without seasonal adjustment. This wage index also covers part time work, but does not incorporate bonuses or overtime.

In France, wage negotiations take place within branches and companies, but employers do not have to raise wages. Only the minimum wage (“SMIC”) benefits from an indexation mechanism (see below). The position of different union federations varies considerably regarding the response of wages to the inflation. While all the unions ask for salary increases to face the rise in the cost of living, only the CGT wants “to return to the sliding scale of salaries” which involves “a mechanism for the automatic increase of salary scales and retirement pensions on inflation. With immediate repercussions in all branches”<sup>6</sup>.

Many professional branches have launched wage negotiations: hotel-restaurant, metallurgy, textile, retail, construction, bank and insurance, automotive, transports but it is not possible at the moment to accurately predict the outcomes.

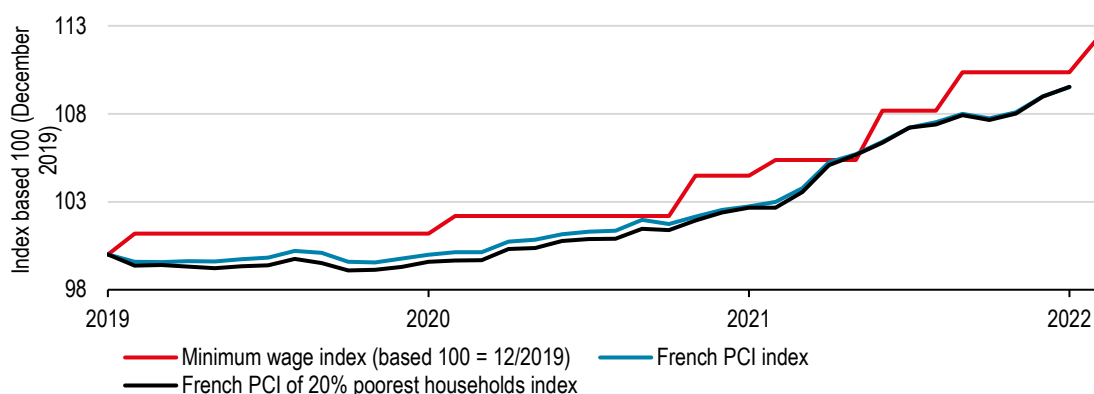
Overall, we expect the SMB to rise by 3.4% in 2022 and 3.8% in 2023, while inflation will be at 5.3% and 5%, respectively, leading the SMB to fall by 3.1% in real terms over those two years. The expected decrease of 1,9% of the real SMB in 2022 is the worst figure since 70 years.

### The minimum wage (SMIC)

In August 2022, the minimum wage, SMIC (*Salaire minimum interprofessionnel de croissance*), was 8% higher than 12 months earlier, while the CPI excl. tobacco, for the first quintile of households’ incomes, was 6.3% higher. The SMIC was raised three times in 2022 (in January, May, and August) as it is indexed on the CPI (Figure 9). In view of inflation forecasts for the last quarter of 2022, the SMIC may be expected to rise by 1.7% on 1<sup>st</sup> January 2023, only reflecting the rise in inflation. The hourly SMIC is set by decree. It relies on an indexation rule based on two components (see box 1) and may besides increase more rapidly on a discretionary basis (‘coup de pouce’).

In real terms, the SMIC’s purchasing power increased slightly in 2022. In January 2023, the nominal SMIC will be 12 percentage points above its December 2019 (pre-COVID19 crisis) level, while consumer prices would be 10 percentage points higher, i.e. a 2 percentage points gain in purchasing power.

**Figure 9: Evolution of hourly gross minimum wage compared to evolution of pieces**



Sources: Insee, authors’ calculations.

<sup>6</sup> <https://www.cgt.fr/actualites/france/interprofessionnel/salaires/preservons-le-pouvoir-dachat-avec-lechelle-mobile-des-salaires>.

### Box 1: The SMIC indexation mechanism

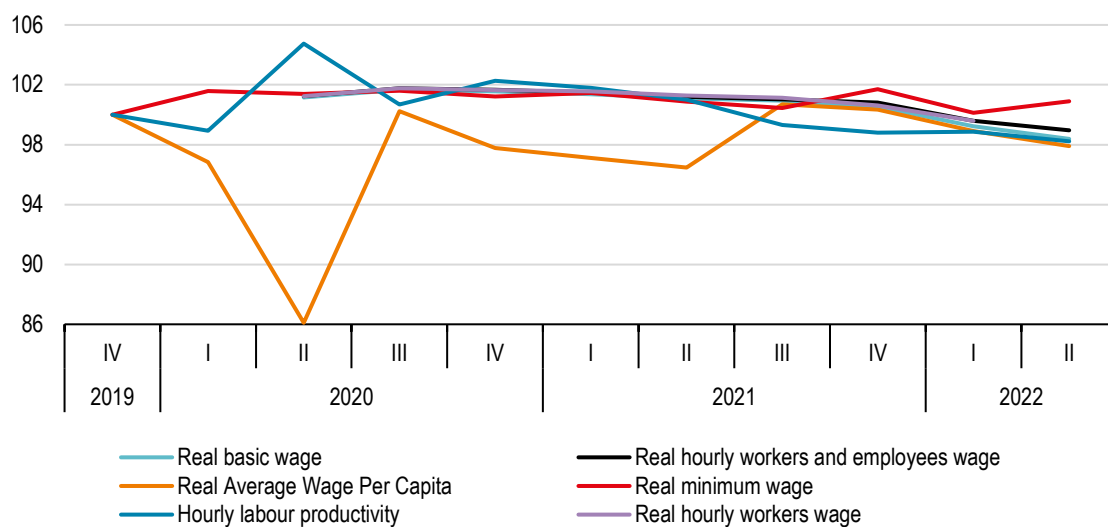
On 1<sup>st</sup> January 2021, 12% of workers in the non-farming market private sector<sup>7</sup> were directly affected by the hourly SMIC legal increases. Since a decree released in February 2013, the SMIC indexation has been based on two criteria.

First, an inflation criterion allowing to maintain the minimum wage in real terms. The reference index is the Consumer price index (CPI, as released by INSEE), for the first quintile of households' incomes, excluding tobacco. The indexation rule is: average of the annual CPI growth rate, smoothed over 12 months. Besides, in order to maintain the SMIC level in real terms during the year, in case of a sudden rise in inflation, the SMIC is automatically indexed on CPI, for the first quintile of households' incomes, excluding tobacco, as soon as this price index rises by more than 2% as compared to the last date of the SMIC adjustment.

Second, a criterion of purchasing power gains allows to index the SMIC on wage growth and hence avoid the SMIC lagging behind other wages. The reference index is: half of the purchasing power gains of the average hourly wage of workers and employees (*Salaire horaire moyen des ouvriers et des employés* (SHBOE), smoothed over 12 months.

An economic policy challenge is arising in the wage structure, as the SMIC's nominal growth is more rapid than other wages (Figure 10). Thus, the purchasing power is higher for the SMIC in the second quarter of 2022 than it was before the COVID19 crisis, whereas it is below for all salaries (by 1.6 percentage point) and for blue collar workers and employees (by 1 percentage point). The SMIC real wage growth is hence decorrelated from the rest of the wage structure, and also from losses in hourly labour productivity (by 1.8 percentage points).

**Figure 10: Purchasing power of several wage indexes and labour productivity**  
Index based 100 (December 2019)



Sources : DARES, Insee, authors' calculations.

<sup>7</sup> The reference group is: all employees, except apprentices, vocational training and temporary contracts.

## Social benefits price-indexed with a lag, leading to temporary losses in purchasing power

In France, social benefits are indexed on observed inflation over the past year (see box 2), which results in some lag in price-indexation, in particular when inflation accelerates. Old-age public pensions were increased by 1.1% in January 2022 and the other price-indexed benefits (family, RSA (Revenu de solidarité active), ...) were increased by 1.8% in April 2022, before the French government announced a discretionary rise in all social benefits of 4% in July 2022.

In October 2022, without accounting for one-off additional support measures<sup>8</sup>, the purchasing power of most social benefits is below its pre-crisis level (Figure 11). This is partly offset by the discretionary increase of July 2022. In October 2022, the purchasing power of public pensions will be 2.5 percentage points below its pre-crisis level, 2.1 for family benefits, 1.7 for the RSA, and 3.5 below for housing benefits.

According to the Draft Law for Social Security Financing (*Projet de loi de finances de la sécurité sociale*, PLFSS) for 2023, old-age pensions are to increase by 0.8% in January 2023, while the other social benefits are due to rise by 1.7% in April 2023.

### Box 2: French social benefits, indexation rules

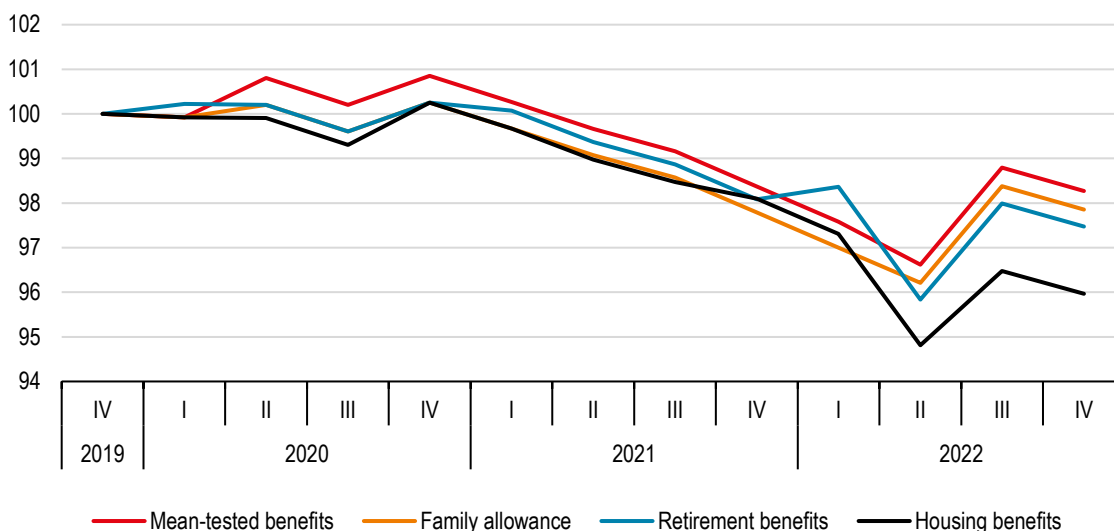
Since 2016, French social benefits have no longer been indexed to forecast inflation but to observed inflation. Previously, social benefits variations were sometimes not in line with observed inflation, depending on inflation forecasts, which required to amend indexation *a posteriori*. Now, pensions and all social benefits are indexed on past observed inflation (over the last 12 months). Thus, indexation of a benefit at month M, will be calculated as the average annual inflation over M-14 to M-3. Besides, the government may amend this rule in a discretionary manner, announcing a 'coup de pouce' or instead freezing, or limiting the indexation. The reference price index is the CPI excluding tobacco calculated by INSEE. Indexation dates differ according to benefits: public pensions indexation is recalculated on 1<sup>st</sup> January, family benefits and solidarity benefits on 1<sup>st</sup> April, housing benefits on 1<sup>st</sup> October.

The sudden rise in inflation in 2022 has led social benefits and pensions to be under-indexed, as inflation observed in 2021 was low. This is why the French government announced a discretionary revaluation in July 2022, bringing forward the indexation that would have otherwise taken place in October 2022 for housing benefits and in 2023 for pensions, family benefits, assistance benefits.

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<sup>8</sup> Several one-off support measures were introduced (prime Covid, prime inflation), for people entitled to assistance or housing benefits. Their amount takes family composition into account.

**Figure 11: Purchasing power of social, family and old-age benefits**  
Index based 100 (December 2019)



Sources: Institut des Politiques Publiques (IPP), authors' calculations.

## Unit labour costs and profit margins of non-financial companies

The profit margins of non-financial companies have remained at a relatively high level as compared to its pre-COVID 19 crisis (considering 2018 as a reference year, as in 2019 profits were impacted by the payment of two tax credits - CICE, Crédit d'impôt pour la compétitivité et l'emploi).

Margins increased by 1 percentage point of value added (VA) between 2018 and the third quarter of 2021 (Table 1) thanks to company tax cuts, and to one-off measures still in place in the third quarter of 2021, and also to a more rapid rise in the VA deflator as compared to consumer prices. On the contrary, the rise in unit labour costs contributed to cut profits by 2.5 percentage points of VA in that time period, due to higher real wage growth in a situation of labour productivity declines (Figure 12).

Over the last three quarters, as inflation accelerated, margins slightly deteriorated (-0.4 percentage point of VA between the 3<sup>rd</sup> quarter of 2021 and the 2<sup>nd</sup> quarter of 2022), despite lower companies' support linked to the COVID19 crisis and significant labour productivity losses, both elements having contributed to cut margins by 1.3 percentage point of VA over the three quarters. The fall in margins was limited by falling real wages (which raised margins by 1 percentage point of VA) and on the other hand because non-financial companies passed on higher import prices in their value added prices, the latter rising almost as much as consumer prices.

The relative stability of margins hides a strong heterogeneity at the sector level. On the one hand, there has been a strong improvement in the situation of "energy, water, and waste management" industries, and of transportation services since the start of the COVID19 crisis, and also since the rise in energy prices; on the other hand, the 'transport equipment' manufacturing industries have suffered a huge fall in margins (Figure 13).

Conversely, since the strong rise in energy prices, the situation had improved in some industries, such as in the agri-food sector, whereas it has deteriorated in the accommodation and food services activities, and services to households, mainly because of diminishing government support in a post-COVID situation. But it is difficult to make a link between margin rates at the industry level and the energy intensity of their production. For instance, the weight of energy in value added in the hospitality sector, services to households and services to companies' sectors is low although the deterioration of margins is the largest, whereas the weight of energy is high in industrial sectors, including agri-food, where margins have not deteriorated since the 3<sup>rd</sup> quarter of 2021. Margins declines in these sectors mainly result from the COVID19 crisis.

**Table 1: Decomposing the variation in non-financial companies (NFC) profit margins**  
In NFC's value added, percentage points

	2018 average	2021q3	2022q2
<b>Margin rate</b>	<b>31.5</b>	<b>32.6</b>	<b>32.2</b>
<b>Variation, as compared to 2018</b>		<b>1.0</b>	
Impact of ULC*, of which:		-2.5	
<i>Productivity</i>		-0.7	
<i>Real wages**</i>		-1.8	
Impact of taxation and companies' support		1.6	
Impact of relative prices***		1.9	
<b>Variation, as compared to 2021q3</b>			<b>-0.4</b>
Impact of ULC*, of which:			0.2
<i>Productivity</i>			-0.8
<i>Real wages**</i>			1.0
Impact of taxation and companies' support			-0.5
Impact of relative prices***			-0.1

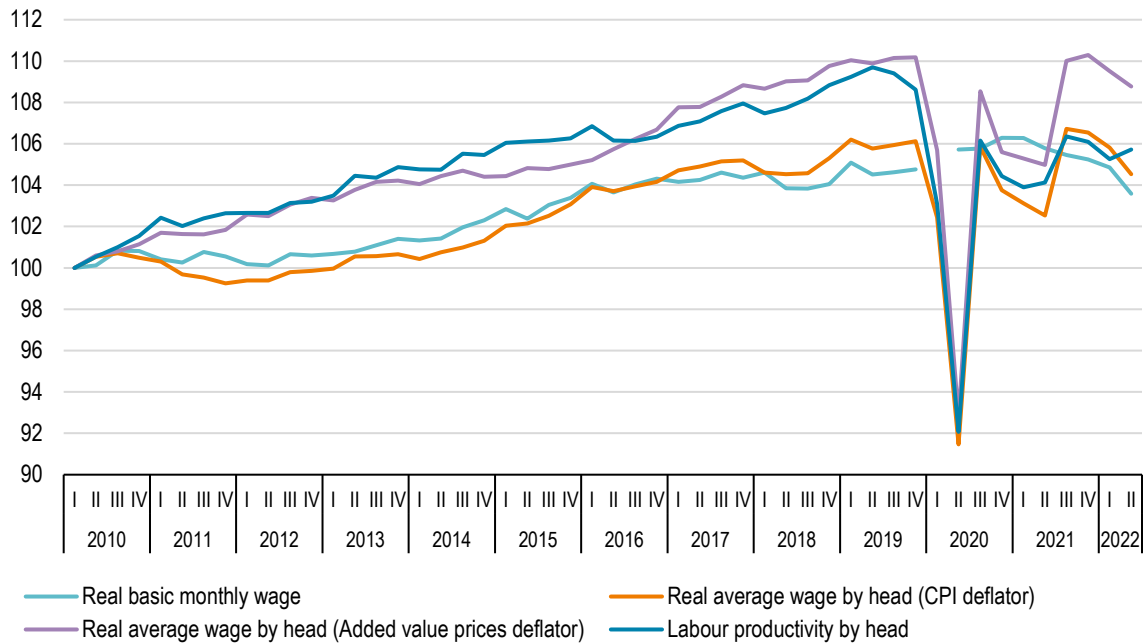
\* Unit labour costs

\*\* Deflated by consumer prices

\*\*\* Ratio of value added price to consumer price

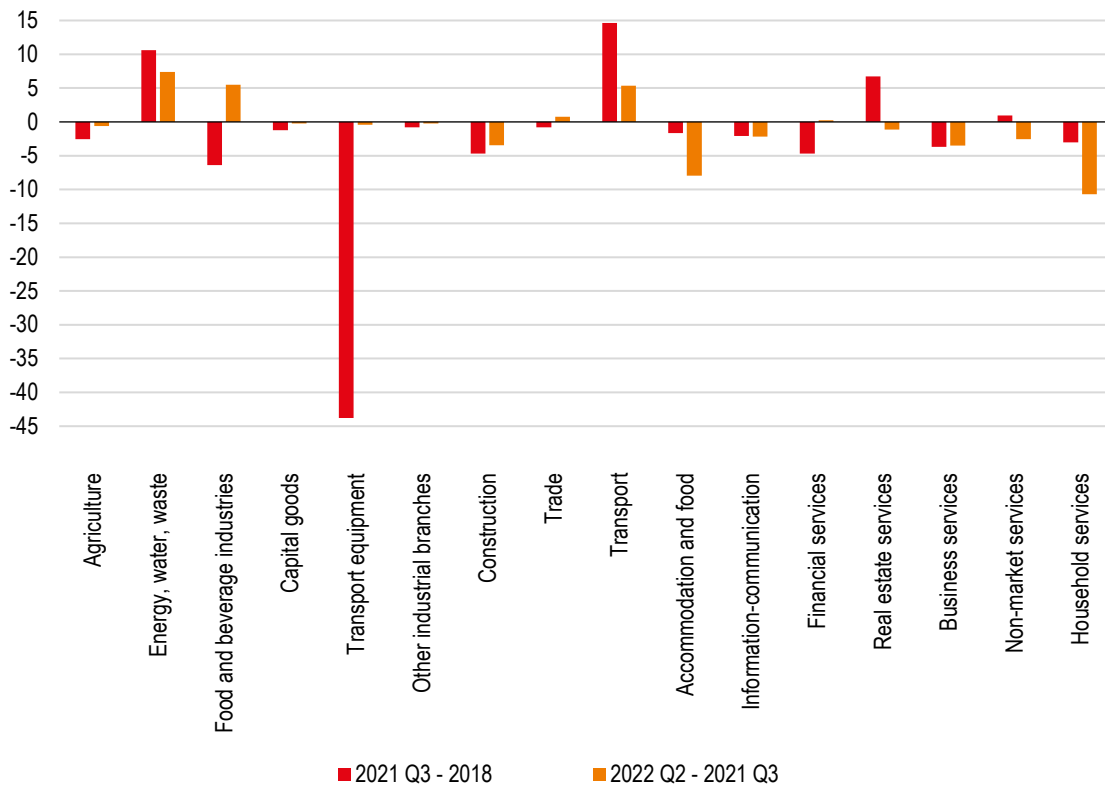
Sources: Insee, authors' calculations.

**Figure 12: Basic monthly wage, average wage by head and labour productivity**  
Index 100 in 2010 Q1



Sources: DARES, Insee, authors' calculations.

**Figure 13: Variations of profit margins by sector**  
Gross operating surplus (% of added value)



Sources: Insee, authors' calculation.



## Measures to limit the impact of the energy shock on households

Huge fiscal measures have been implemented to soften the impact of higher energy prices on households' purchasing power. First of all, the "tariff shield" froze regulated gas tariffs and limited the increase in regulated electricity tariffs to 4% in February 2022. On top of this came a 15 cents (excluded VAT) per liter discount on fuel prices from April to August 2022, rising to 30 cents in September-mid-November; this is due to be cut to 10 cents in mid-November-December.

In 2023, the Draft finance law (*Projet de loi de finances*, PLF) for 2023 maintains the tariff shield, although with a 15% rise in regulated electricity and gas prices at the beginning of the year. The discount on fuel prices, on the other hand, is to be abolished from January 2023.

These measures are estimated to cost 27 billion euros in 2022 for the tariff shield (18.7 billion for electricity and 8.4 for gas) and 45<sup>9</sup> billion in 2023 (34 billion for electricity and 11 for gas). The discount on fuel prices is to cost 8.1 billion in 2022. The total cost of these measures is 35 billion euros in 2022 (1.3% of GDP) and 45 billion in 2023 (1.7% of GDP). In total, 80 billion (2.9 points of GDP) will have been deployed in two years to limit the rise in energy prices (Table 5). On the other hand, the net cost for public finances is very different due to the lower charges linked to the public energy service (SPE), the latter corresponding to the compensation by the state for renewable energy producers in the difference between the price of the aid (purchase obligation or additional remuneration) and the market price of electricity or gas. However, the sharp increase in energy market prices since the end of 2021 has led to a sharp reduction in the cost of this public aid, or even to payments from producers to the State. These lower SPE charges would thus reduce the budgetary cost for the state by 48 billion euros (1.8 points of GDP).

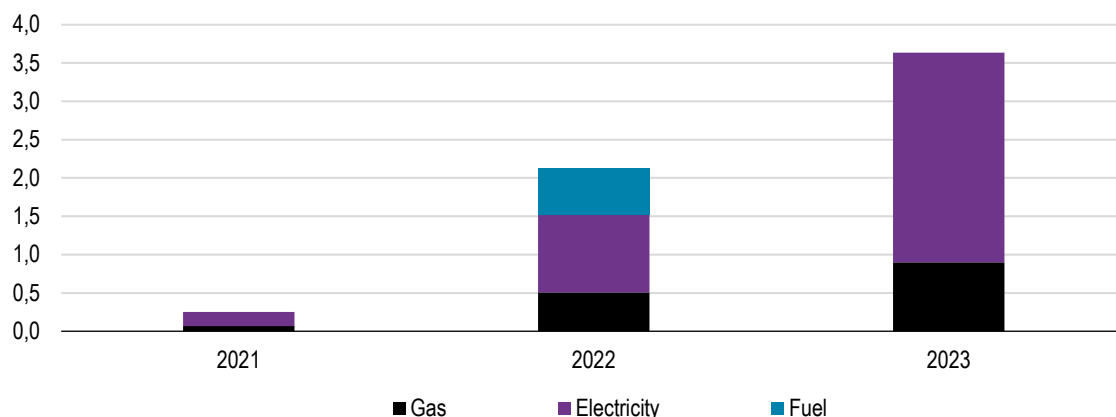
In view of accelerating inflation, in July 2022 the government also brought forward the price indexation of social benefits and the rise in civil servants' wage index (indice fonction publique) for a total cost of 10.4 billion euros in 2022 (0.4% of GDP). One should also add to the list: a one-off payment ("prime exceptionnelle de rentrée" and "chèque énergie exceptionnel") for a total of 2.8 billion (0.1% of GDP) in 2022. In the amount of 100 euros, to which is added 50 euros per child, this "prime exceptionnelle de rentrée" set up exceptionally for the year 2022 is intended for households with the most modest incomes (those benefiting from social minima and from the "prime d'activité"). About 11 million households will benefit from this aid. The amount of the "chèque énergie exceptionnel" is €100 to €200 depending on household income and composition. Its payment is planned from the end of 2022 relating to the increase in energy for the lowest-income households. 12 million households will benefit from it.

From a macroeconomic point of view, the measures taken by the government are effective in countering inflation in several respects: firstly, by limiting the rise in energy prices, it reduces the contribution of the energy component to inflation. According to our estimates, the tariff shield and the discount of fuel prices cut directly, i.e. excluding indirect and second-round effects, the CPI by 2.1 percentage points in 2022 (after 0.2 in 2021) and by 3.6 in 2023 (Figure 14).

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<sup>9</sup> The net cost of the tariff shield would be 16 billion only, mainly because of additional incomes linked to renewable energies, the price of which are usually subsidised.

**Figure 14: Contribution of the tariff shield and the discount of fuel prices to the cut of CPI in % points of CPI**



Sources: Insee, [Projet de Loi de finances 2023](#), OFCE's forecasts.

Secondly, the measures taken indirectly reduce inflation through the fall in the prices of intermediate consumption of suppliers, reducing the final price of companies. In its September 2022 study<sup>10</sup>, INSEE estimates that the indirect impact of the tariff shield represents an inflation saving of 1 percentage point by mid-2022. Thus, the measures taken to limit the rise in energy prices would have, through direct but also indirect effects, made it possible to reduce inflation by around 3%-points in 2022.

Finally, by reducing inflation, the expected second-round effects on wages and social benefits are limited. Lower inflation will mechanically contain the risk of an inflationary spiral, because automatic increases will be lower (minimum wage, rents, benefits, etc.) but also negotiated increases, with wages having to increase less to compensate for inflation. This effect has not been estimated to date but is far from negligible.

The tariff shield, a French singularity in 2022, is the main explanation for the inflation gap, of more than 3 points, between France and the Euro Area in 2022, with France currently having the lowest inflation in Europe. With much lower inflation than its main European partners, companies are improving their relative price competitiveness even more strongly.

If, from a macroeconomic point of view, this policy is costly but relatively effective, from a microeconomic point of view it serves to contain inequalities because the households most exposed to the energy shock are found in low-income households as well as a part of the middle class, these households having a higher-than-average weight of energy in their consumption. According to the above-mentioned INSEE study, the tariff shield reduces the inflation of the first five deciles more than that of the last three deciles. This diagnosis is also true between households in rural or suburban areas, which gain more from the shield than households in urban centers. Targeting the tariff shield would have weighed less on the public deficit and accentuated the redistributive effect of the measure, but would have posed the problem of threshold effects (what level of income should be used?) and eligibility criteria. Moreover, it would not have been possible to limit to income criteria alone (place of residence, family structure, type of energy consumed,

<sup>10</sup> For more details, see « La flambée des prix de l'énergie : un effet sur l'inflation réduit de moitié par le « bouclier tarifaire » », Insee Analyses, n°75, Septembre 2022.

distance to work, access to public transport, etc. are also relevant) and its implementation with multiple criteria seemed too complex in the short run

The main criticism of this mechanism is that by subsidising fossil fuels, it creates a weak incentive to reduce energy consumption and does not accelerate the energy transition. From this point of view, it would have been useful to make access to cheap energy conditional on an incentive for limiting consumption. Households could have benefited from the shield on 80% or 90% of their consumption, the rest being market price, while sparing the most modest households, those living in poorly insulated housing or those who have already made significant efforts in terms of their energy consumption. Unfortunately, the government has not made this choice and this proposal has not really been in the French debate before the vote to introduce the tariff shield.

### Energy measures: A dashboard

The measures implemented to contain the rise in energy prices are mainly measures to directly limit the rise in energy prices, with a progressive increase in budgetary costs in 2022 and 2023, and a total cost of 100 billion euro (3,7% of GDP)<sup>11</sup> (Table 2). These price measures amount to 80% of all fiscal measures implemented in 2021-23 to tackle the energy crisis (Figure 15).

Direct support to households diminishes over the 2021-2023 time period, such as the inflation allowance (indemnité inflation) of 100 euros allocated to 38 million people at the end of 2021, one-off energy cheques (at the end of 2021: 100 euros to 5.8 million households, i.e. households in the first two deciles; end of 2022: 200 euros for households in the first two deciles, 100 euros for households in the third and fourth deciles) or raising by 10% the “forfait kilométrique” (professional costs entailed by the use of vehicles, that households may deduct from their pre-tax incomes).

Last, as concerns companies, the tariff shield also applies to SMEs and very small enterprises. Sectoral aid measures for businesses were provided in 2022 for a budgetary cost of 1.1 billion euros, as well as specific aid for energy-intensive businesses in 2022 and continuing in 2023 (1.5 billion each year). At the end of October, the government strengthened support for businesses at risk of bankruptcy. For companies, state aid will be available in two ways. One – endowed with 7 billion euros – will ensure an immediate reduction in the electricity bills of small and medium firms (those that do not already benefit from regulated electricity sales tariffs). The other device – endowed with 3 billion euros – will be paid in the form of aid to large companies and medium size companies in difficulty because of energy prices, which will request it from state services.

The measures taken by the government to cut off the rise in energy prices have been rather well received and have not been the subject of major protests by the unions and employers.

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<sup>11</sup> As we as we have specified above the net costs is largely lower (1.9% of GDP) due to the SPE and it is almost divided by two.

**Table 2: Fiscal measures implemented to mitigate the impact of the energy price shock**

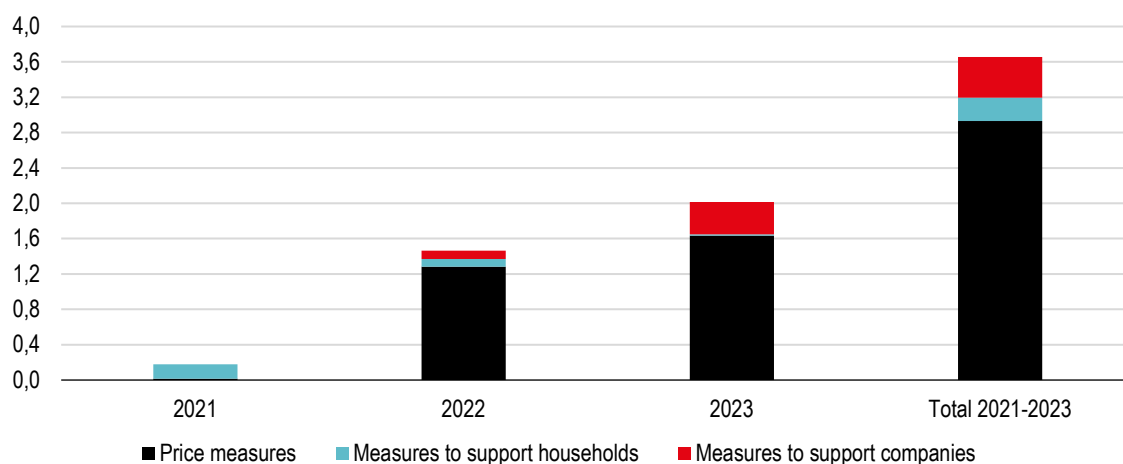
	2021		2022		2023		Total 2021-2023	
	Billion euros	% of GDP	Billion euros	% of GDP	Billion euros	% of GDP	Billion euros	% of GDP
<b>Price measures</b>	<b>0.4</b>	<b>0.0</b>	<b>35.2</b>	<b>1.3</b>	<b>44.9</b>	<b>1.6</b>	<b>80.5</b>	<b>2.9</b>
Gas (tariff shield)	0.4	0.0	8.4	0.3	11.1	0.4	19.9	0.7
Electricity (tariff shield)			18.7	0.7	33.8	1.2	52.5	1.9
Fuel prices (discount per liter)			8.1	0.3			8.1	0.3
<b>Measures to support households</b>	<b>4.3</b>	<b>0.2</b>	<b>2.4</b>	<b>0.1</b>	<b>0.4</b>	<b>0.0</b>	<b>7.1</b>	<b>0.3</b>
Inflation allowance	3.8	0.1					3.8	0.1
One-off energy cheque	0.5	0.0	2	0.1			2.5	0.1
Revaluation of « Forfait kilométrique »*			0.4	0.0	0.4	0.0	0.8	0.0
<b>Measures to support companies</b>			<b>2.6</b>	<b>0.1</b>	<b>10</b>	<b>0.4</b>	<b>12.6</b>	<b>0.5</b>
<b>Total gross cost</b>	<b>4.7</b>	<b>0.2</b>	<b>40.2</b>	<b>1.5</b>	<b>55.3</b>	<b>2.0</b>	<b>100.2</b>	<b>3.7</b>
<b>Lower SPE** costs</b>	<b>-2.0</b>	<b>-0.1</b>	<b>-17.3</b>	<b>-0.6</b>	<b>-29.0</b>	<b>-1.1</b>	<b>-48.3</b>	<b>-1.8</b>
<b>Total net cost</b>	<b>2.3</b>	<b>0.1</b>	<b>22.9</b>	<b>0.8</b>	<b>26.3</b>	<b>1.0</b>	<b>51.5</b>	<b>1.9</b>

\* Professional costs entailed by the use of vehicles, that households may deduct from their pre-tax incomes.

\*\* Service Public de l'Energie.

Sources: Fiscal documents, [Projet de Loi de finances 2023](#), OFCE's forecasts.

**Figure 15: Repartition of budgetary measures to tackle the energy crisis in % of GDP**



Sources: Insee, [Projet de Loi de finances 2023](#), OFCE's forecasts.

The major criticism from employers is that aid is not adapted to all situations and that it also has the unfortunate tendency to create distortions of competition, depending on whether certain companies benefit from it or not. Some argue that the threshold of 3% of turnover that energy consumption must represent to access this aid be removed.

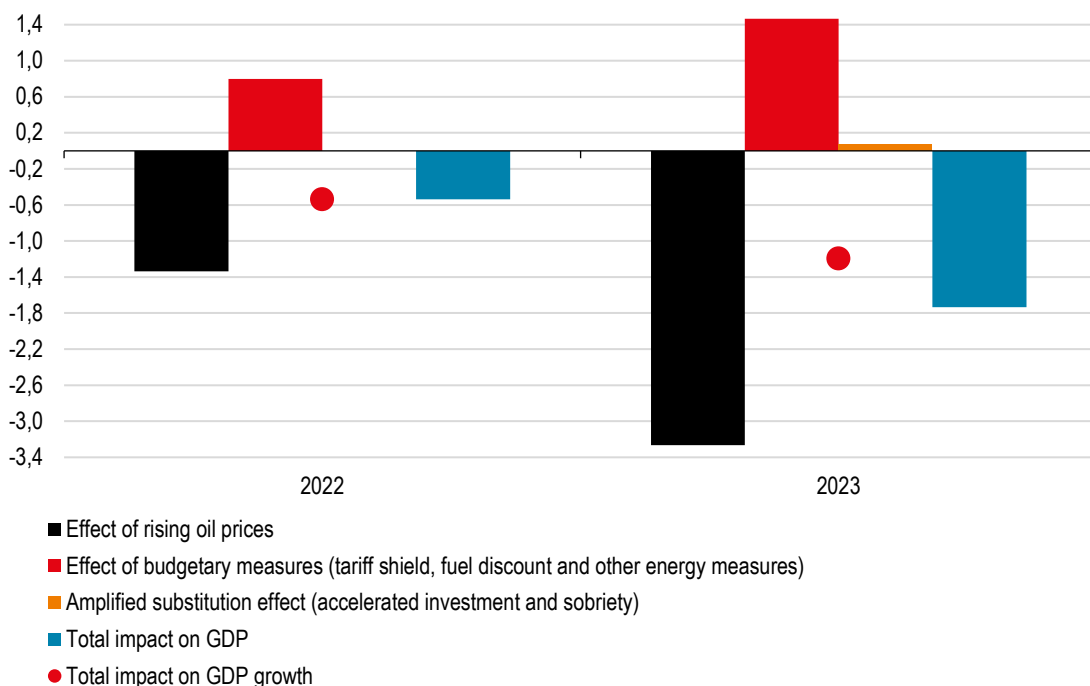
The CFDT advocated maintaining the tariff shield and proposed the creation of targeted assistance for workers who need their vehicle to get to work. The CGT considers that the tariff shield arrived a little late and that it would be necessary to return to better regulation of energy prices. Overall unions support larger wage increases to deal with inflation.

Unions and employers have proposed consensual measures on sobriety to save energy regulation of temperatures in the workplace, manage energy consumption and fight against energy waste, implementation of “referents for energy sobriety”, refusal of a systematic generalization of teleworking and the need to consider “longer-term investments” (building renovation, renewable energies).

## A huge impact of the energy shock on output, partly softened by fiscal measures

Energy prices are, by themselves, estimated to reduce French GDP by 1.4 percentage point in 2022 and 3.3 points in 2023, but the fiscal measures introduced to tackle the energy crisis soften the shock by 0.8 percent of GDP in 2022 and 1.5 point in 2023 (Figure 16). The whole impact of the shock on French GDP, accounting for fiscal measures and also from investment measures targeted at accelerating green transition and reducing fossil fuel consumption would amount to -0.6% in 2022 and -1.8% in 2023.

**Figure 16: Impact of the energy shock on French GDP**  
in % of GDP



Sources: Insee, [Projet de Loi de finances 2023](#), OFCE's forecasts.

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