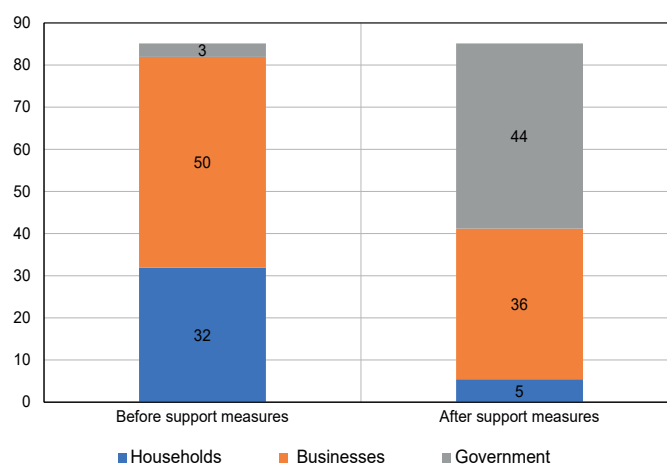


## The Distribution of Losses Caused by the Energy Terms of Trade Shock

*Guillaume Clavères*

- In 2022, the rise in energy prices and the depreciation of the euro caused a deterioration in France's terms of trade, defined as the ratio between export and import prices. As France is a net importer of oil and gas, the increase in their relative price automatically reduces the country's real income, i.e. its purchasing power. At the end of 2022, this loss in real income could reach €85bn, representing around 3 percentage points of GDP compared to 2019 (pre-pandemic levels).
- This estimate is obtained in a static ex-ante framework in order to isolate the energy shock prior to its propagation and behavioural changes. In a dynamic framework, import volumes may decline when prices increase, which can explain French Customs' slightly lower projection that the country's energy costs will cause GDP to fall by 2.5 percentage points. Businesses may also pass on some of the price increases to their exports: when taking into account price changes of non-energy imports and exports, the terms-of-trade shock declines to around 1.5 percentage points of GDP.
- With support measures, the French government is expected to shoulder more than half of real income losses in 2022, while households and businesses would directly bear 6% and 42% of the remaining estimated losses, respectively. As businesses would be able to pass on some of the rise in input prices to consumers relatively quickly and massively, it would add as much to the cost burden on households.
- These support measures have been effective at curbing inflation in France – which in October 2022 had the lowest rate of inflation of all European Union (EU) Member States, – protecting household purchasing power and preventing bankruptcies. However, effective energy-saving measures are also needed in order to facilitate changes to energy consumption behaviour.
- Currently funded by debt, the measures transfer the cost burden of France's energy expenses on tomorrow's generations. Although smoothing the cost over time is warranted given the magnitude of the shock, this offsetting cannot be a permanent solution.

**Distribution of real income losses in 2022 vs 2019 arising from the energy terms of trade shock, before individual behavioural changes (in €bn)**



Source: DG Trésor calculations.

How to read this chart: Ex-ante losses over the full year before behavioural changes and macroeconomic feedback, calculated relative to values in 2019.

# 1. France's loss in real income could reach €85bn in 2022 due to the energy crisis

## 1.1 France faces a significant deterioration in its terms of trade in 2022

The current rate of inflation in France and all European economies is primarily driven by the rise in energy prices. Historically, the French National Institute of Statistics and Economic Studies (INSEE) has reported that changes in the price of France's imports and exports tend to reflect fluctuations in the price of fossil fuels, of which France is an importer.<sup>1</sup> In the context of the ongoing energy crisis, the higher cost of energy imports is worsening the terms of trade, even if part of this import price shock can be passed on to export prices (Box 1).

Assessing the deterioration in the terms of trade arising from the energy crisis necessarily involves turning our attention to oil and gas price increases, as well as the depreciation of the euro, which drives up the price of oil, predominantly purchased in dollars (some 80% of it, according to Eurostat).<sup>2</sup> The role of electricity prices is not factored in to our calculations, beyond the rise in gas prices, because France is not generally a net importer of electricity.<sup>3</sup> The effect of the depreciation

of the euro on the non-energy trade balance is also excluded from our analysis since it is negligible.<sup>4</sup>

Regarding oil (Chart 1), the increase in its import price is due to both the higher price of oil in dollars and, to a lesser extent, the depreciation of the euro against the dollar. Based on the Brent price for crude oil, plus a refining margin (50% of France's oil imports are refined products), the price in euros of oil imports increases by an annual average of 77% between 2019 and 2022 (Box 2). This price rise incorporates the exchange rate effect, with an estimated 6% annual average depreciation of the euro between 2019 and 2022.

For gas (Chart 2), by weighting the monthly and annual products of the Title Transfer Facility (TTF) and the Gas Exchange Point (PEG) hubs that France uses to procure its gas supply, the increase in gas suppliers' procurement costs is estimated to be, on an annual average basis, around 650% higher in 2022 than in 2019 (Box 2). Regarding gas procurement strategy, we assume very low business hedging activity in advance of the delivery year (whether through futures trading or long-term contracts).<sup>5</sup>

### Box 1: Terms of trade and loss in real income

Terms of trade refer, for a given country, to the ratio between its export and import prices. All else equal, the rise in the price of energy imports (oil and gas) and the depreciation of the euro are causing a deterioration in France's terms of trade in 2022.

In an open economy, fluctuations in the terms of trade create a difference between real GDP growth, i.e. the goods and services produced by a country, and real national income growth, i.e. the amount of goods and services that can be purchased with a country's GDP level, representing its total purchasing power. For a given GDP level, if there is a deterioration in the terms of trade, or similarly if import prices increase faster than export prices, then the country's real income falls.

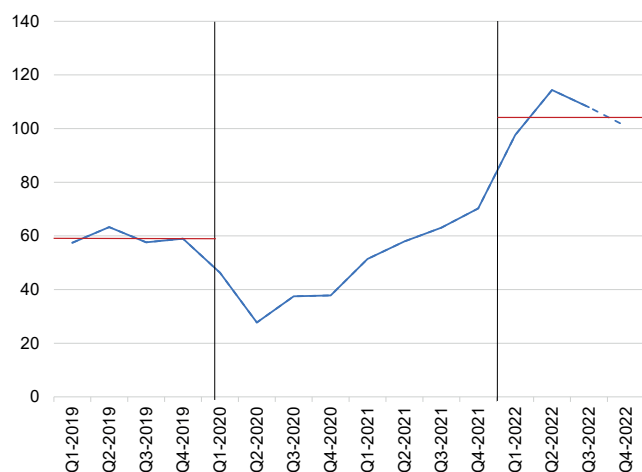
This paper is concerned with the external terms of trade, which differ from the domestic terms of trade (the ratio between the price of GDP and the price of final domestic demand) by a factor which depends on the share of foreign trade in GDP.

- (1) See V. Amoureux, N. Carnot and T. Laurent (2022), "Termes de l'échange et revenu intérieur réel : mesurer le pouvoir d'achat de la nation", Blog de l'Insee, September.
- (2) This figure corresponds to the invoicing currency of the imported oil as defined by Eurostat, i.e. the currency in which the commercial invoice is drawn up.
- (3) Since the start of 2022, however, France has experienced several periods as a net importer of electricity, owing to the unusually low level of nuclear power generation.
- (4) France had a foreign trade balance surplus of €21bn for non-energy goods and services in 2019, according to French Customs and the *Banque de France*.
- (5) Assuming that business hedging activity in advance of the delivery year is around 7% of total supply, in line with the formula for calculating regulated retail prices for gas.

We are looking to assess the deterioration in the terms of trade directly induced by the energy crisis before the potential transfer of its associated costs to the price of exports. This method is discussed in section 1.3.

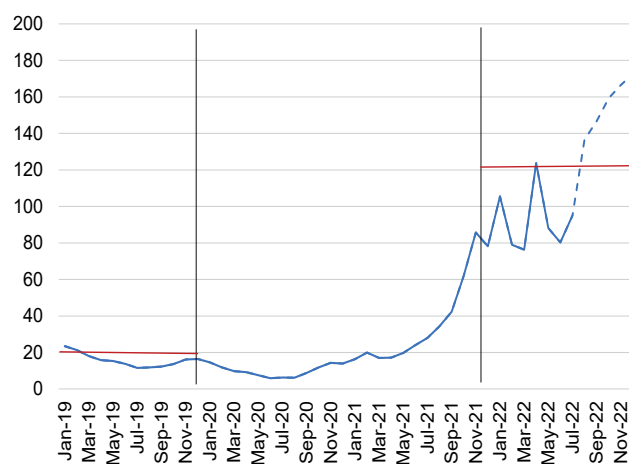
Here we assess the deterioration in the terms of trade which has been caused directly by the energy crisis before any potential impact on export prices. This method is discussed in point 1.3.

**Chart 1: Quarterly prices of imported oil in €/barrel**



Source: Commodity Research Bureau and DG Trésor calculations. Brent price plus a refining margin, quarterly averages, last data point Q2 2022; thereafter forecasts from the 2023 Budget Bill (dotted line).

**Chart 2: Gas suppliers' estimated procurement costs (€/MWh)**



Source: DG Trésor calculations and forecasts, Reuters. For end-2022, gas price quotations are used from the 15 July to 15 August 2022 period. Last data point: July 2022, thereafter forecasts from the 2023 Budget Bill (dotted line).

## Box 2: Sources and methodology

Our estimates of losses and their distribution among institutional agents are based on a static framework, with calculations made at the end of August 2022 in line with the assumptions from the 2023 Budget Bill.

The increase in the price of oil is estimated on an annual average basis using for end-2022 the average futures price for the period running from 1 to 18 August 2022. The price used is the Brent price plus a refining margin, while incorporating the effect of the depreciation of the euro (nominal bilateral exchange rate against the dollar, with prices observed up to 18 August and a freeze corresponding to the average for the period from 1 to 18 August for end-2022). The increase in the price of gas is estimated using a simplified formula for calculating regulated retail prices (TRV), with a weighting of various gas market products: 27.4% for futures (M+1) on the TTF, 65.4% for futures (M+1) on the PEG and 7.2% for futures (Y+1) on the TTF. TTF and PEG refer to price indices commonly used by French suppliers for purchasing gas. Given that this analysis was undertaken in late August 2022, procurement costs for end-2022 are estimated based on prices on futures markets observed for the period running from 15 July to 15 August 2022.

These price increases are applied to oil and gas trade balances for 2019 to obtain aggregate losses in billions of euros, with said losses distributed among institutional agents (households, businesses, government) based on consumption data from the energy reports “*Bilan énergétique de la France pour 2019*” and “*Consommation d’énergie par usage du tertiaire*” prepared by the Data and Statistical Analysis Department of the Ministry for the Ecological Transition. This ex-ante estimate represents gross direct losses before the introduction of support measures, which transfer part of the losses of households and businesses to the government.

The support measures taken into account in the analysis, as outlined in the 2023 Budget Bill, do not include all anti-inflation measures for 2022 (totalling €48.6bn). In particular, the exceptional back-to-school benefit, support for storage of natural gas and sectoral subsidies for businesses are excluded from the analysis since they do not directly address the rise in energy prices. Around 40% of the early increase in pensions and welfare benefits is factored in, corresponding to the contribution of energy prices to inflation. For measures targeting more than just households (e.g. the one-off energy subsidy) or businesses (e.g. subsidies), the distribution of support between businesses and households is estimated based on consumption data used to determine the distribution of direct losses.

## 1.2 The rise in energy prices automatically reduces France's real income

Given that France is a net importer of oil and gas, the higher prices of these products since 2019 are driving up the country's energy costs and causing a loss in real income. Using 2019 as the baseline year allows us to compare import prices in 2022 with those prior to the war in Ukraine and the COVID-19 crisis. Since the pandemic significantly affected France's foreign trade and energy prices due to the temporary collapse in demand, 2020 and 2021<sup>6</sup> do not constitute relevant bases for comparison.

In a static framework, i.e. one which does not factor in the responses of economic agents, oil and gas price increases, applied to 2019 trade deficits and driven up by the depreciation of the euro, represent a real income loss of around €85bn in France, or more than 3 percentage points of GDP (Table 1). It is estimated that this loss is mainly attributable to the higher cost of gas (€56bn) and, to a lesser extent, to the increased cost of oil (€29bn) because, although the trade deficit was lower for gas than for oil in 2019, the rise in the price of gas was much greater than that of the price of oil. This estimate is subject to a high degree of uncertainty, not least because of the volatility of oil and gas prices that affects price increase forecasts for end-2022. If prices were to rise less than the 2023 Budget Bill projects, the estimated losses would be lower, and vice versa.<sup>7</sup>

## 1.3 Several adjustment channels are reducing the actual loss in real income versus the €85bn gross ex-ante estimate

This proposed figure of €85bn in real income losses is to be interpreted as a static ex-ante estimate that excludes adjustment channels, in order to isolate the shock itself prior to propagation and behavioural changes, which should partially offset the effects of higher prices for imported energy products.

First of all, businesses are able to pass-through a portion of the increased production prices into the price of exports. Doing so would reduce the energy crisis-induced deterioration in the terms of trade. Applying the rate of change of non-energy import and export deflators (according to INSEE, up 14.9% and 18.2%, respectively, between Q1 2019 and Q3 2022) to 2019 trade balances would reduce the negative impact of the terms-of-trade shock to approximately 1.5 percentage points of GDP.

In addition, import volumes may decline relative to those in 2019 in response to the rise in energy prices and due to macroeconomic feedback effects (e.g. decline in activity and consumption), which would reduce energy costs. By way of comparison, the "net" aggregate loss may be approximated using data for oil and gas trade balances from French Customs,<sup>8</sup> which estimates a deterioration of 2.5 percentage points of GDP in 2022.<sup>9</sup>

**Table 1: Aggregate real income losses for France in 2022**

	Price increases in € between 2019 and 2022		Trade balance in 2019 (in €bn)	Real income losses in 2022 (in €bn)	Real income losses in 2022 (in percentage points of GDP)
Energy	Gas	654%	-9	-56	-2.1
	Oil	77%	-37	-29	-1.1
<b>Total</b>				<b>-85</b>	<b>-3.2</b>

Source: INSEE, French Customs, Reuters, Commodity Research Bureau, DG Trésor calculations.

How to read this chart: The GDP level for 2022 is in line with the 2023 Budget Bill.

(6) See France's 2022 foreign trade report, "Rapport du commerce extérieur de la France", DG Trésor.

(7) After an update of price increase calculations on 3 November 2022, aggregate losses are estimated to be €82bn.

(8) Trade balances in value terms, incorporating both changes in price and volume, calculated on a CIF-FOB basis. In French Customs' reporting, France's aggregate trade balance is expressed in FOB-FOB terms, the result of an adjustment allowing the shift from a CIF (cost, insurance and freight) import valuation method to a free-on-board (FOB) valuation method; however, balances are expressed in CIF-FOB terms in trade balance breakdowns.

(9) By extending the trade balance for the first three quarters of 2022 over 12 months, adjusted for seasonal variations and business days.

Lastly, macroeconomic and global feedback mechanisms have the potential to influence the magnitude of aggregate losses with uncertain downward or upward effects, through international prices and global demand for French exports. For example, the depreciation of the euro can bring about gains in cost-competitiveness. Additionally, the symmetric effect of the rise in energy prices for our main trading partners is expected to depress demand for French goods and weigh on our exports as a result. A macroeconomic analysis using the Mésange model, which takes into account the effect of reduced volumes in response to price increases as well as

macroeconomic feedback mechanisms (excluding feedback effects through the global economy), estimates a GDP loss of around 2.8 percentage points over the long term (Box 3). Over a one-year horizon, the GDP loss would be lower, at around 1.6 percentage points. In fact, with the Mésange model, economic agents are relatively slow to change their behaviour after a shock (for instance, household consumption in the model responds belatedly to changes in purchasing power). Accordingly, a certain amount of time must pass before we see the full effect of the deterioration in the terms of trade on the economy.

### Box 3: Estimate of the cost of energy price increases using the Mésange model

In the static estimate, the rise in energy prices and the depreciation of the euro are measured at constant volumes. The Mésange macroeconomic model<sup>a</sup> takes into account changes in trade volumes, which may curb losses, as well as macroeconomic feedback mechanisms which, conversely, increase losses. Following a depreciation of the euro, import volumes decline in the short run, whereas export volumes rise. However, higher prices for imported energy products, which increase companies' production costs, reduce export volumes.

To illustrate, a permanent depreciation of the nominal effective exchange rate (NEER) – calibrated in line with the depreciation of the euro against the dollar used in the static analysis between 2019 and 2022, and assuming constant exchange rates with the other currencies in the NEER basket – would increase activity by 0.05 percentage points of GDP the first year compared to the baseline scenario and by 0.1 percentage points of GDP over a two-year horizon. In the long term, the impact on activity and the effect on employment would be virtually zero (Table 2).

Conversely, a permanent increase in the price per barrel of oil – calibrated in line with the energy (oil and gas) price increases used in the static analysis between 2019 and 2022, excluding the depreciation of the euro – would decrease activity by 1.6 percentage points of GDP the first year compared to the baseline scenario and by 3.9 percentage points of GDP over a two-year horizon. In the long term, activity would remain below its initial level (down 2.8 percentage points of GDP compared to the baseline scenario), and the trade balance would run a larger deficit (down 3.1 percentage points of GDP compared to the baseline scenario) due to lastingly higher energy costs. For all time horizons, increased energy prices considerably dominate the exchange rate effect (Table 2).

It should be noted that these results concern real GDP, as opposed to the country's real income, with which the rest of this paper is concerned (see Box 1 above for an explanation of the difference between these two variables). The Mésange model is not designed to measure the impact of shocks to the country's real income.

**Table 2: Mésange model estimates (changes in percentage points of GDP compared to the baseline scenario)**

	First year	2-year horizon	Long term
Permanent depreciation of the NEER	+0.05	+0.1	≈0
Permanent increase in oil and gas prices (excluding currency depreciation)	-1.6	-3.9	-2.8
Cumulative effect	-1.6	-3.8	-2.8

Source: Mésange model, DG Trésor calculations.

a. Dufernez et al. (2017), "Le modèle macroéconométrique Mésange : réestimation et nouveautés". DG Trésor Working Document No. 2017/04 – May 2017.

## 2 The government is expected to shoulder more than half of real income losses induced by the energy crisis in 2022

### 2.1 Without support measures, the ex-ante real income losses would have been borne by households and businesses

Without support measures, businesses would have incurred 59% of the €85bn in aggregate losses related to the rise in energy (oil and gas) prices, while households and the government sector would have sustained 37% and 4% of the losses, respectively. These direct losses (before taking into account government support) are estimated using the distribution of the consumption of oil and gas among institutional sectors in 2019, assuming that the breakdown of energy consumption is the same for the imports of these products (Table 3).

### 2.2 Support measures mitigated the energy crisis's impact on the economy

Public finances are covering in 2022 a significant portion of the losses incurred by households and businesses, through the measures adopted by the government to curtail the impact of energy price increases (Table 4). Regarding households, measures aimed at improving purchasing power can bolster nominal income (e.g. the one-off energy subsidy and the increase in pensions and welfare benefits) and limit the erosion of real income linked to price increases (e.g. the cap on energy prices, known in French as the *bouclier tarifaire*). For businesses, energy price cap measures can curb the rise in production costs, while subsidies can help maintain their revenue.

**Table 3: Consumption among institutional sectors in 2019**

	Gas		Oil	
	Annual consumption (TWh)	Annual consumption (as a %)	Annual consumption (megatonnes of oil equivalent)	Annual consumption (as a %)
Households	147	30%	28	51%
Businesses	315	65%	25	47%
Government	23	5%	1	2%
<b>All sectors</b>	<b>485</b>	<b>100%</b>	<b>54</b>	<b>100%</b>

Source: DG Trésor calculations from the energy reports "Bilan énergétique de la France pour 2019" and "Consommation d'énergie par usage du tertiaire" prepared by the Data and Statistical Analysis Department of the Ministry for the Ecological Transition.

**Table 4: Measures to mitigate the rise in energy prices in 2022**

Measure	Amount (in €bn)
One-off energy subsidy	1.8
Gas price cap – compensation for suppliers	8.1
Electricity price cap – cuts in the domestic consumption tax on electricity for end-users	7.4
Electricity price cap – compensation for suppliers	11.3
Fuel rebate	7.6
Subsidies for energy-intensive companies	1.5
10% increase in the kilometric scale for tax deductions	0.4
Early increase in pensions and welfare benefits	2.5
Subsidy for low-income households relying on fuel oil for heating	0.2
<b>Total</b>	<b>40.8</b>

Source: *The 2023 Economic, Social and Financial Report appended to the 2023 Budget Bill*. The estimate does not take into account all anti-inflation measures from 2022 (totalling €48.6bn).

After taking into account these measures (totalling €40.8bn in 2022), households would sustain just 6% of aggregate direct losses (as end-users of energy products), whereas businesses would incur 42% of them (Chart 1). This distribution of support is established by dividing up the measures among households and businesses (see Box 1).

The distribution of direct losses after adjustment for support measures corresponds again to an ex-ante estimate: the estimate of the remaining portion of losses borne by businesses does not take into account the adaptation of their procurement strategies or their ability to cushion the shock by raising prices for their customers.

In particular, the energy market hedging strategies of businesses and suppliers are diverse and the losses incurred by businesses (in billions of euros) are calculated according to their share in total final gas consumption (Table 3). If French businesses or suppliers (excluding financial corporations) turn out to have hedging instruments exceeding those used in our analysis, our proposed estimate would

overstate the short-term losses incurred by the economy and businesses in 2022. A solid level of business hedging activity in 2022 would, however, carry forward some of the losses to 2023 (when contracts expire and are renewed at market price).

Businesses may also pass on some of their increased production costs to customers, which our estimate does not take into account. In addition to their ability to transfer some of the cost overrun to foreign trading partners by raising export prices, they may pass on some of the rise in input prices to end-users (i.e. households and, to a lesser extent, the government sector), which would increase the cost burden on households. This transfer of higher energy prices to customers would occur relatively quickly and massively (for instance, based on the Mésange model, 80% of the rise in production costs would be passed on to final household consumption prices over a one-year horizon). It reduces the balance to be paid by businesses while increasing that of households by as much, before taking into account second-round effects, however, such as

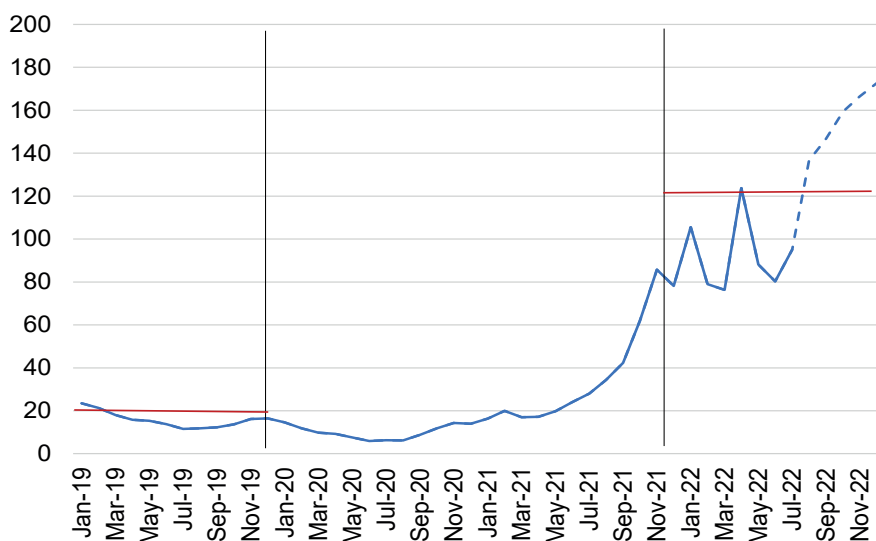
wage increases in response to inflation, which can more evenly distribute the losses among households and businesses. These second-round effects complicate the estimate of the final distribution of losses among businesses and households. Moreover, businesses have different exposures to the energy crisis, with some of them generating greater revenue due to the rise in prices (e.g. some energy generating companies). The estimate of “average” losses obscures, therefore, the likely considerable diversity in situations faced across the economy.

Although France’s loss in real income following the rise in energy prices is inevitable, it can be cushioned for some economic agents through government action. Based on the assumptions used in the estimate, public finances have shouldered more than half of direct real income losses induced by the rise in oil and gas prices in 2022 (52% of losses), resulting in an increase in general government debt. However, this estimate also corresponds, for purposes of consistency, to a “gross” cost for public finances, partially offset by macroeconomic feedback effects

(protecting activity maintains government revenue) and by the generation of additional revenue due to higher energy prices, such as that from the levy known as the contribution to the public electricity service (CSPE).

Support measures have been particularly effective at protecting household purchasing power. The cap on gas and electricity prices in combination with the fuel rebate is estimated to have directly limited the rise in the Consumer Price Index (CPI) by more than 2 percentage points on an average annual basis in 2022, compared to a scenario without measures.<sup>10</sup> INSEE, which incorporates these measures’ indirect effect on other products, estimates that the rise in the CPI was reduced by a total of 3 percentage points year over year in the second quarter of 2022.<sup>11</sup> This is in addition to direct support measures to shield household income, which limited inflation by 1.2 percentage points in 2022. These measures taken together have safeguarded household purchasing power in 2022 (unchanged from 2021), versus a deterioration of 3.5 percentage points without these measures.<sup>12</sup>

**Chart 3: Rise in the Harmonised Index of Consumer Prices (as a %, year-over-year change)**



Source: Eurostat, HICP; Last data points: October 2022 (flash estimate).

(10) See the 2023 Economic, Social and Financial Report.

(11) A. Bourgeois., R. Lafrogne-Joussier (2022), “La flambée des prix de l’énergie : un effet sur l’inflation réduit de moitié par le bouclier tarifaire”, *Insee Analyses*, no. 75.

(12) See the 2023 Economic, Social and Financial Report. The measures used to calculate changes in purchasing power include measures that were not taken into account in Table 4.



Owing to these support measures, France had the lowest inflation rate of all EU countries in October 2022: according to Eurostat figures from October, the country's annual inflation rate was 7.1% as measured year on year by the Harmonised Index of Consumer Prices (HICP), versus an average of 11.5% for the EU as a whole and 10.6% for the euro area

(Chart 3). While energy contributed 4.2 percentage points to the inflation rate in the euro area in October, it contributed only 1.8 percentage points to France's inflation rate. Compared to other major European countries, France has undertaken some of the largest fiscal packages to counter inflation in 2022 (Box 4).

#### Box 4: Comparison of measures adopted in Europe to counter rising inflation

In order to compare the measures undertaken by France, Germany, Italy and Spain, our scope goes beyond the measures directly addressing the rise in energy prices, in that it also includes long-term measures, such as income tax cuts, where they constitute part of an anti-inflation package (Table 5).<sup>a</sup> The measures featured in our comparison cover the period extending from mid-2021 to 3 November 2022.<sup>b</sup> The estimates are subject to a certain degree of uncertainty, depending on changes in prices and actual disbursements. Our analysis does not take into consideration the possible extension of some measures or the introduction of new measures down the line.

Within this scope, the measures implemented in France in 2022 are predominantly made up of schemes to limit energy price increases, like the cap on energy prices (gas and electricity) and the fuel rebate. Support in Germany is mainly provided by way of transfers to households and energy tax cuts.<sup>c</sup> In Italy, measures encompass support for household income, business subsidies and energy price regulation, while those in Spain are focused on consumer energy prices, via tax cuts and lower prices at the pump.

**Table 5: Anti-inflation measures in 2022**

	Measures in 2022 (in €bn)	Measures in 2022 (as a % of 2022 GDP)
France	54	2.1%
Germany	60	1.6%
Italy	53	2.8%
Spain	17	1.3%

Source: DG Trésor calculations, estimates based on measures announced as of 3 November 2022.

- The total amount for France differs from that shown in Table 4 above because it includes the civil service pay rise, elimination of the public broadcast licence fee, sectoral subsidies, the back-to-school benefit and the full increase in pensions and welfare benefits.
- Corresponding to an update of the comparison presented in Box 2 of Trésor-Economics No. 312, "World Economic Outlook in Autumn 2022: The Economy Is Bruised, But Not Broken", September 2022.
- The German government announced at the end of September a €200bn relief plan, but it mainly concerns 2023 (when gas and electricity price caps will take effect). Of the plan's measures, our calculation only incorporates the gas "advance payment", with the government covering German gas consumers' December bill (€8.9bn in total assistance).

### 2.3 Other mechanisms will gradually have to pick up the baton to absorb the loss in real income

The deterioration in the terms of trade induced by the rise in energy prices has led to a loss in real income in France which, while mainly covered by public finances for the time being, will ultimately have to be distributed among other economic agents.

Although the measures undertaken have a moderating effect on prices in the near term, they come at a high cost for public finances. What is more, they slow down the adjustments needed in the medium term if prices continue to remain high, as well as the achievement of targets essential to the climate transition and energy sovereignty. Concomitantly, effective energy-saving measures can contribute to such adjustments.

In addition, by absorbing the higher cost of energy and suppressing efforts to reduce the amount consumed, the measures are funding a transfer of wealth to gas- and oil-exporting countries, which are seeing a boost in their real income thanks to the improvement in their terms of trade, driven by the increase in the price of their exports. In 2019, France imported the bulk of its oil and gas from the United States, Russia and Saudi Arabia.<sup>13</sup>

Lastly, currently funded by debt, support measures transfer today's energy costs to tomorrow's generations. Although smoothing the cost over time is warranted given the magnitude of the shock and allows the inflation rate in France to remain the lowest in the euro area, this offsetting cannot be a permanent solution.

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(13) For the October 2021 to September 2022 period, France imported most of its oil and gas from the United States, Russia and Saudi Arabia (excluding transit countries such as Belgium and Germany).



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