Growth is holding up, inflation too

Economic outlook

15 March 2023

Insee

Measuring, understanding

The issues of Economic outlook are available as soon as they are translated on the INSEE website **www.insee.fr**.

ISSN : 2827-4660
ISBN : 978-2-11-162386-6

Completed on 14 March 2023

Growth is holding up, inflation too

Growth is holding up, inflation too

One year on, three years on …

A year after the start of the war in Ukraine, three years after the first lockdown in 2020, western economies have arguably withstood these shocks better than had been feared, but they still run the risk of high inflation. Countries are not all exposed to these shocks to the same extent, especially to the war in Ukraine and the energy crisis: the United States is undoubtedly less affected than Europe; and within the Eurozone, France is probably less under threat than Germany and those countries whose energy supplies before the war were largely dependent on Russian gas.

When we compare the main macroeconomic indicators published recently by INSEE to their levels a year ago and three years ago, we see both the impact of the economic shocks and the relative resilience of the French economy. At the end of 2022, French quarterly Gross Domestic Product (GDP) was slightly more than 1% above that at the end of 2019 (compared with almost -1% for Spain and the United Kingdom, 0% for Germany, and almost 2% for Italy) and 0.5% above that of Q4 2021. After the strong rebound after lockdown, French activity slowed markedly in 2022 but quarterly growth remained slightly positive at year's end. Payroll employment was more buoyant than activity, partly due to apprenticeships: in December 2022, it exceeded its December 2019 level by 4.5%, and that of December 2021 by 1.3%. Corporate investment, driven by spending on computer services, is also very dynamic, at nearly 9% above its level of three years ago.

Conversely, the manufacturing production index was down 3% in January 2023 compared to January 2020 (and almost 1% compared to January 2022), mainly reflecting supply chain difficulties and rising energy prices. Exports of goods and services were also down (-1%) in Q4 2022 compared to the end of 2019, although they have improved by about 4% since the end of 2021.

In recent quarters, the most notable feature has been soaring consumer prices. In February 2023, their year-on-year variation was 6.3%, but the resurgence of inflation had started earlier with the result that the general level of prices increased by 10.8% compared to February 2020. Overall, the purchasing power of household gross disposable income (GDI) per consumption unit was protected during the pandemic, and in Q4 2022 it was a little over 1% above its level at the end of 2019, although almost 1% below its level at the end of 2021. Household consumption, which rebounded strongly after the lockdowns, stood at its pre-health crisis level, although it had been higher during summer 2021: it fell back by a little over 1% between the end of 2021 and the end of 2022. At the end of 2022 therefore, the household savings ratio stood at about 2 points above its pre-crisis level.

Headline inflation could fall back slightly in spring 2023, but core inflation is expected to continue to rise

For several months, the business tendency surveys have shown a relative easing of certain supply constraints, especially supply chain difficulties. However, hiring difficulties remain close to their highest levels. On the demand side, concerns are increasing somewhat. The balances of opinion on probable changes in selling prices remain high overall and rose sharply in February in retail trade, especially food.

This increase reported in the surveys echoes recent negotiations between producers and distributors. It is difficult to predict the exact impact on changes in consumer prices in the short term. The assumption adopted in this Economic Outlook is that this impact could be spread over several months, depending mainly on the disposal of inventory already purchased by the distributors and the measures they have taken to offset price rises. Over the forecasting period (mid-2023), the year-on-year variation in food prices is expected to exceed 15%, making it still the primary contributor to inflation. The national accounting data show that agrifood industries experienced margin compression in 2021, due to the effect of the increased cost of inputs, but this margin rate recovered throughout 2022, which is perhaps a catch-up effect, at least in part.

The prices of manufactured goods and services are also likely to remain relatively dynamic. Their year-on-year variation looks set to exceed 5% and 3% respectively by mid-2023. Conversely, the contribution of energy to the year-on-year variation in the consumer price index is expected to be zero or even in negative figures by June, mainly due to a "base effect" linked to the very high prices of petroleum products in spring 2022. This effect should be enough to push down headline inflation (+5.4% year-on-year forecast in June). However, core inflation, from which the most volatile prices have been removed, is expected to continue to increase and reach +6.4% year-on-year in June.

In H1 2023, growth looks likely to remain slightly positive with the unemployment rate stable

In this context of high inflation, household confidence is still in decline, but in France, according to the business tendency surveys, the business climate continues to hold up. Many companies face high energy prices. They are reacting mainly by increasing their selling prices, and to a much lesser extent by reducing their activity. This is certainly the case for the most energy-intensive branches (e.g. the steel industry, pulp, paper and cardboard manufacturing, and the manufacture of basic chemicals), where production plummeted in H2 2022.

Manufacturing output could therefore decline slightly in Q1 2023, as the January index suggests. Market services are expected to grow only moderately this quarter, with a decline in transport, which is most affected by the ongoing social movement. Given the information available at this stage, this movement is likely to have only a limited effect at the macroeconomic level. All in all, French GDP looks set to increase modestly in Q1 (+0.1% forecast), with a weak rebound in household consumption on the demand side, and a further decline in their investment in construction, in a context of rising interest rates. Growth is likely to be a little higher in Q2 (+0.2% forecast), mainly under the assumption of stability in manufacturing output, a slight acceleration in services and, again on the demand side, support for foreign trade with new aeronautical and naval deliveries.

The annual growth overhang for 2023 is thus expected to be +0.6% by mid-year, but this forecast is subject to many uncertainties, both national (e.g. duration and extent of strikes) and international (geopolitical developments, effects of ongoing monetary tightening, stability of the financial system, etc.).

On the labour market, employment is likely to slow (+0.1% forecast in Q1 then in Q2 2023), in the wake of activity. Per capita productivity is therefore expected to remain stable, well below its pre-health crisis level, especially in industry: this gap is only partly explained by the steady growth in sandwich contracts in recent years. The unemployment rate should hold steady in H1 2023 at 7.2% of the active population.

Inflation, consumption: disparities between households and changes in behaviour

In H2 2022, the purchasing power of household gross disposable income rebounded overall, after falling back in H1. It was pushed up by the many support measures. These included the value sharing bonus (PPV), exempt from social contributions and taxation, which was paid in massive amounts at the end of the year to almost a third of employees in non-agricultural market branches. The “windfall effect” was significant for companies, since about 30% of these payments appear to have been substitutes for increases in base wages.

The purchasing power of the GDI is nevertheless expected to decline once again in H1 2023, as a result of the dynamism of prices and the expected slowdown in income (backlash from PPV payments at the end of 2022, deceleration in employment) despite a probable new automatic revision of the minimum wage (SMIC) in spring. The year-on-year variation in the nominal average wage per capita (SMPT) in the non-agricultural market branches is expected to rise to a little under +5% in Q2 2023. Meanwhile, the carry-over in annual change in purchasing power per consumption unit is likely to reach -0.7% by mid-2023.

Not all households are affected in the same way by inflation. Differences between consumption structures are reflected significantly in inflation differentials by household category. These differences have widened in recent months, with rising food prices combined with rising energy prices for housing. In January 2023, inflation was therefore higher for the oldest households (more than 1 point higher than the average, and +2.5 points compared to the youngest households, who tend to be tenants and probably in smaller dwellings), for those living in rural municipalities and for low-income households (for whom food is basically more of a burden). Even within these categories, inflation can differ significantly between households, with an interquartile difference of about 2 to 3 percentage points.

An extra question was added to the household survey in December 2022 to try and measure changes in consumer behaviour in this context. Two out of three households say that they have changed their consumer habits in the last year, due to inflation. These tend to be young households, or households with modest incomes and/or with children. These changes usually consist in reducing their consumption of food and energy for housing, and this is confirmed by the “hard” data at an aggregated level. To a lesser extent, households report that they are moving towards new brands or product ranges. While all these changes relate to the last 12 months, it is likely that they will persist over the next few months, in a context of inflation that looks set to remain high, especially with regard to food products.

French economic outlook

Warning

This focus was modified on 4 May 2023 in order to clarify the scope of Figure 4. The text has also been amended accordingly.

In 2022, faced with rising prices, households changed their consumption habits

At the end of 2022, with prices having risen almost constantly throughout the year, more than two thirds of households said they had changed their consumption habits because of inflation. These were mostly young households or households with children. They were from all social contexts (measured by socio-professional category) and from both urban and rural areas. Changing consumption habits as a result of inflation seems to be something that has affected the entire scale of living standards, although it is more apparent in households that are financially stretched. These changes mainly concern housing energy and food, linked to the high inflation affecting these two consumer items. In the case of food, this has led to a reduction in amounts consumed and, to a lesser extent, to changing product range or supermarket.

In December 2022, two out of three households said that they had changed their consumption habits over the past year, due to the rise in the general level of prices

For the past year, households have reported growing concern about the economic situation. In spring 2022, the composite indicator of household confidence tumbled to a very low level, close to that of the crisis in 2008, and it has not risen since then. The context of continuous price rises (+5.2% on average across 2022) contributes to this concern: in December 2022, 76% of households considered that prices had risen sharply over the previous 12 months, a higher percentage than the highest point reached in May 2008.

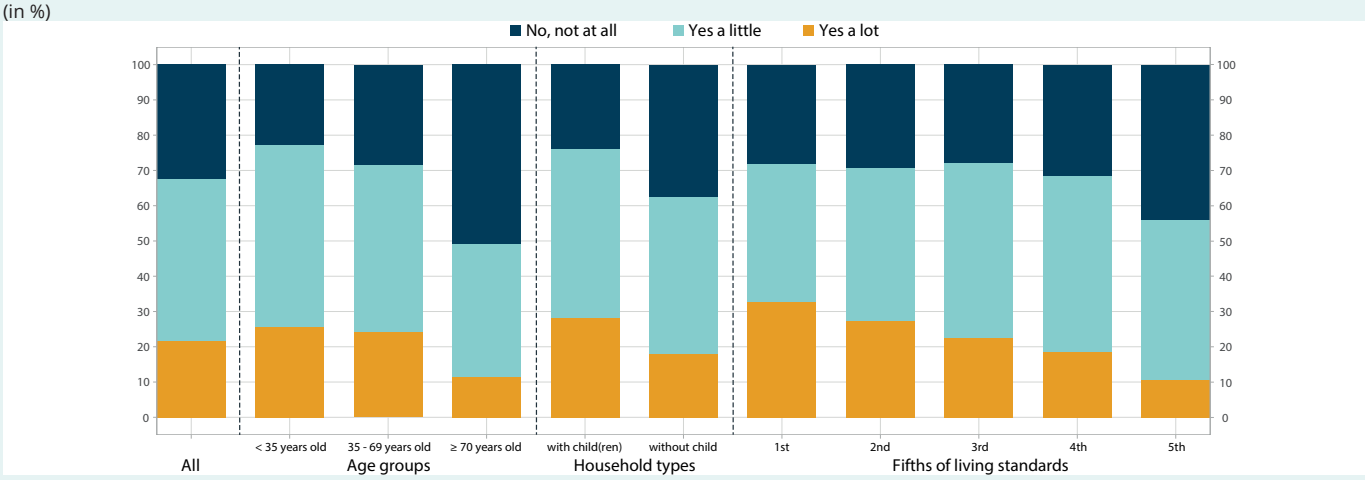
In this context, and as part of the monthly consumer confidence survey (CAMME) in December 2022, INSEE asked households about any changes in their consumption habits (►**Box**). In December 2022, 68% of households said they had changed their consumption habits over the last twelve months because of inflation (►**Figure 1**).[1] More specifically, almost one in two households (46%) reported that they had changed their consumption habits a little because of inflation and about one in five households (22%) said they had changed their habits a lot. These responses can be related to the sharp slowdown observed in 2022 compared to 2021 (+2.7% in 2022, after +5.2%), where in fact the average annual growth in 2022 was largely a "carry-over effect" associated with the upturn in purchases in H2 2021.

These reported changes in consumption habits and the slowdown in consumption dynamics at the macroeconomic level are linked to the decline in purchasing power associated with inflation. In fact, many households consider that their financial situation deteriorated markedly in 2022 or that it will probably deteriorate in 2023: the balances of opinion of households concerning their past and future personal financial situation are very far below their long-term average. During 2022, more households reported that they were in debt or drawing on their reserves (+3 points between December 2021 and December 2022, ►**Figure 2**), against a background of virtual stability in real gross disposable income at the macroeconomic level on average over the year.

1 In the CAMME survey of December 2022, the consumption habits that the questionnaire was focusing on covered everyday consumer items (food, clothing, transport, telecommunications, outings and leisure, heating, electricity) and more occasional items (vehicle purchase, building work, leisure).

►1. Share of households saying that they changed their consumption habits over the past year because of inflation in December 2022

(in %)



How to read it: in December 2022, 68% of households said they changed their consumption habits over the past year because of inflation (Yes a little, Yes a lot).
Scope: households living in ordinary housing in Metropolitan France.
Source: INSEE, Monthly consumer confidence Survey.

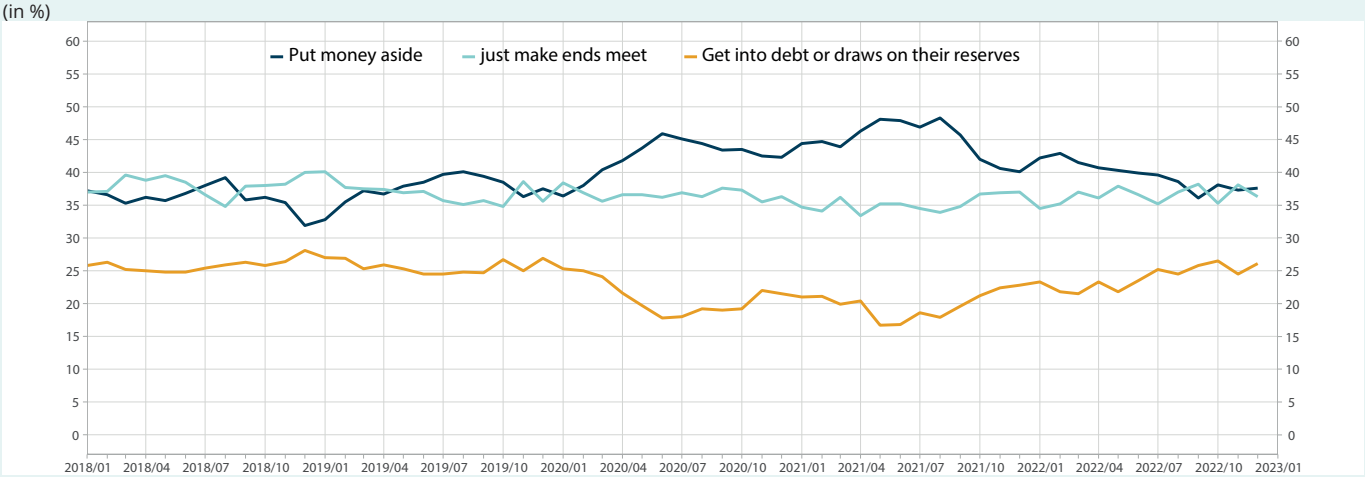
Households aged under 35 and households with children have made more changes to their consumption habits to cope with inflation

Among the households surveyed, the youngest respondents said they had changed their consumption habits most since the previous year because of inflation (►Figure 1). In particular, in households where the reference person is under 35 (►definitions), 77% said they had modified their consumer behaviour, either slightly or significantly, compared to 49% of the over-70s. 26% of the youngest households said they had even changed their habits a lot to cope with inflation, compared to only 11% of the oldest households. These statements may be surprising insofar as normally older people have to cope with higher inflation than other households (►Focus on inflation by category of household), due to a consumption structure where spending on heating (►Herpin and Michel, 2012) and food (►Ferret and Demoly, 2019) have a disproportionate impact. However, greater stability in their income, and perhaps their greater wealth, compared to the youngest households, may provide possible explanations (►Cazenave-Lacrouts and al., 2022), thereby implying a lesser need to modify their consumption habits.

The size of households and in particular the presence of children also seem to be important factors in the way they adapt to inflation. 76% of households with one or more children say that they have changed their consumption habits to cope with inflation, compared to 62% of households without children (single-person

►2. Share of households saying that they put money aside, just make ends meet or get into debt/draw on their reserves

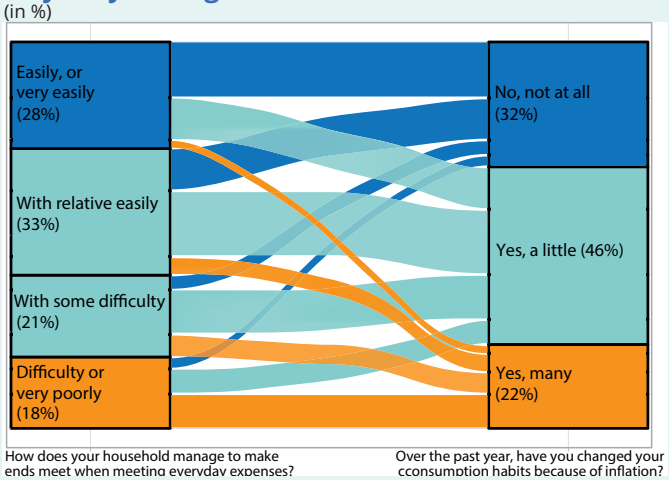
(in %)



how to read it: in December 2022, 38% of households said that they put money aside.
Scope: households living in ordinary housing in Metropolitan France.
Source: INSEE,INSEE, Monthly consumer confidence Survey.

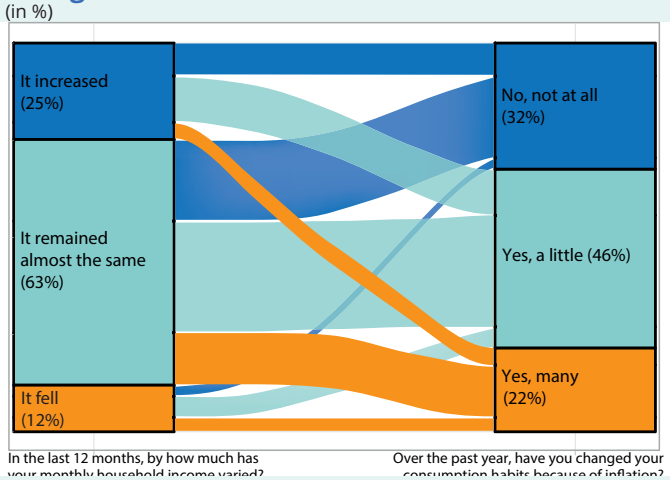
►3a. Responses from households on their consumption habits, cross-referenced with the way they manage to make ends meet

(in %)



►3b. Responses from households on their consumption habits, cross-referenced with change in their income

(in %)



How to read it: in December 2022, 25% of households said that their monthly income increased year-on-year, 46% of households said that they had changed their consumption habits a little over the past year. Among households whose income increased, 48% said they had changed their habits a little.
Scope: households living in ordinary housing in Metropolitan France.
Source: INSEE, Monthly consumer confidence Survey.

or couple). These results are consistent with those obtained according to age, as there are many more households without children among the elderly. However, they remain true, all other things being equal, when considering other known socio-demographic household characteristics (sex of the reference person, socio-professional category, level of education and income, place of residence, housing situation –owner or tenant).[2] Characteristics such as socio-professional category or place of residence (according to the different sizes of urban unit) do not seem to produce significant differences in whether consumption habits were altered as a result of inflation.

Changes in consumption habits concern all households, regardless of standard of living, although they affect those with financial difficulties more

Changes in consumption habits due to inflation seem to concern all households, with no distinction made for income or standard of living (►**definitions**). Half of households that reported that they can easily or very easily meet their everyday expenses for the month, nevertheless said that they had changed their consumption habits, probably to keep their budget constant, to maintain their saving capacity or in order not to use up their savings (►**Figure 3a**). In addition, among households that said their income was stable or that it increased during 2022, two thirds said that they changed their consumption habits a little or a lot to cope with inflation (►**Figure 3b**).

That said, some behavioural disparities persist, depending on standard of living. Thus the wealthiest households (the 20% of households with the highest standard of living) said less often than other households that they changed their consumption habits because of inflation. Moreover, the higher the standard of living, the fewer households report a change in their habits (►**Figure 1**). Households that find it difficult or very difficult to meet their everyday expenses –this proportion increased in 2022– are significantly more likely to say that they have made considerable changes to their consumption (►**Figure 3a**).

To make savings, efforts focused mainly on housing energy and food

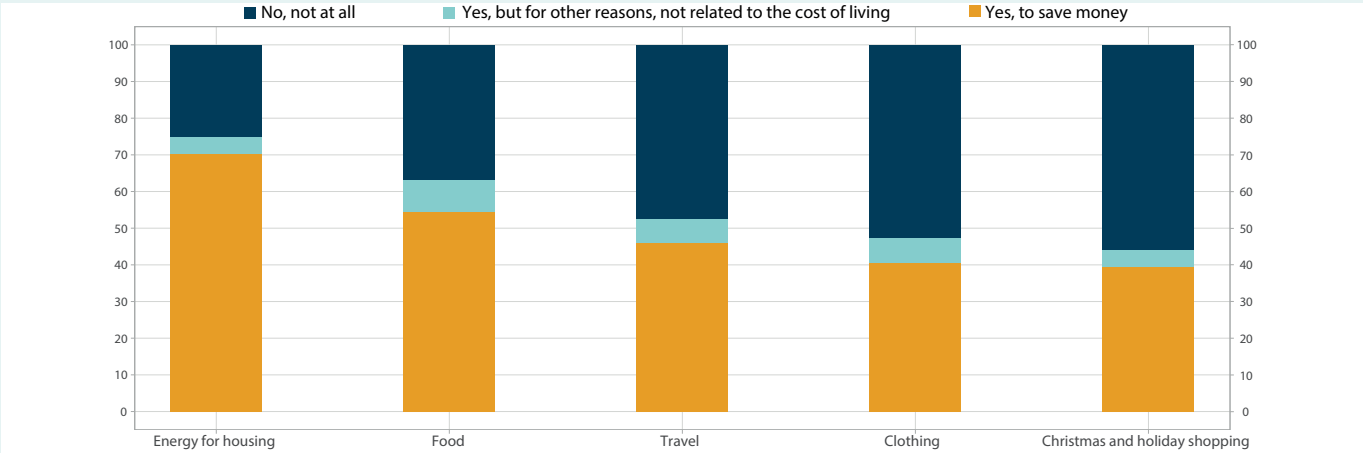
Among the households saying that they changed their consumption habits, efforts primarily concerned energy for housing (heating, electricity) and food (►**Figure 4**). According to the survey, 70% of households said they had changed their habits regarding the consumption of housing energy in order to make savings, and 54% said this for food. However, many fewer said this for spending on travel (46%) or clothing (41%). Finally, among the households saying that they changed their consumption habits, 39% had planned to change their end-of-year purchasing habits in order to save money.[3]

These responses from households are consistent with the significant reductions in consumption observed at the end of the year both for energy for housing and for food, and also with the high levels of inflation measured for these items. Between December 2021 and December 2022,

2 Among the households surveyed, those with the oldest members (over-75s) changed their consumption habits significantly less than the under-35s, all other characteris-tics being the same. Similarly, people living alone and couples without children report having changed their consumption habits following price rises less often than larger households, and in particular families with children.
3 For the December 2022 edition of the CAMME survey, households were interviewed over a three-week period, between 25 November and 15 December 2022. The Christmas holidays started on 16 December.

►4. Share of households saying that they changed their consumption habits regarding housing energy, food, travel, clothing, and purchases for the end-of-year celebrations

(in % among households reporting an overall change in their consumption behaviour due to inflation)



How to read it: in December 2022, among households who, according to the survey, have changed their overall consumption behaviour because of inflation over the past year, 70% said they changed their consumption habits regarding housing energy (Yes a little, Yes a lot).
Scope: households living in ordinary housing in Metropolitan France and reporting an overall change in their consumption behaviour due to inflation over a year.
Source: INSEE, Monthly consumer confidence Survey.

housing energy is the consumption item that recorded the largest drop in volume (-14.1% for "energy, water, waste") and the highest rise in prices (+18.6% year-on-year in December 2022 for "electricity, gas and other combustible liquids"). The rise in food prices (+12.9% year-on-year in December 2022) was also historic, as was the corresponding drop in household purchases for this consumer item (-8.5% over the same period).

Changes in consumption habits regarding housing energy concern all categories of household.[4] Only households with children stand out, reporting more change in their habits.

There are more notable disparities, however, among households that have changed their food habits in order to make savings. Once again, the youngest households, the least well-off and those with children say that they have changed their habits most regarding food.

In addition, to make savings on food, households mainly choose to consume less:[5] 41% give this behaviour change as their main action. Otherwise, households have also turned significantly to new stores[6] or new product ranges:[7] a quarter have done each of these choices (►**Figure 5**).

Regarding travel, households are less likely to have changed these habits, compared to what they report for housing energy or food. However, inflation on consumer products linked to travel was also very high in 2022 (+14.3% year-on-year in December 2022 for petroleum products, +8.5% for transport services). In fact, household consumption has declined significantly for this item (-5.0% between December 2021 and 2022) although less than for housing energy or food. Although these changes do not exclude occasional travel, they are nevertheless consistent with the economic literature, which reports a relatively lower elasticity in spending linked to travel than to food spending when prices go up (►**Douenne, 2020; Calvet and Marical, 2011; Caillavet et al., 2009**), linked to a large proportion of travel that is compulsory.

Elderly people (over-75s) and people living alone have changed the way they move around less than younger people (under-35s) or than households of more than three people, when socio-demographic characteristics are equivalent. While the vast majority of daily journeys are compulsory for households in general, this is probably less the case for older people[8] (over-65s), who are more often inactive or less likely to have children in their house. In addition, for this particular consumer item, place of residence is also a factor for disparities between households. Those who live in large metropolitan areas (towns of more than 100,000 inhabitants) –perhaps with shorter daily journeys or less affected by price increases (public transport networks, etc.)– are relatively less likely to report changes in their habits. ●

Léa Mauro, Nicolas Palomé

4 With fixed socio-demographic characteristics, type and place of residence.
5 For example, by buying meat less often, or buying smaller portions, or not buying some products at all.
6 For example, to find the same products at a cheaper price.
7 For example, by buying budget lines, switching from organic to non-organic, etc.
8 "*Se déplacer au quotidien: enjeux spatiaux, enjeux sociaux*", Fiche d'analyse de l'Observatoire des territoires 2019

►5. Nature of behavioural changes described by households reporting changes in their food consumption habits

(in %)

Note: for this question, households had to say what the main change was in their food consumption habits (only one answer possible).
How to read it: in December 2022, 41% of households who said that they had changed their food habits in the past year said they had focused on eating less.
Scope: households living in ordinary housing in Metropolitan France.
Source: INSEE, Monthly consumer confidence Survey.

Monthly consumer confidence survey

In order to monitor the opinions of households in Metropolitan France on the economic situation and their own personal situation, INSEE carries out a monthly consumer confidence survey (CAMME).

In December 2022, in a context of continuous price increases throughout the year, INSEE interviewed households on their consumption habits with regard to inflation. In addition to the usual questions, the CAMME survey included additional questions on changes in households' consumption habits in the course of the year, in order to gain a better understanding of their reactions to rising prices. Interviews took place between 25 November and 15 December 2022 with the household reference person or their spouse.

Detailed information on the methodology of these monthly surveys, the results of which are used each month to calculate the consumer confidence index, are available in the section "List of data sources" on the INSEE website.

An extract from the questionnaire of the exceptional December module is reproduced in the Appendix.

Definitions:

Reference person: in the CAMME survey the household reference person or their spouse is interviewed. This is the tax reference person. This is a different notion from that usually used in household surveys.

Income: the monthly income provided in the CAMME survey is declared spontaneously by the interviewee when data is collected. The interviewer may specify as follows: "take all types of income into account: wages, retirement pensions, unemployment benefit, family benefits, etc. Give the amount before tax is deducted at source". These declared data correspond more to a primary income or a wage than to the disposable income that is usually measured.

Standard of living: the standard of living is equal to the disposable income of the household divided by the number of consumer units (CU). The standard of living is therefore the same for all the individuals in a given household. The consumer units are generally calculated using the modified OECD scale which allocates 1 CU to the first adult in the household, 0.5 CUs to other persons aged 14 years or older and 0.3 CUs to children under 14.

Appendix: extract from the questionnaire in the Income and Inflation module of the CAMME survey for December 2022

Additional questions on income (included since September 2021) used in this study:

Q-A: In the last 12 months, by how much has your monthly household income varied?

1. It increased by 1,000 euros or more
2. It increased by 500 to 999 euros
3. It increased by 200 to 499 euros
4. It increased by 100 to 199 euros
5. It increased by 50 to 99 euros
6. It remained almost the same (variation between –49 and +49 euros)
7. It fell by 50 to 99 euros
8. It fell by 100 to 199 euros
9. It fell by 200 to 499 euros
10. It fell by 500 yo 999 euros
11. It fell by 1,000 euros or more

Q-B: How does your household manage to make ends meet when meeting everyday expenses?

1. Very difficulty
2. Difficulty
3. With difficulty
4. With relative easily
5. Easily
6. Very easily

Additional questions on inflation (asked in December 2022) used in this study

Q1: Over the past year, have you changed your consumption habits because of inflation?

Consumption habits cover all everyday consumption items (food, clothing, transport habits, telecommunications, outings and leisure, heating, electricity) or more occasional items (vehicle purchase, building work, leisure, etc.).

1. No, not at all
2. Yes, a little
3. Yes, many

If households reply Yes, a little or Yes, a lot to question 1a:

You said that you have changed your consumption habits this year because of inflation. These changes may concern you or all of your household. For the following questions, give the main reason for these changes.

Q2a: Over the past year, have you changed your travel habits? This may concern daily journeys or occasional travel.

These may be individual motorised journeys (car, motorcycle, truck), collective motorised journeys (bus, train, plane, etc.) or non-motorised (e.g. bicycle).

For example, to make savings, the household uses its usual means of transport less/more, or tries to travel fewer/more kilometres with it. The household may also have changed its method of transport: switching from car to bicycle, or to public transport to reduce costs, on a daily basis or for leisure, cancelling or postponing planned trips.

Q2b: Compared to last winter, have you changed your habits in terms of energy consumption in your home (heating or electricity)?

For example, to limit costs, you may switch on the heating less or set it to a lower temperature, using electrical appliances less or paying more attention to off-peak hours, etc.

Q2c: Over the past year, have you changed your food habits?

The term food habits covers product purchasing habits in the broad sense, type of product, number of servings, product ranges consumed or supermarkets visited, etc.

Q2d: Over the past year, have you changed your consumption of clothing and footwear?

For example, waiting for the sales, changing brands, buying second-hand, etc.

Possible response modalities for questions 2a to 2d

1. No, it is the same as last year
2. Yes, a little, to save money
3. Yes, a lot, to save money
4. Yes, but for other reasons, not related to the cost of living

If households reply Yes, a little or Yes, a lot to question 2c:

You said that you have changed your food habits this year.

Q3: How have you changed your food habits? Give the main change.

The household can only give one possible answer.

1. You eat less (e.g. by buying meat less often, or buying smaller portions, or by not buying some products at all)
2. You go to different shops for your food shopping (e.g. to find the same products at a cheaper price)
3. You have changed product range (e.g. by buying budget lines, switching from organic to non-organic, etc.)
4. You eat in more at home (e.g. by going less often to the works canteen, school canteen, or to a restaurant, etc.)

Q4: Are you currently changing your habits for the end-of-year celebrations?

Consumption habits surrounding products related to Christmas celebrations include presents, meals, decorations, etc., as well as travel habits for parties or the number of guests invited if parties are held at home.

1. No, it is the same as last year
2. Yes, a little, to save money
3. Yes, a lot, to save money
4. Yes, but for other reasons, not related to the cost of living

Q5: If prices continue to increase in the next few months, do you anticipate having to change your consumption habits, or change them again?

1. No
2. Yes, a little
3. Yes, many

Bibliography

Cazenave-Lacrouts M.-C., Cheloudko P., Hubert O. (2022), "The composition of household wealth has changed little following the health crisis", *Insee Première* n°1899.

Douenne T. (2020), "The vertical and horizontal distributive effects of energy taxes: a case study of a French policy", *The Energy Journal*.

Caillavet F., Lecogne C. et Nichèle V. (2009), "*La consommation alimentaire : des inégalités persistantes mais qui se réduisent*", Cinquante ans de consommation en France, INSEE, September 2009.

Calvet L. et Marical F. (2011), "Petrol Consumption: Short- and Long-Term Price Effects by Population Category", Économie et statistique n°446, INSEE.

Ferret A. et Demoly E. (2019), "Consumer behaviour in 2017", Insee Première n°1749.

Herpin N. et Michel C. (2012), "*Avec le passage à la retraite, le ménage restructure ses dépenses de consommation*", *Insee Références, France portrait social*, édition 2012.

French economic outlook

Warning

This focus was modified on 19 April 2023 to correct an error detected in figures 4, 5 and 6. The text has also been amended accordingly.

At the start of 2023, inflation differentials between households were accentuated by the sharp rise in food and energy prices

At the beginning of 2023, differences between consumption structures continued to have a significant effect on inflation differentials according to household category (the youngest households compared to the oldest, those living in small municipalities compared to those in large conurbations, the least well-off compared to the most affluent). These differentials, which can be as much as 3 percentage points, are mainly due to energy, especially housing energy, and food. There are also considerable differences within the household categories themselves, with an interquartile differential of 2 to 4 inflation points. However, inflation for the youngest households seems to be relatively uniform compared to that of older households. Finally, it should be noted that inflation differentials only provide information on some of the possible purchasing power differentials, which also depend on changes in income.

In January 2023, inflation differentials could be as high as 3 points between household categories, mainly due to energy and food

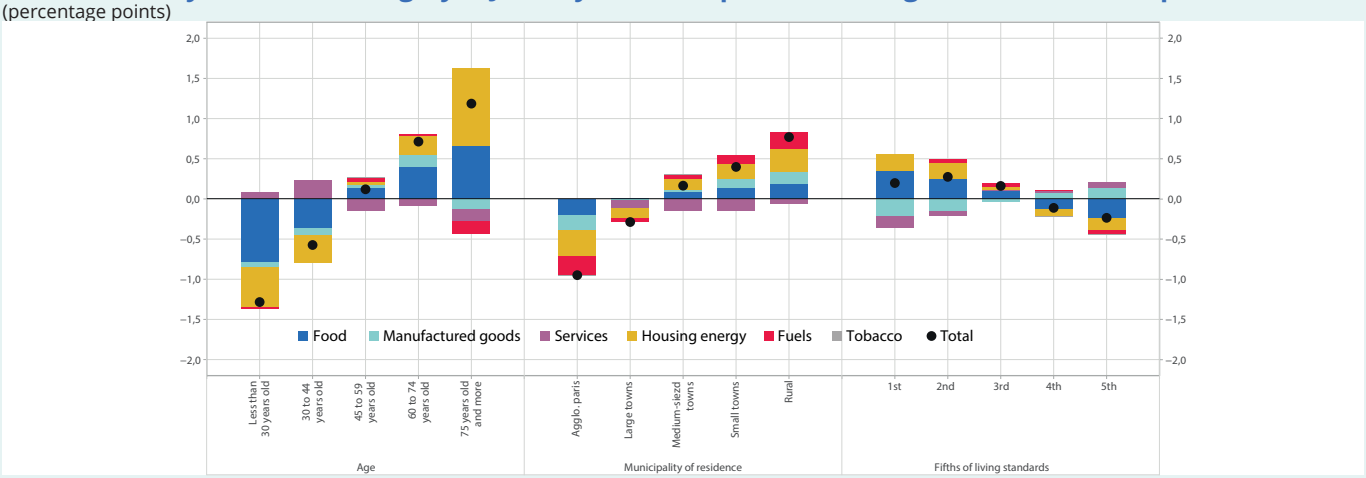
Depending on the structure of their consumption basket, which may vary from one situation to another or reflect their own preferences, households are not all exposed in the same way to accelerating prices. The *Economic Outlook* of 24 June 2022[1] showed that the rise in inflation since 2021 had increased disparities between households. While inflation differentials between household categories were no greater than 0.2 points on average between 2015 and 2021, they were more than 1.5 points in April 2022. The greatest disparities were to be found mainly between young households and the oldest households, with the former experiencing, on average, a much lower inflation than the latter, but there were also disparities between households living in rural areas compared to those living in major cities or in the Paris conurbation. Inflation differentials appear less pronounced, however, according to households' standard of living.

The update of this study (▶ **Box 1**) for January 2023, when inflation reached 6.0% year-on-year in Metropolitan France,[2] shows that disparities between categories of household have further intensified. These differentials were more than 2 points in January 2023 from one category of household to another (▶ **Figure 1**). As in April 2022, energy (housing energy[3] and fuel) contributes significantly to the inflation differentials between household categories, but now the contribution of food is just as great. In fact, on average in Metropolitan France, since September 2022, food has made the largest contribution to headline inflation, both because of the high rate of food inflation (+13.4% year-on-year at the beginning of 2023 in Metropolitan France) and its sizeable weight in household consumption (16% on average).

1 "Depending on their energy and food expenditure, some household categories are exposed to apparent inflation that may differ by more than one point from the average", Focus in *Economic Outlook* of 24 June 2022, INSEE.
2 All figures quoted in this study relate to Metropolitan France
3 Energy consumed mainly for housing corresponds, for example, to energy used for heating, lighting or cooking. It consists of electricity, gas, liquid fuels (e.g. heating oil) or solid fuels (e.g. wood).

▶1. Inflation by household category in January 2023, compared to average inflation in Metropolitan France

(percentage points)



Note: municipality of residence is understood to mean belonging to an urban unit of a certain size.
How to read it: in January 2023, inflation was 1.2 points higher for households where the reference person was over 75 years old. Housing energy contributed +1.0 point to this differential and food contributed +0.7 points.
Scope: households living in ordinary housing in Metropolitan France.
Source: Consumer price indices, Family Budget Survey 2017, INSEE calculations.

Inflation is higher for the oldest households, for those living in rural municipalities or small towns and also for low-income households

The greatest inflation differentials estimated in January 2023 can generally be found in the same household categories as those identified in the *Economic Outlook* of June 2022: older households compared to younger ones, rural households compared to those living in the largest towns. As was the case in April 2022, differentials are less pronounced in relation to standard of living, even though inflation for the most modest households (the 40% of households with the lowest standard of living) is higher than for the most well-off.

However, inflation differentials between household categories may show up effects of intersecting dimensions, where it is impossible to determine the specific effect of each by simply comparing levels of inflation for the different categories. An analysis with "all other things being equal" confirms the conclusions in Figure 1 (►**Box 2**) in this respect. Here, age emerges as an inflation disparity factor between households, including between households where all other sociodemographic characteristics are the same. All other things being equal, inflation is lower for households where the reference person is young: thus, in January 2023, inflation for households with members under 30 years old was on average 2.2 percentage points lower than for households over 75 years old, and this was the same for other given sociodemographic characteristics, including the fact of being a tenant or a homeowner. Being a tenant (which is more often the case for young households) is currently likely to reduce headline inflation, as the weight of rent in the budget automatically reduces the share of other items, including food and energy in particular, where prices have risen sharply.

The type of municipality of residence also plays a significant role in inflation differentials between households, as currently, all other things being equal and given the consumption structure of the inhabitants, inflation is higher in small municipalities. However, the inflation disparities resulting from this factor are less pronounced than those associated with household age: again, all other things being equal, between a household in a rural area and a household in the Paris conurbation, the inflation differential was 0.6 percentage points on average in January 2023.

Standard of living is also an inflation differential factor between households: inflation is currently higher for the most modest households, all other things being equal. With other characteristics the same, in January 2023, inflation for a household in the most modest 20% was on average 0.9 points higher than for a household in the wealthiest 20%.

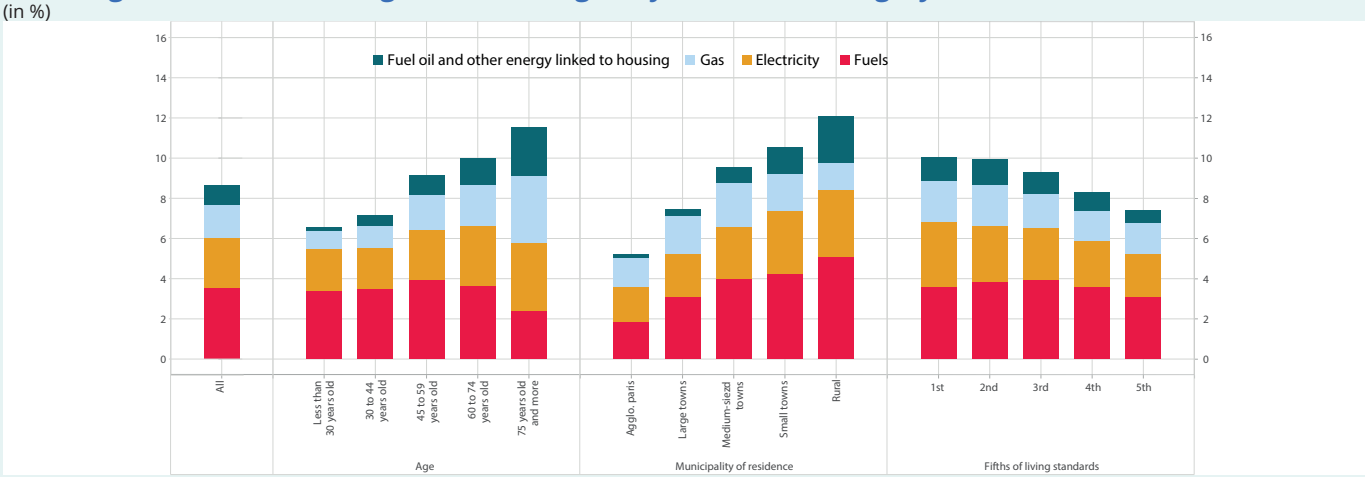
The high inflation experienced by the oldest households is due mainly, regarding energy, to a greater weight of gas or heating oil in their budget

Among all consumer items, although energy contributes significantly to inflation differentials between household categories, this is due first and foremost to housing energy (►**Figure 1**).

On average across all households, the year-on-year variation in housing energy prices in January 2023 was 17.7% in Metropolitan France, thus higher than that for fuel (14.0% year-on-year). Housing energy spending, representing on average 5.2% of household consumption, can vary substantially from one household category to another. In particular, weight of this expenditure

►2. Weight of different energies in the budget, by household category in 2022

(in %)



Note: municipality of residence is understood to mean belonging to an urban unit of a certain size.
How to read it: in 2022, purchases linked to energy represented around 9%, on average, of household consumption spending.
Scope: households living in ordinary housing in Metropolitan France.
Source: Consumer price indices, Family Budget Survey 2017, INSEE calculations.

increases with household age, regardless of its other sociodemographic characteristics, thereby driving up inflation for older people. While the under-30s devote 3% of their spending to this consumption item, on average, this share is 6% for 60- to 74-year-olds and around 9% for the over-75s (►**Figure 2**). The reason for this is probably partly because the dwellings of older households have larger surface areas, on average, even for equivalent household size.

In addition, the youngest households spend a larger share of their housing energy expenditure on electricity (almost two-thirds spent this way by the under-30s, compared to a little over one third by the over-75s), while older people use more gas or other fuels such as heating oil, which have increased in price much more than electricity prices over the last twelve months.

Regarding fuel, the oldest households spend a slightly smaller proportion of their budget on this item (about 2% of total spending for the over-75s, compared to 3% for the under-30s). Thus fuels contribute to bringing down the inflation experienced by the oldest households, reducing slightly the inflation differentials between them and the youngest households.

Spending on fuel is an inflation disparity factor between households in small towns and those in large conurbations

Housing energy also drives inflation differentials between rural households or those in small towns and households in large towns or the Paris conurbation. On the one hand, the weight of this expenditure is greater in the less urban areas (7% of the household budget in rural areas, compared to a little over 3% in the Paris conurbation), even when all other sociodemographic characteristics are the same; on the other hand, housing energy more often consists of heating oil or other fuels, whereas households in the Paris conurbation tend to consume more electricity.

However, fuels also make a sizeable contribution to inflation disparities between small municipalities and metropolitan areas. The weight of fuels in household spending is less in major cities or the Paris conurbation (2 to 3% of the household budget) than in smaller towns or rural areas (4 to 5% of the budget). This remains true when checking against other sociodemographic characteristics, including those who own a car – in large towns or the Paris conurbation, the vehicle is probably used less often, even if the household owns one.

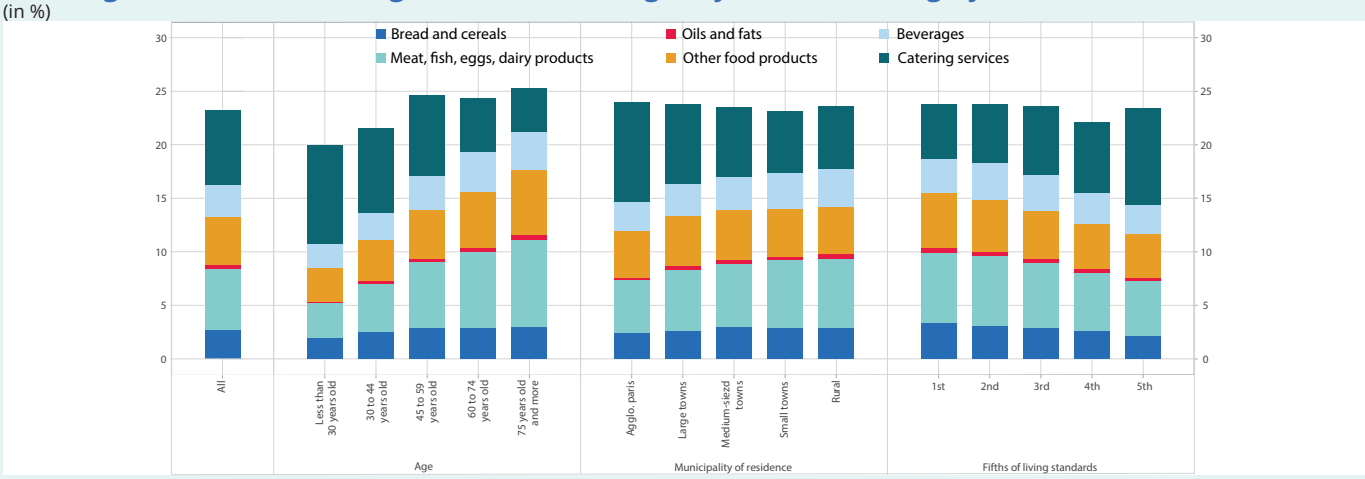
Among the oldest and the least well-off households, food occupies a greater proportion of the budget and concerns products affected more by inflation

Between the youngest and the oldest households, food is an inflation differential factor in the same way as energy. This is also the case between low-income and wealthy households, although the disparities appear to be less significant.

The role of food in inflation differentials between household categories is above all due to the variability of the weight that this item represents in the household budget. In fact, the share of the budget spent on food (excluding catering services) increases with age (►**Figure 3**): while the under-30s spend about 11% of their budget on this consumer item, this increases to about 21% for the over-60s. These differentials can also be observed, all other things being equal, when comparing households of the same size or households where the housing status (tenants or homeowners) is the same. For

►3. Weight of food and catering services in the budget, by household category in 2022

(in %)



Note: municipality of residence is understood to mean belonging to an urban unit of a certain size.
How to read it: in 2022, food represented around 16%, on average, of household consumption spending. Catering services represented around 7% of household consumption spending.
Scope: households living in ordinary housing in Metropolitan France.
Source: Consumer price indices, Family Budget Survey 2017, INSEE calculations.

the youngest households, however, the weight of catering services, which was less affected by inflation, is greater. These differentials between the youngest and the oldest households regarding the weight of food in the budget, excluding catering services, have been documented (►**Ferret and Demoly, 2019**, and **Herpin and Michel, 2012**) and could be due to a generational effect.

As well as the share of their budget that they spent on food, which is greater than that spent by the youngest households, the oldest households, especially those aged 75 and over, also tend to purchase products that have been more affected by inflation. In their food spending, animal protein products (meat, fish, eggs and dairy products) feature more heavily, and these prices have increased more (between +14% and +19% year-on-year in January 2023) than the price of food products overall (+13.4%).

Like all non-discretionary spending[4] – food also has a greater weight in the budget of the least well-off households (18 to 19% of the budget for the poorest 40% of households) than in that of the wealthiest households (14% of the budget for the wealthiest 20% of households), and this regardless of their other sociodemographic characteristics.

For the most modest-income households, the price of the food basket has increased more rapidly, which may be due to the weight of oils and other fatty products, which figure a little more in their food spending, and whose prices are among the most buoyant among food products (about +30% year-on-year in January 2023).

Within the same category inflation can differ significantly from one household to another

While dimensions as diverse as age, place of residence or standard of living can have a significant impact, inflation can also vary considerably for households within the same category.

For a quarter of all households, inflation in January 2023 was below 4.6% year-on-year, while for another quarter, inflation was over 7.5%, a difference of 2.9 points (►**Figure 4**). There is also a measurable dispersion over the entire population, with a similar variance, when we limit ourselves to a category of the population. Thus the interquartile differential is almost 4 points in households aged over 75. It is still sizeable for the under-30s, although less pronounced (around 2 points).

In general, within the same category, this differential is around 2 to 4 points. Disparities are particularly notable in the oldest households, but also in the least well-off households.

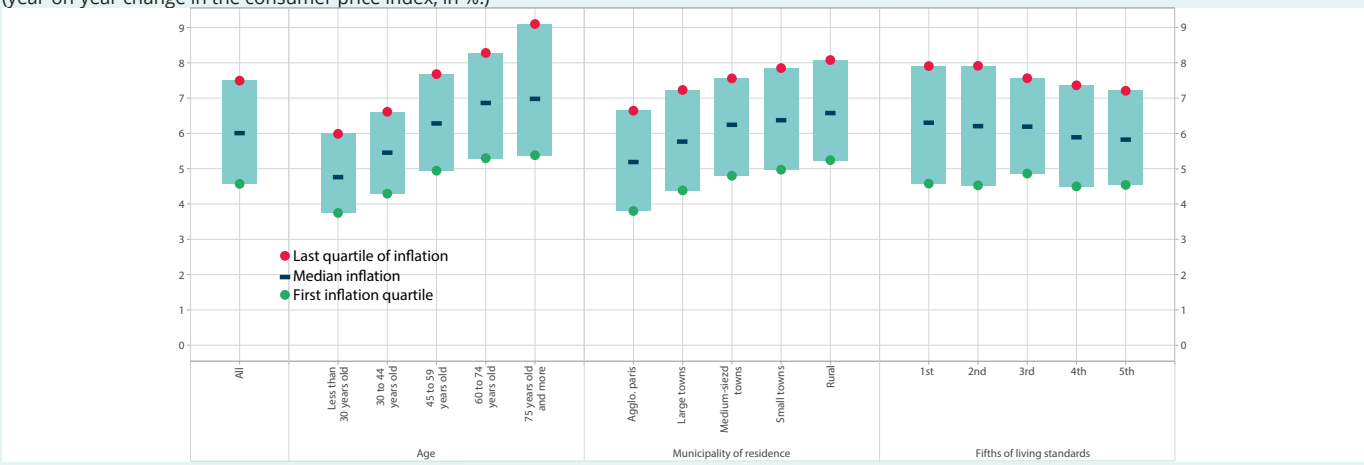
Among the oldest and the least well-off households, the share of spending on energy is less consistent from one household to another

Inflation disparities within each household category stem from consumption structures that differ from one household to another. In particular, with regard to energy, which we have seen is one of the main factors of disparity between categories, the share of spending on this item in the budget can vary considerably between households,

4 "Non-discretionary" spending refers to consumption items that are difficult to adjust in the short term because they meet essential needs: spending on food, health, education, fuel or transport services.

►4. Inflation dispersion within each household category, in January 2023

(year-on-year change in the consumer price index, in %.)



Note: municipality of residence is understood to mean belonging to an urban unit of a certain size.
How to read it: in January 2023, 25% of households where the reference person was under 30 years old faced inflation lower than 3.7% and 25% faced inflation higher than 6.0%. The median inflation rate experienced by these households was 4.8%.
Scope: households living in ordinary housing in Metropolitan France.
Source: Consumer price indices, Family Budget Survey 2017, INSEE calculations.

and even within each category (►Figure 5). This variability may reflect disparities in the amounts of energy consumed from one household to another (depending on the surface area of the dwelling, for example) but also variation in the type of energy used (depending on whether electricity, gas or heating oil are used for heating, for example).

Among the under-30s, a quarter of households spend less than 3% of their budget on energy, whereas a quarter spend 11% or more, a difference of around 8 percentage points. For the oldest households, this interquartile differential is even greater, at 11 percentage points for 60-74-year-olds and 14 points for those aged 75 and over.

This greater homogeneity among young households, in terms of the weight of energy in their spending, can be explained by the fact that there are fewer disparities in a certain number of related dimensions. For example, the youngest households are more concentrated in the towns. They are also less well-off financially (about a third of households aged under 30 are in the first standard of living quintile), whereas the distribution of the oldest households is more evenly spread across the standard of living scale. Lastly, the youngest households are also more similar regarding their housing status (84% are tenants). The fact of being a homeowner, all other things being equal, is associated with a greater weight of housing energy in the budget.

In the most modest households, where the interquartile inflation differential is higher than for the wealthiest households, the share of spending on energy is also less homogeneous. In the most modest 20%, a quarter of households spend less than 4% of their budget on energy, while a quarter spend more than about 16%, an interquartile differential of about 12 percentage points.

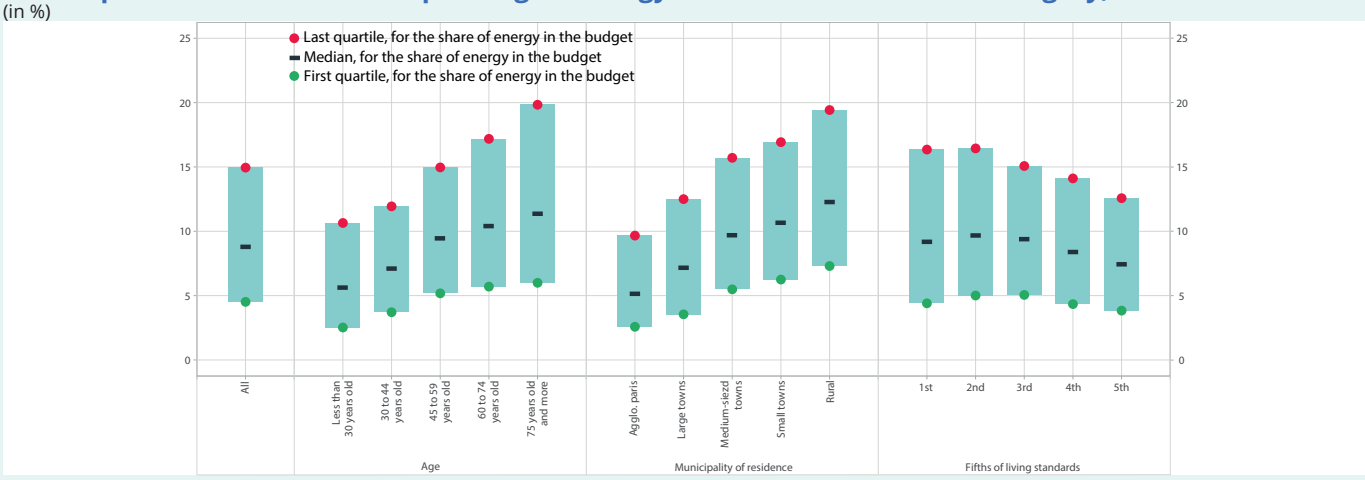
In comparison, this differential is a little under 9 points in households in the last standard of living quintile. This greater dispersion within the poorest households can be explained in particular by a more balanced distribution among households in the first standard of living quintile between those who own a car and those who do not (36% of households in the first standard of living quintile do not own a car, compared with only 11% of households in the last quintile). It is also linked to less homogeneity in the most modest households regarding their housing status.

The weight of spending on food is also a factor in inflation dispersion within household categories. The oldest households are also the ones where the weight of food in the budget varies most. Among households aged 75 and over, a quarter spend at least a third of their budget, approximately, on food, while a quarter spend less than 13%, a differential of almost 20 percentage points. Among those under 30, this differential is reduced to 13 points. Similarly, among the most modest 20% of households, the interquartile differential is around 20 points, compared to 15 points for the wealthiest 20%. As in the case of energy, this variation in the weight of food in the household budget may be because the quantities eaten vary from one household to another, but also because the basket of goods can vary too. In particular, at the start of 2023, within their basket of food goods, the share of the budget that households spend on categories of products most affected by inflation (animal protein products or oils and other fatty products) varies widely. Thus, within the same category, the diversity of households across other social dimensions that determine the composition of the consumer basket (housing status, owning a car, area of residence, etc.) results in significant variability from one household to another, in the level of inflation they face. ●

Émilie Cupillard, Olivier Simon

►5. Dispersion of the share of spending on energy within each household category, in 2022

(in %)



Note: municipality of residence is understood to mean belonging to an urban unit of a certain size.
How to read it: in 2022, 25% of households where the reference person was under 30 years old spent less than 3% of their budget on energy, and 25% spent 11% or more. For these households, the median share of the budget spent on energy was 6%.
Scope: households living in ordinary housing in Metropolitan France.
Source: Consumer price indices, Family Budget Survey 2017, INSEE calculations.

Box 1. Methodology

The methodology used for this Focus is similar to that used for the Focus in the Economic Outlook of 24 June 2022.

The Consumer Price Index (CPI) of January 2023 covers a basket of goods and services, the composition of which reflects the structure of average household consumption in 2022. Based on this average 2022 structure and data collected in the Household Budget Survey 2017, which provides information on different consumption behaviour from one household to another, the method consists in constructing, for each household or household category, its own consumption structure.

More precisely, the consumption structure of the household (or household category) is obtained by calculating, at the level of each group of products in the CPI, the ratio of spending by the household (or household category) on this product to the average spending by households on this same product. To calculate these "budget coefficients", items of consumption are considered at level 3 of the functional classification of household consumption (COICOP), which contains 117 classes.

By applying the CPI of its various expenditure items to the consumption structure for each household (or household category), we can then deduce the CPI experienced by this household (or category).

This method is based on several assumptions:

- For a given group of products at level 3 of the COICOP classification (e.g. the item "Bread and cereals", which notably includes pasta, rice, bread, etc.), change in the prices of products is assumed to be the same from one household to another. The method is therefore not able to take into account changes in price that differ from one area to another, for example, or differ according to the range of products consumed;
- Differences between the consumption structure of a household in a given category and the average consumption structure are assumed to have remained stable since 2017, when data were collected for the Household Budget Survey used in this study;
- In particular, the CPIs estimated for each household do not take into account a possible change in household behaviour during the year, especially if this change results in a reduction in the impact of inflation on its spending.

This methodology is similar to that used by the OFCE in Box no.4 of its *Policy brief* of 22 February 2023, where additional results to those given in this Focus are presented, calculated on the average change in prices across all of 2022.

In addition, the exercise focuses on the impact of the price increase on the budget of each household, understood in terms of its actual consumption spending and not as its disposable income. The study published by France Stratégie in February 2023 ("*Alimentation, logement, transport : sur qui l'inflation pèse-t-elle le plus ?*"), although based on a slightly different methodology from that used here (the consumption structures used are those from 2017, including the average consumption structure), shows that price rises automatically have a greater impact, in percentage terms, on the monetary resources of households with the lowest disposable income. ●

Box 2. Effect of households' sociodemographic characteristics on the rate of inflation experienced in January 2023, all other things being equal

Inflation differentials between household categories may result from the combined effects of their sociodemographic characteristics. To isolate each individual effect, all other things being equal, an econometric model was estimated on the entire sample of households in the 2017 Household Budget Survey covering all of Metropolitan France (approximately 12,000 households). In this model, the inflation that each household faced in January 2023 is explained in terms of the sociodemographic characteristics of the household, including the age of the reference person, the composition of the household, the number of consumption units, socio-professional category, standard of living quintile, housing status, type of municipality of residence and whether they own a car (►**Figure 6**). Similar models were estimated for housing energy inflation alone and inflation of the food basket.

Being a tenant has a significant effect in lowering the inflation experienced by households in 2023: perhaps the explanation is that food and energy automatically have a lesser weight in a tenant's budget, which also includes their rent. However, even with the same housing status, other sociodemographic characteristics are associated with a higher inflation for the household. In this respect, both the age of the household and its standard of living or the type of municipality of residence can have significant effects on inflation, and this is true for any other given sociodemographic characteristic, including the fact of being a tenant or a homeowner.

The number of consumption units in the household can push its inflation significantly upwards. This is probably the reason why, according to the estimate, the composition of the household (couple with a child, without children, etc.) has very little significant effect, as this is already reflected in the number of consumption units.

Amongst the socio-professional categories, managers, intermediate professions and artisans, shopkeepers, company managers appear to face lower inflation than workers, while farmers would face higher inflation. Concerning the estimated effect for farmers, it should be considered with caution, given the small number of households in the sample and also the relatively coarse mesh used to define the municipality of residence.

The same linear regression applied not to headline inflation but to housing energy inflation in January 2023 also highlights the variables of age of household, composition of household (rather than number of consumption units, which is not significant), socio-professional category and type of municipality of residence. Concerning this last dimension, households living in rural municipalities or small towns experience less vigorous housing energy prices, all other things being equal, than those living in medium-sized municipalities. The reason for this may be the composition of these energies, as households in rural municipalities use more heating oil and other fuels, while those in medium-sized towns use gas; gas prices have increased more sharply year-on-year than the prices of heating oil and other fuels (35.7% year-on-year in January 2023 for gas, 28.7% year-on-year for heating oil and other fuels).

The linear regression applied to food inflation gives fewer significant variables: only household age (over 75 years old) appears significant, also standard of living or the fact of living in a rural municipality. ●

►6. Econometric model of inflation experienced by households in January 2023, according to their sociodemographic characteristics

Household characteristics		Distribution in the population (in %)	Effect on inflation in January 2023 (in points)		
			All products	Housing energy	Food
Age of reference person	Less than 30 years old	10.6	-0.94***	-3.02***	ns
	30 to 44 years old	24.8	-0.45***	-1.72***	ns
	45 to 59 years old	27.6	Ref.	Ref.	Ref.
	60 to 74 years old	23.5	0.48***	ns	ns
	75 years old and more	13.5	1.28***	3.35***	0.18**
Household composition	Person living alone	35.5	Ref.	Ref.	Ref.
	Couple with 3 or more children	4.9	ns	1.88*	ns
	Couple with 2 children	11.6	-0.33*	1.95***	ns
	Couple with 1 child	10.2	ns	1.56***	ns
	Couple without children	26.4	ns	0.68*	0.1*
	Single-parent family	8.8	ns	1.98***	0.17**
	Other	2.5	ns	ns	ns
Number of consumption units (1)		1.5	0.45***	ns	0.16**
Socio-professional category	Manager	14.1	-0.36***	-0.68*	ns
	Employee	14.4	ns	-0.72**	0.12**
	Worker	15.7	Ref.	Ref.	Ref.
	Intermediate profession	15.7	-0.28***	-1.06***	ns
	Artisan, shopkeeper, company manager	4.2	-0.23*	ns	ns
	Farmer	1.1	0.42**	ns	ns
	Retired	34.8	ns	ns	ns
Standard of living quintiles	1st	19.9	0.56***	ns	0.16***
	2nd	20.0	0.18***	ns	ns
	3rd	20.0	Ref.	Ref.	Ref.
	4th	20.0	-0.17**	ns	-0.09*
	5th	20.0	-0.38***	ns	-0.13***
Housing status	Buying property	19.5	1.06***	ns	0.08*
	Tenant	43.3	Ref.	Ref.	Ref.
	Homeowner	37.2	1.64***	1.86***	ns
Municipality of residence (2)	Paris conurbation	16.1	-0.27***	-1.74***	-0.08*
	Large towns	31.0	Ref.	Ref.	Ref.
	Medium-sized towns	13.5	0.21***	0.53*	ns
	Small towns	17.9	0.22***	-0.61**	ns
	Rural	21.5	0.37***	-0.64**	0.11**
Does not own a car		18.9	-0.28***	-0.83***	ns
Owns a car		81.1	Ref.	Ref.	Ref.

*** significance level 1%; ** ... 5%; * ... 10%; ns: not significant
Ref : modality taken as a reference within a given sociodemographic dimension and which generally corresponds to the modality best represented in the sample.
(1) For this line, the value given in the column “Distribution in the population” corresponds to the average number, in the population, of consumption units in the house-hold.
(2) The municipality of residence is understood to mean belonging to an urban unit of a certain size.
How to read it: in January 2023, a household aged under 30 experienced inflation that was on average 0.94 points lower than a household aged 45 to 59 years old, all other sociodemographic character-istics being the same
Scope: households living in ordinary housing in Metropolitan France.
Source: Consumer price indices, Family Budget Survey 2017, INSEE calculations.

Bibliography

INSEE (2022), "Depending on their energy and food expenditure, some household categories are exposed to apparent inflation that may differ by more than one point from the average", Focus of the *Economic outlook* from 24 June 2022, INSEE.

Ferret A. and Demoly E. (2019), "Consumer behaviour in 2017", *Insee Première* n° 1749.

Herpin N. and Michel C. (2012), "*Avec le passage à la retraite, le ménage restructure ses dépenses de consommation*", *Insee Références*, France, portrait social, edition 2012.

Madec P., Place M. and R. Sampognaro (2023), "*Une analyse des mesures budgétaires et du pouvoir d'achat en France en 2022 et en 2023*", *Policy Brief* n° 112 from OFCE, February 2023.

Cusset P.-Y., Trannoy A., (2023), "*Alimentation, logement, transport : sur qui l'inflation pèse-t-elle le plus ?*", *Note d'analyse* n° 119 from France Stratégie, February 2023.

Economic activity

In Q4 2022, French GDP slowed further (+0.1%, according to the detailed results from the quarterly accounts, after +0.2% in Q3). Activity proved to be resilient in a context affected by continuing tensions, mainly regarding energy prices and supply chains (►**Figure 1**). Energy-saving behaviour combined with the mild temperatures certainly helped the economy to resist over the last months of 2022. Notably, apart from the manufacture of coke and refined petroleum products, which was affected by strikes in October, output in the manufacturing branches fell back only moderately, despite a significant drop in energy consumption by businesses in the sector. Households also demonstrated energy-saving behaviour: their consumption declined substantially in Q4 (►**Figure 2**), mainly of energy products. All in all, across the whole of 2022, economic growth was +2.6%, after +6.8% in 2021 (►**Figure 3**).

According to the business tendency surveys, the start of 2023 was notable for a gradual and partial easing of supply chain difficulties (►**Figure 4a**), and by a slight relaxing of the tensions that energy prices are causing for businesses (►**Focus**). However, very many business leaders still expect to raise their selling prices: the corresponding balances of opinion have recently increased in both services and trade. The latest available short-term economic indicators thus appear to be divided: while business tendency surveys in February continued to show the resilience of the business climate in France in the main sectors of activity (►**Figure 4b**), it is still in a deteriorated state in the most energy-consuming branches (chemicals, wood-paper, metallurgy, ►**Figure 4c**), which is consistent with the latest production data (►**Box**).

In this still uncertain context, GDP is expected to increase moderately in Q1 2023 (+0.1% forecast). Despite an automatic rebound in the coke and refined petroleum products sector, activity in manufacturing industry is likely to decline, weakened mainly by the most energy-intensive branches (►**Figure 5**). Concerning energy production, and especially electricity production, growth in activity is likely to slow, following maintenance being carried out in some nuclear power plants and social movements. At the same time, market services are expected to grow only moderately. In particular, activity in trade is likely to be sluggish, and will probably fall back in transport services, which have been penalised by strikes.

►1. Goods and services: resources-uses balance at chain-linked prices for the previous year, in quarterly and annual change

(quarterly and annual changes, in %; seasonally adjusted data - YTD)

	2021				2022				2023		2021	2022	2023 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Gross domestic product	**0.1**	**1.1**	**3.3**	**0.6**	**-0.2**	**0.5**	**0.2**	**0.1**	**0.1**	**0.2**	**6.8**	**2.6**	**0.6**
Imports	1.4	1.5	0.9	5.2	1.3	1.1	4.2	-0.4	0.0	0.5	7.8	9.1	2.4
Total resources	0.4	1.3	2.8	1.4	0.3	0.8	0.9	0.0	0.1	0.3	7.4	4.1	0.9
Household consumption expenditure	0.5	1.2	5.4	0.6	-1.0	0.6	0.4	-1.2	0.2	0.1	5.2	2.7	-0.2
General government consumption expenditure*	-0.5	0.6	3.4	0.7	0.3	0.0	0.3	0.6	-0.1	0.0	6.4	3.0	0.5
of which individual general government expenditure	*0.0*	*0.9*	*4.8*	*0.6*	*0.3*	*-0.4*	*0.3*	*0.6*	*-0.2*	*0.0*	*8.3*	*3.2*	*0.2*
of which collective general government expenditure	*-1.8*	*-0.1*	*0.0*	*0.7*	*0.2*	*0.8*	*0.2*	*0.6*	*-0.1*	*0.1*	*2.8*	*1.5*	*0.8*
Gross fixed capital formation (GFCF)	0.7	2.1	0.5	-0.3	0.3	0.3	2.3	0.3	0.4	0.3	11.4	2.3	2.0
of which Non-financial enterprises (NFE)	*0.6*	*1.7*	*0.9*	*-0.2*	*0.1*	*0.5*	*3.8*	*0.6*	*0.6*	*0.5*	*11.4*	*3.3*	*3.6*
Households	*0.4*	*4.0*	*1.2*	*-0.7*	*0.0*	*-0.1*	*-0.7*	*-0.9*	*-0.4*	*-0.3*	*17.0*	*0.3*	*-1.7*
General government	*-1.5*	*0.6*	*-1.6*	*-0.5*	*1.1*	*-0.1*	*1.0*	*0.5*	*0.4*	*0.2*	*2.7*	*0.6*	*1.4*
Exports	-0.3	2.5	2.2	2.9	1.9	0.7	1.0	0.5	-0.2	1.0	8.6	7.1	1.7
Contributions (in points)													
*Domestic demand excluding inventory***	*0.3*	*1.3*	*3.7*	*0.4*	*-0.4*	*0.4*	*0.8*	*-0.4*	*0.2*	*0.1*	*7.0*	*2.7*	*0.5*
*Changes in inventories***	*0.3*	*-0.4*	*-0.7*	*0.9*	*0.0*	*0.3*	*0.4*	*0.2*	*0.0*	*-0.1*	*-0.3*	*0.6*	*0.4*
Foreign trade	*-0.5*	*0.2*	*0.4*	*-0.7*	*0.2*	*-0.1*	*-1.1*	*0.3*	*-0.1*	*0.1*	*0.1*	*-0.7*	*-0.3*

Forecast.
* Consumption expenditure of general government and non-profit institutions serving households (NPISH).
** Changes in inventories include acquisitions net of valuable items.
How to read it: in Q1 2023, exports would decrease by 0.2% compared to Q4 2022; the contribution of foreign trade to quarterly GDP growth would be negative at -0.1 points.
Source: INSEE calculations from various sources.

French economic outlook

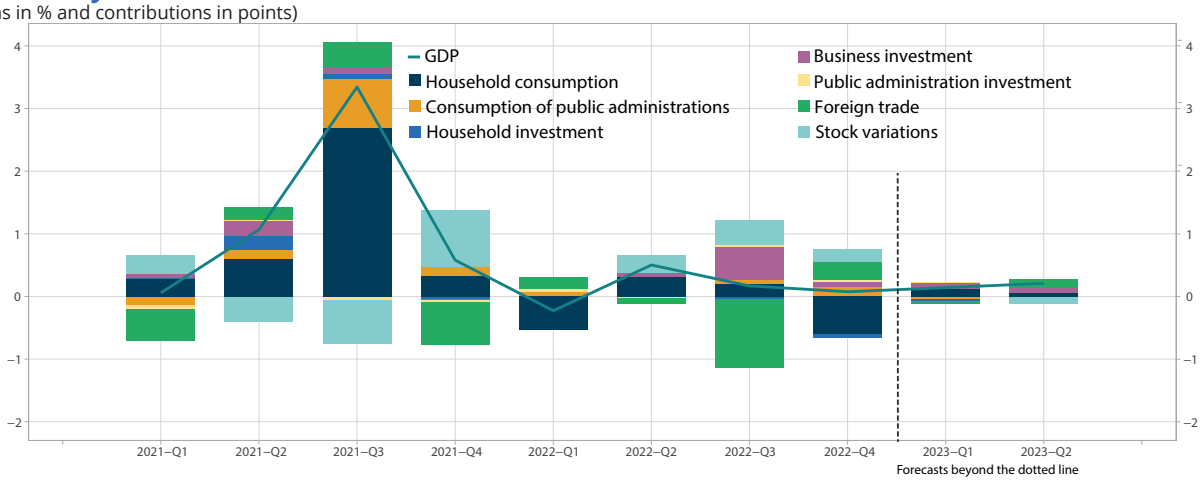
Within the main demand items, household consumption is expected to bounce back slightly in Q1 2023. Electricity and gas consumption are likely to settle down somewhat with lower temperatures than in the autumn, although energy-saving behaviours will probably continue. Growth in corporate investment is expected to continue, in the wake of economic activity and despite a less favourable context of rising interest rates. Lastly, foreign trade is likely to make a negative contribution to growth. Imports should remain stable, with lower energy imports compensating for weak domestic demand. Exports, meanwhile, are expected to decline, mainly as a backlash after naval deliveries in the previous quarter.

In Q2 2023, activity is expected to grow moderately (+0.2%). After two quarters of decline, activity should stabilise in manufacturing, but accelerate slightly in services. Meanwhile, household consumption is expected to grow only very moderately in a context where purchasing power is in decline. Corporate investment should continue to grow, again driven by the use of information and communication services, despite further increases in interest rates. Foreign trade looks set to support growth slightly: while imports are expected to increase again, exports are likely to be particularly dynamic, sustained by new aeronautical and naval deliveries.

All in all, the annual growth overhang for 2023 is expected to be +0.6% at mid-year. Apart from geopolitical developments, these forecasts remain highly dependent on changes in price increases and the behaviour of households and businesses in this context. The continuing social movements also create uncertainty: however, previous episodes of this type have shown that while their effects could be significant for the sectors concerned directly (transport services, coke and refined petroleum products, energy production where applicable) or less directly (e.g. accommodation-catering services), the impact remained limited at a macroeconomic level. Finally, the effects of monetary tightening could begin to slow activity in the coming quarters. ●

►2. Quarterly variations in GDP and contributions of main demand items

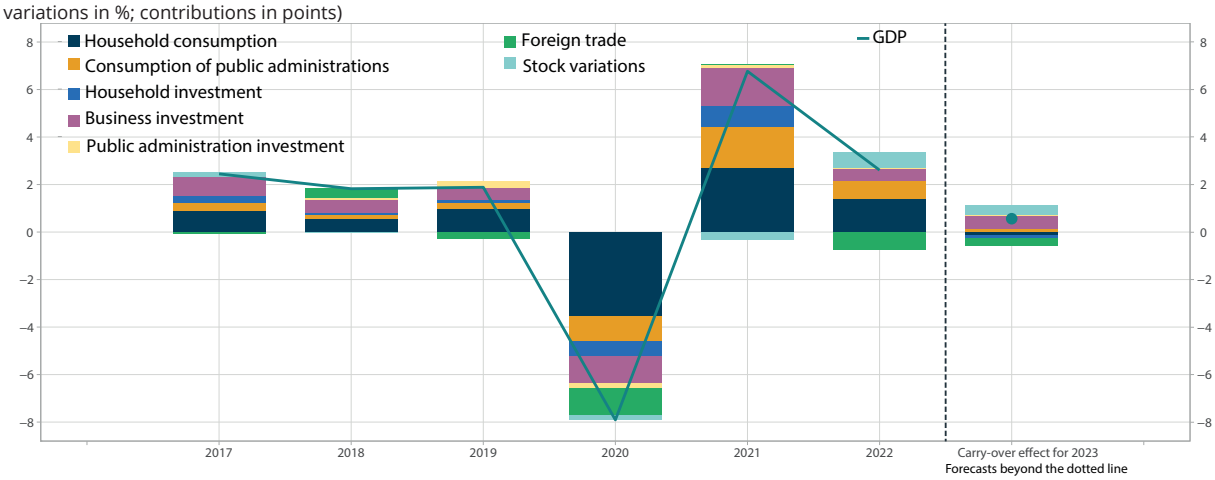
(variations in % and contributions in points)



Note: general government consumption also includes consumption by non-profit institutions serving households (NPISH).
How to read it: in Q1 2023, GDP is expected to increase by 0.1% compared to Q4 2022; the contribution of household consumption is likely to be about +0.1 points.
Source: INSEE.

►3. Annual variations in GDP and contributions of main demand items

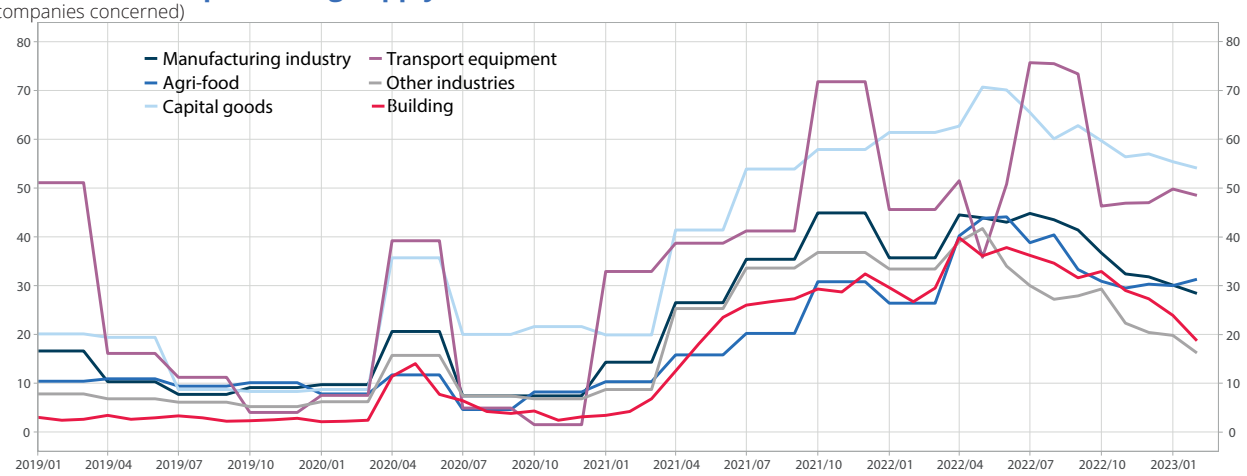
(annual variations in %; contributions in points)



Note: general government consumption also includes consumption by non-profit institutions serving households (NPISH).
How to read it: in 2022, GDP would increase by 2.6%; the contribution of household consumption amounted to 1.4 points.
Source: INSEE.

►4a. Businesses experiencing supply chain difficulties

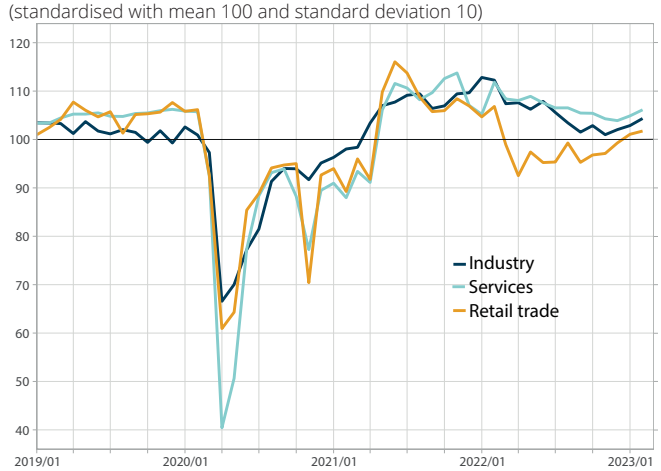
(% of companies concerned)



Last point: February 2023.
Note: results are weighted by turnover.
How to read it: in February 2023, 28% of businesses in the manufacturing industry reported supply chain difficulties.
Source: business surveys, INSEE.

►4b. Business climate in industry, services and retail trade

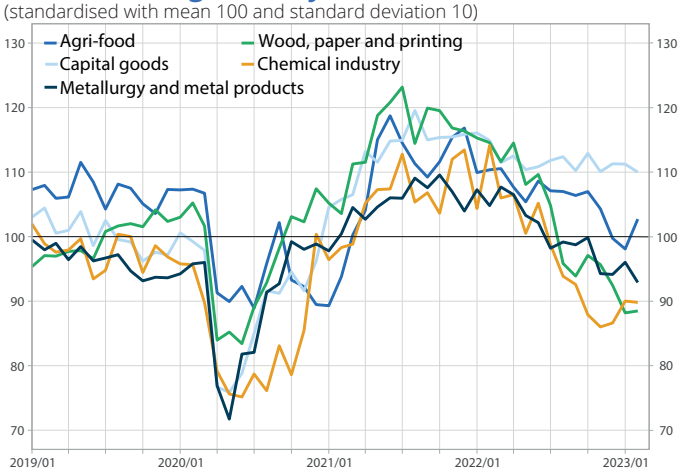
(standardised with mean 100 and standard deviation 10)



Last point: February 2023.
How to read it: the business climate in services stood at 106 points in February 2023, above its long-term average (100).
Source: business surveys, INSEE.

►4c. Business climate in different branches of the manufacturing industry

(standardised with mean 100 and standard deviation 10)



Last point: February 2023.
How to read it: the business climate in metallurgy stood at 93 points in February 2023, below its long-term average (100).
Source: business surveys, INSEE.

►5. Quarterly changes in economic activity by industry

(quarterly changes in %)

Branch	weight in %	2021				2022				2023	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Agriculture, forestry and fishing	**2**	**0.1**	**0.2**	**0.5**	**0.2**	**0.4**	**0.1**	**0.3**	**0.2**	**0.2**	**0.1**
Industry	**14**	**-0.9**	**-0.7**	**-0.2**	**-0.2**	**-0.1**	**-1.0**	**-0.6**	**1.3**	**-0.1**	**0.0**
Manufacturing industry	11	-0.3	-1.0	-0.5	-0.1	1.2	0.2	0.5	-0.3	-0.2	0.0
Manufacture of food products, beverages and tobacco-based products	2	1.2	0.4	0.4	0.2	-0.1	-1.3	0.0	0.0	-0.4	-
Coke and refined petroleum	0	-31.3	-2.1	-12.8	3.4	21.4	5.4	0.9	-9.2	9.5	-
Manufacture of electrical, electronic. computer equipment; manufacture of machinery	2	1.7	-0.2	0.1	0.5	1.1	0.3	2.1	0.2	0.4	-
Manufacture of transport equipment	2	-4.2	-5.4	-1.7	1.2	-3.2	5.0	4.3	-0.3	-0.8	-
Manufacture of other industrial products	6	-0.2	-1.0	-0.7	-0.6	1.9	-0.1	-0.2	-0.3	-0.6	-
Extractive industries, energy. water, waste treatment and decontamination	3	-3.3	0.7	1.1	-0.9	-4.5	-5.3	-4.7	7.5	0.3	0.0
Construction	**6**	**2.7**	**2.1**	**-0.2**	**-0.1**	**0.2**	**-0.7**	**-0.4**	**-0.3**	**0.1**	**0.1**
Mainly market services	**57**	**-0.1**	**1.9**	**5.1**	**1.1**	**-0.3**	**1.2**	**0.5**	**0.0**	**0.2**	**0.3**
Trade; repair of automobiles and motorcycles	10	-0.2	-0.5	2.1	0.5	-1.2	-0.3	0.4	-0.7	-0.1	0.2
Transport and storage	5	3.6	2.6	8.6	3.7	1.0	3.4	0.1	0.7	-0.3	0.2
Accomodation and catering	3	-12.5	30.0	43.4	0.1	-2.1	9.3	0.1	-0.2	0.4	0.4
Information and communication	5	2.2	1.7	2.8	1.0	0.5	1.8	2.4	0.8	0.8	0.9
Financial and insurance activities	4	1.8	1.7	2.8	0.4	-0.5	0.6	-0.2	-0.2	0.1	0.3
Real estate activities	13	-0.1	0.4	0.8	0.3	0.3	0.5	0.3	0.1	0.3	0.2
Scientific and technical activities; administrative and support services	14	-0.4	1.5	2.9	0.7	-0.5	0.5	0.3	-0.2	0.2	0.4
Other service activities	3	-1.9	4.6	25.2	6.6	-0.2	2.1	0.5	1.0	0.5	0.6
Mainly non-market services	**22**	**0.3**	**-0.1**	**1.8**	**0.2**	**0.2**	**-0.1**	**0.0**	**0.1**	**0.1**	**0.1**
Total VA	**100**	**0.1**	**1.0**	**3.3**	**0.7**	**-0.1**	**0.5**	**0.2**	**0.2**	**0.1**	**0.2**
Taxes and subsidies		*0.1*	*1.2*	*3.9*	*0.0*	*-1.0*	*0.4*	*0.0*	*-0.9*	*0.3*	*0.0*
GDP		**0.1**	**1.1**	**3.3**	**0.6**	**-0.2**	**0.5**	**0.2**	**0.1**	**0.1**	**0.2**

Forecast

How to read it: in Q4 2022, value added of the manufacture of transport equipment branch declined by 0.3%. It is expected to fall by 0.8% in Q1 2023.

Source: INSEE.

Strong decline in production in some energy-intensive industrial branches

In the context of rising electricity and gas prices, energy-intensive branches are particularly exposed to a sharp rise in their production costs. Within industry, metallurgy, the paper and paperboard industry and also the chemicals industry are among the most energy-consuming branches (compared to their level of activity measured in value added, ►**Figure 1**). This is also the case for the manufacture of other non-metallic mineral products (especially the glass industry and the manufacture of construction materials). Other branches of manufacturing are much less energy-intensive.

Within the four most energy-intensive branches (in terms of divisions in the French classification of activities NAF rev.2), output in several activities has been on a downward trend since early 2022, and this has been even more pronounced since November (►**Figure 2**). This is the case for the iron and steel industry (sub-group 241 of the metallurgy division, ►**Figure 3**), other non-ferrous metals (sub-group 244 of the metallurgy division), the manufacture of pulp, paper and paperboard (sub-group 171 of the paper and paperboard industry division), and the manufacture of basic chemicals (sub-group 201 of the chemical industry). In these branches, companies are facing a sharp rise in their costs, especially energy costs, which may force them to reduce their production and/or increase their selling prices, although the latter option would reduce their competitiveness in relation to foreign competitors, especially in America and Asia. In comments in their responses to the monthly branch surveys (from which data is used to calculate the industrial production index published every month), a small proportion of companies report that they have decided to reduce production. From questions added recently to the business tendency surveys, the proportion of such companies can be determined (►**Focus**).

Other energy-intensive activities show a more moderate drop in production, sometimes with very different behaviour from one sub-branch to another. For example, in the manufacture of glass and glass products (group 231 of NAF), the shaping and processing of flat glass remains at a higher level of production than at the start of 2022, although it has shown a definite downward trend since November (►**Figure 4**). Conversely, the manufacture of hollow glass (class 2313) is down considerably, especially tableware, kitchen glassware and crystalware, where production has plummeted since November, and production capacity has also been reduced. ●

►1. 10 most energy-intensive branches in the manufacturing industry, excluding refined petroleum products, by ratio of energy consumption to value added

(energy consumption in 2019 in thousands of tons of oil equivalent (kTOE), value added in 2019 in €M (current euros))

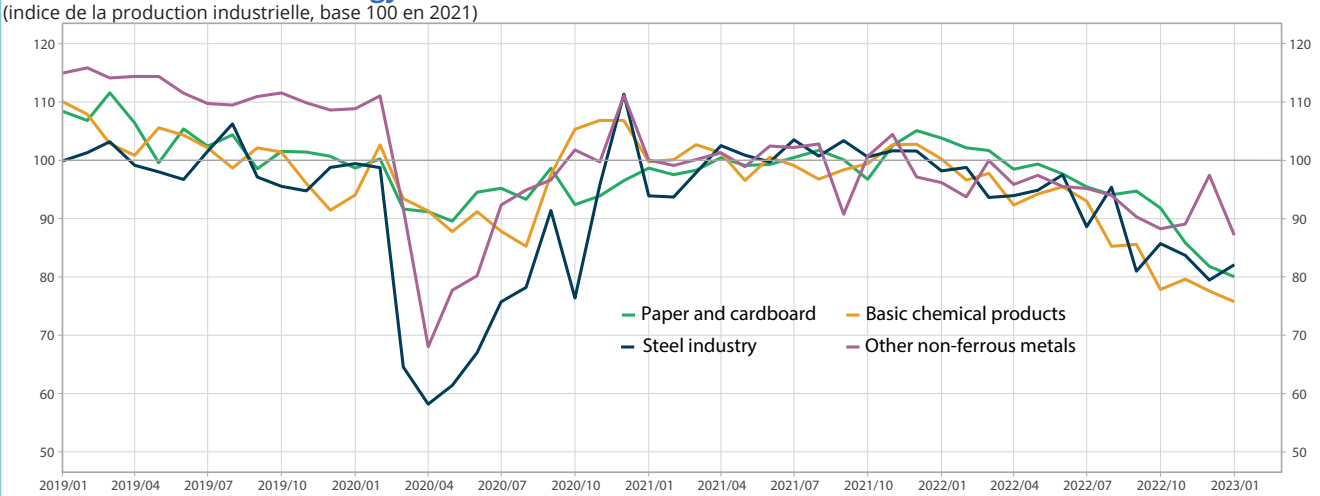
Sector of activity, division of NAF rev.2	Gross consumption in kTOE [1]	Value added in millions of euros [2]	Ratio [1] / [2]
24 - Metallurgy	7,712	4,936	1.56
17 – Paper and board industry	3,013	4,534	0.66
20 – Chemical industry	10,569	20,899	0.51
23 – Manufacture of other non-metallic products	3,698	8,623	0.43
16 – Manufacture of wood and of products of wood	545	3,290	0.17
10 – Food industries	4,660	39,449	0.12
13 – Manufacture of textiles	207	1,989	0.10
22 – Manufacture of rubber and plastic products	900	11,484	0.08
29 - Automobile industry	723	13,703	0.05
11 – Manufacture of beverages	304	6,679	0.05

Note: energy consumption includes all types of energy: all combustibles (including gas), steam and electricity. The activities mentioned may differ slightly from those identified in the Focus in the October 2022 Economic Outlook ("Which are the branches of activity where production is most dependent on energy?"): in fact, the energy intensity consumption indicator is not the same (ratio on production in the October 2022 Focus and not on value added), nor is the same level of disaggregation considered. In addition, the coke and petroleum products branch is not considered here as it is an energy-producing activity.
How to read it: in 2019, establishments whose main activity was in metallurgy consumed 7,712 thousand tons of oil equivalent in energy. The same year, value added in the branch was 4,936 million current euros. The ratio of these two figures gives an energy intensity of 1.56.
Sources: INSEE, Annual Industrial Energy Consumption Survey 2019 and National Accounts 2019.

.../...

▶2. Production in four energy-intensive industrial branches

(indice de la production industrielle, base 100 en 2021)



Source : INSEE.

▶3. Change in industrial output for the most energy-intensive industrial branches

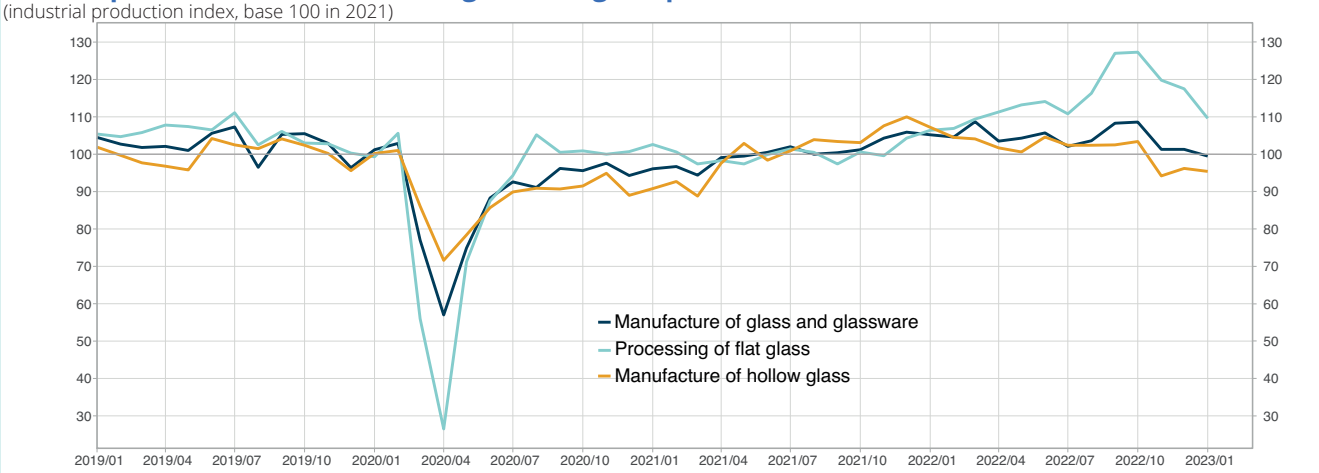
(year-on-year variation in the industrial production index in %: average index over the half-year as a ratio of the average index over the same half-year one year earlier, indices SA-WDA)

Section and division of NAF Rev. 2	S2 2021	S1 2022	S2 2022
All manufacturing industry	**0.6**	**1.0**	**2.3**
24 – Metallurgy	1.1	-2.2	-6.8
241 – Steel industry	*15.6*	*-2.0*	*-16.0*
244 – Other non-ferrous metals (Aluminium, lead, zinc, copper)	*0.3*	*-3.9*	*-7.3*
17 – Paper and paperboard industry	3.8	0.8	-5.6
171 – Manufacture of pulp, paper and paperboard	*6.4*	*1.6*	*-10.4*
20 – Chemical industry	2.7	-1.7	-4.8
201 – Manufacture of basic chemical products	*1.6*	*-4.0*	*-16.7*
23 – Manufacture of other mineral and non-metallic products	0.0	0.8	-3.0
231 – Manufacture of glass and glass products	*8.2*	*7.8*	*1.9*

How to read it: in metallurgy, the average of the industrial production index in H2 2022 was 6.8% below the average of the industrial production index in H2 2021.
Source: INSEE.

▶4. Output in the manufacture of glass and glass products

(industrial production index, base 100 in 2021)



Source: INSEE.

Faced with energy price rises, companies are reacting mainly by increasing their selling prices, while also considering investments to reduce their energy bill

In February, in a context where high energy bills still prevail, the industrial companies interviewed for the business tendency surveys continue to give priority to increasing their selling prices, but they also plan to make investments to protect themselves against this eventuality. The expected decline in activity affects mainly energy-intensive companies or those exposed to larger energy price increases. There are slightly fewer companies saying that they plan to reduce their production in the next three months than there are saying they have already done so in the last three months.

Wholesale electricity and gas market prices have fallen back since mid-December, returning to their levels before the start of the war in Ukraine, but still higher than before the health crisis[1] (►**Energy and commodities**). For most companies, however, the purchase prices of electricity and gas are not directly indexed to the wholesale price: their prices are fixed over a contractual period (►**Focus** related to these issues in the *Economic Outlook* of December 2022), and therefore depend on the terms and schedule of the energy supply contract. In particular, for multi-year contracts signed in H2 2022, the prices are automatically very high. In the case of electricity, a recent survey of suppliers by INSEE confirmed the sharp increases in selling prices to companies (►*Insee Focus* N°290).

In February 2023, INSEE interviewed companies in industry and services for its business tendency surveys, as it had done at the end of 2022, on their reactions to this energy situation. The responses they obtained in February cannot, strictly speaking, be compared to the responses collected at the end of 2022. Although the response modalities for the two questionnaires were broadly identical, questions in the February survey, like most other questions in these surveys, referred to actions taken in the last three months or expected to be taken in the next three months. The questionnaire at the end of 2022 was only forward-looking but without mentioning any particular time period. In both questionnaires, companies were free to express several types of reaction.

Nearly half of industrial companies are considering an increase in their selling prices in response to the current energy context

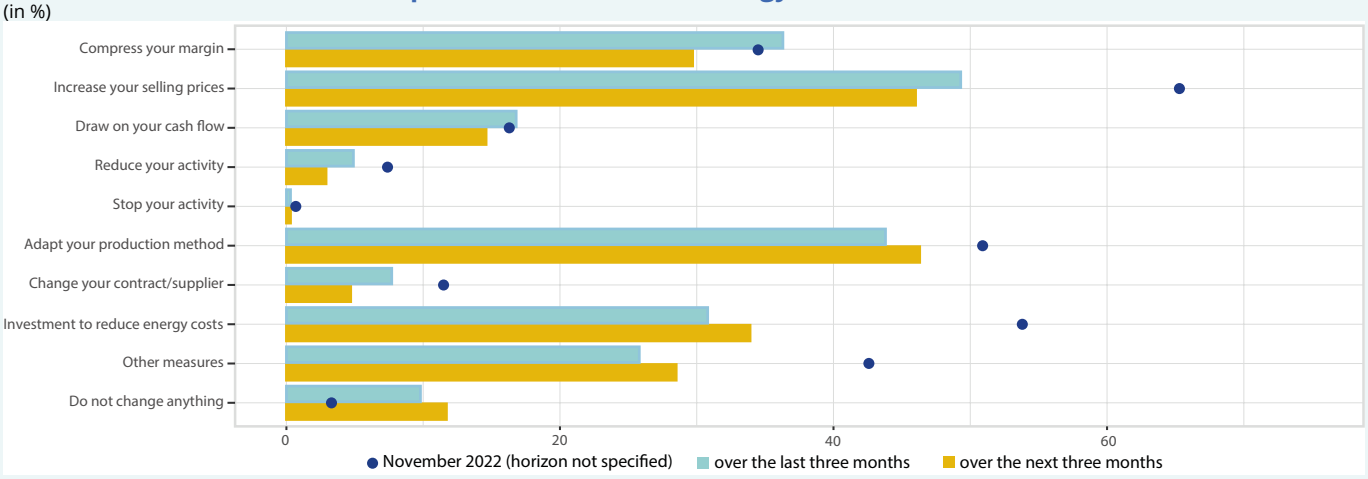
Despite the difference in the questioning, companies' reactions to energy prices in February were overall and qualitatively fairly similar to what they had said at the end of last year.

To cope with the energy situation, and especially in industry, more than 45% of companies plan to increase their selling prices (►**Figure 1**), and this figure was even as high as 70% in the agrifood industry. Just under half of

1 In February 2023, the price of natural gas (TTF) was close to its level at the beginning of September 2021, and in January 2023, the French Industrial Production Prices Index (IPPI) for electricity sold wholesale on the spot market was back to its September 2021 level.

►1. Reaction of industrial companies to the current energy situation

(in %)



Note: data stop at 27 February 2023. The dots associated with the November 2022 survey relate to an unspecified time in the future. The bars showing "over the last three months" and "over the next three months" correspond to responses in February. Proportions are calculated by weighting companies' responses by their turnover.
Scope: industry.
Source: business surveys, INSEE.

companies plan to adapt their production methods in the next three months. Many companies are also considering making investments[2] (35%) or squeezing their margins (30%). Lastly, only 3% plan to reduce their activity.

The reactions given are relatively similar, whether they refer to the last three months or the next three months, but with some discrepancies. For example, slightly fewer industrial companies intend to squeeze their margins in the next three months (30%) than did so in the last three months (36%). With regard to increasing their selling prices, withdrawing from their cash reserves and reducing activity, again fewer companies envisaged doing this in the next three months than did so in the three months that had just ended, but the difference was much smaller. Conversely, concerning adapting production methods or investments in order to save energy, a few more companies were considering doing this in the next three months than in the last three months.

3% of industrial companies intend to reduce their production in the next three months (against 5% in the last three months)

In industry (or services), companies that say they intend to reduce their activity in the next three months are in the minority overall, at around 3% (or 2%) of companies (►**Figure 2**). However, these proportions exceed 10% in wood-paper and 8% in chemicals, although this is down compared to the proportion of companies that say they did reduce production in the last three months (more than 13% in these two sectors). In services, it is accommodation and catering companies that state most frequently (6%) that they are considering reducing their activity in the next three months, more than over the last three months for this branch.

In industry, declared reductions in activity are expected to be 0.9% on average (counting a zero value for companies

2 The response behaviour to this modality seemed to match the increase in energy price declared for 2022.

►2. Decline in activity: proportion of companies considering this and average percentage by sector

Sector		In November 2022 (timeline not specified)		In February 2023 over the last three months		In February 2023 over the next three months	
		% of companies saying they plan a reduction in activity	average decline (%)	% of companies saying they plan a reduction in activity	average decline (%)	% of companies saying they plan a reduction in activity	average decline (%)
INDUSTRY		**7.3**	**1.5**	**4.7**	**1.1**	**2.8**	**0.9**
Food products	C1	6.7	0.9	3.4	0.4	1.5	0.2
Equipment goods	C3	1.9	0.4	1.2	0.2	1.5	0.6
Transport equipment	C4	1.4	0.4	1.0	0.2	0.1	0.1
of which motor vehicles	*CL1*	*0.9*	*0.5*	*0.1*	*0.2*	*0.1*	*0.0*
of which other transport equiment	*CL2*	*1.8*	*0.3*	*1.8*	*0.2*	*0.0*	*0.1*
Other manufacturing	C5	11.9	2.7	8.1	2.1	5.1	1.8
of which wood and paper products	*CC*	*12.1*	*3.8*	*14.0*	*2.8*	*10.7*	*2.7*
of which chemicals and chemical products	*CE*	*13.5*	*2.8*	*13.4*	*2.7*	*8.3*	*1.5*
of which basic metals and fabricated metal products, except machinery and equipment	*CH*	*22.5*	*4.5*	*12.4*	*4.0*	*6.0*	*3.8*
SERVICES		**2.9**	**0.7**	**1.7**	**0.4**	**1.7**	**0.5**
Road freight transport	H	2.9	2.3	3.8	1.5	2.9	1.9
Accommodation and catering	I	14.3	1.1	3.4	0.9	5.6	0.8
Information-communication	J	0.8	0.5	0.6	0.0	0.2	0.5
Real estate	L	5.3	0.3	2.0	0.4	1.9	0.3
Business services	MN	0.5	0.3	1.0	0.1	0.8	0.2

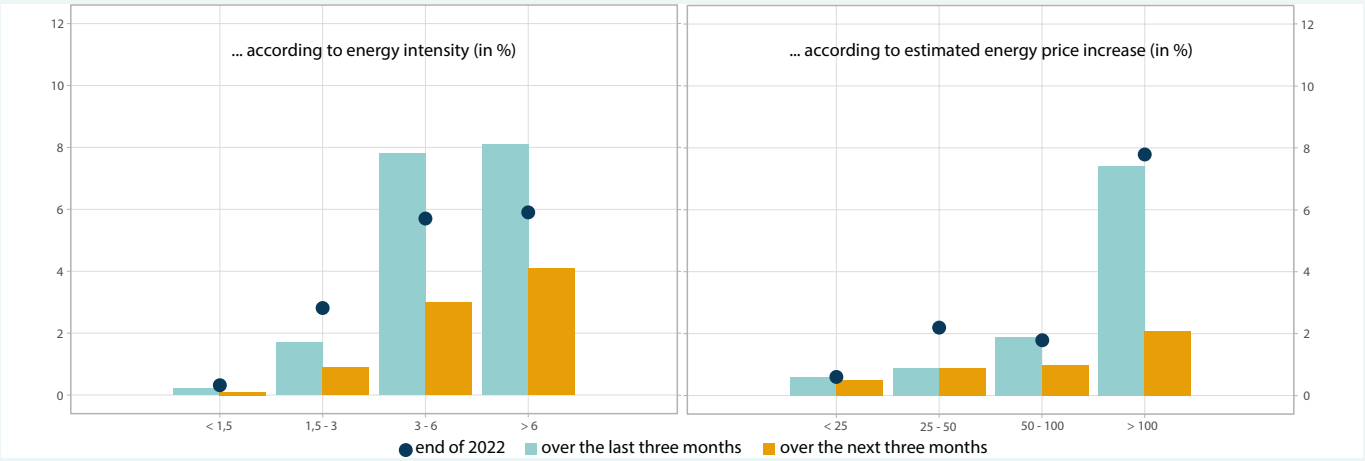
Note: data stop at 27 February 2023. Responses correspond to the November 2022 and February 2023 surveys. The question on the expected decline in activity includes a three-month timeline in the February survey, which was not the case in November. Averages are weighted by turnover. Companies that did not answer the question are considered to have given a value of zero. The services sector represented here does not include rail transport services, as they are not surveyed in the business tendency surveys.
Source: business surveys, INSEE.

planning no reduction in activity), whereas in services, which are less energy-intensive for the most part, they are likely to be 0.5%. It is in the most energy-consuming sectors that declared reductions in activity are expected to be most significant, at around 3% in metallurgy and the wood and paper industry. While these reductions are on average smaller in services, the road freight transport and accommodation-catering branches continue to stand out (declining by 1.9% and 0.8% respectively).

In fact, the most energy-intensive companies, in industry or services, are indeed those whose activity would seem to be most affected by the rise in energy prices. Among the industry and services companies whose gas and electricity consumption is over 3% of turnover, the average drop in activity expected in February is in excess of 3% (►**Figure 3** left). Similarly, this average is around 2% for companies that faced at least a doubling of their energy prices in 2022 (►**Figure 3** right). However, these figures are not forecasts of change in activity: in this module companies are only questioned on any reductions in production linked to the energy context, and not on any increases they may be expecting. ●

Charles-Marie Chevalier

►3. Average of responses to the question on decline in activity...



Note: data stop at 27 February 2023. Averages are weighted by turnover. Companies that did not answer the question are considered to have given a value of zero. Energy intensity is defined as the ratio of electricity and gas consumption in 2022, declared or imputed, to the declared turnover. In particular, 17% of non-responses on gas consumption and 20% on electricity consumption were completed using the EACEI survey of energy use in industry. As some companies said their activity declined in November or December, or they had different responses for the two months, the average of the two was used for the dots representing "end of 2022" in order to have a wider sample.
Price changes are calculated based on company responses to the November and December questionnaires and relate to 2022. The declared variation in energy prices corresponds to the average of these prices for gas and electricity by weighting according to their corresponding energy ratios (if the ratio for a given energy is not known, only the other one is considered).
Note that the categories are not of equal proportions, whether in terms of turnover or number of companies (in particular, a very large majority of companies have an energy ratio of less than 1.5).
Scope: industry and services.
Source: business surveys, INSEE.

Bibliography

Bjai B., Chevalier C-M., Génin H., Lefebvre C. et Roulleau G., (2022) "Companies coping with rising energy prices: contrasting situations and reactions", *Economic outlook*, INSEE, December 2022.

Dunand O., Faucheux J-C., Lutinier B., Passerieux C. et Studer N., (2023) "Electricity prices for business customers are expected to rise sharply in 2023", *Insee Focus* n°290, February 2023. ●

Foreign trade

In Q4 2022, exports slowed and imports flagged, with the result that foreign trade made a positive contribution to GDP growth (+0.3 points). The reason for the decline in imports is mainly the result of trade in energy: imports of electricity, which were very dynamic in previous quarters, fell back as nuclear reactors returned to service, while for gas, the high level of inventory was accompanied by fewer imports. Tourism also played a part: spending by French tourists abroad declined. Meanwhile, exports of manufactured products dropped sharply, despite major naval and aeronautical deliveries, because demand for French products fell. However, this trend was offset by the sharp rise in energy exports, especially gas, and by the upswing in spending by foreign tourists in France.

In Q1 2023, foreign trade is expected to hamper GDP growth slightly (-0.1 point). In fact, exports are likely to slip back (-0.2%) with the after-effects of aeronautical and naval deliveries, despite the upturn in world demand for French products. Meanwhile, imports are expected to remain stable as a result of opposing movements, with the drop in gas imports offsetting the support for domestic demand which has risen slightly. Some nuclear power plants have restarted, thus resulting simultaneously in an increase in electricity exports and a drop in imports, thus making a positive contribution to trade in electricity, although this does not fully compensate for movements in other goods and services.

In Q2 2023, exports are expected to bounce back, sustained by a more dynamic world demand for French products and new naval deliveries. Regarding energy in particular, exports of electricity are likely to continue to increase, while exports of gas could fall back. Imports too are expected to rise again, in the wake of domestic demand. All in all, foreign trade should contribute around 0.1 points to GDP growth in Q2 2023.

►1. French foreign trade

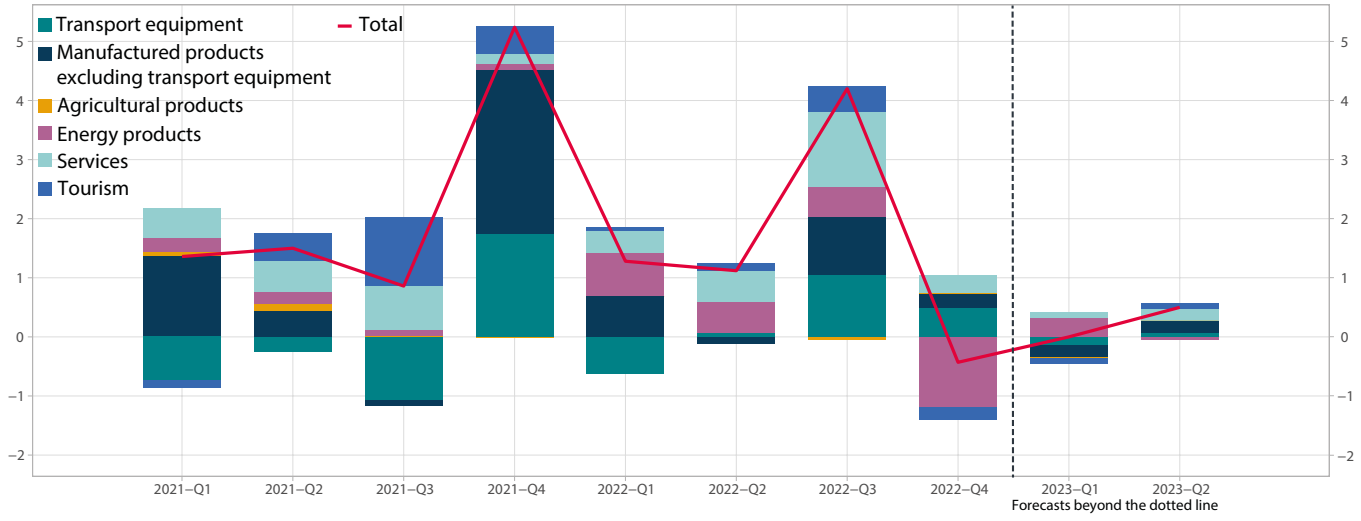
(variation in %, volumes of previous year's chained prices, contributions in points)

	Quarterly variations										Annual variations		
	2021				2022				2023		2021	2022	2023 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Exports													
Total	-0.3	2.5	2.2	2.9	1.9	0.7	1.0	0.5	-0.2	1.0	8.6	7.1	1.7
Manufactured products (66%*)	-2.3	2.9	-2.7	2.8	2.7	-0.1	1.7	-1.0	-0.5	1.1	7.0	4.7	0.4
Imports													
Total	1.4	1.5	0.9	5.2	1.3	1.1	4.2	-0.4	0.0	0.5	7.8	9.1	2.4
Manufactured products (70%*)	0.9	0.3	-1.7	6.6	0.1	-0.1	3.0	1.1	-0.5	0.4	7.4	6.0	2.1
Contribution of foreign trade to GDP	**-0.5**	**0.2**	**0.4**	**-0.7**	**0.2**	**-0.1**	**-1.1**	**0.3**	**-0.1**	**0.1**	**0.1**	**-0.7**	**-0.3**

Forecast.
* Share of exports (or imports) of manufactured products in total exports (or imports), in 2021.
How to read it: in Q1 2023, French exports are expected to decline by 0.2%.
Source: INSEE.

►2. Contributions of different products to imports

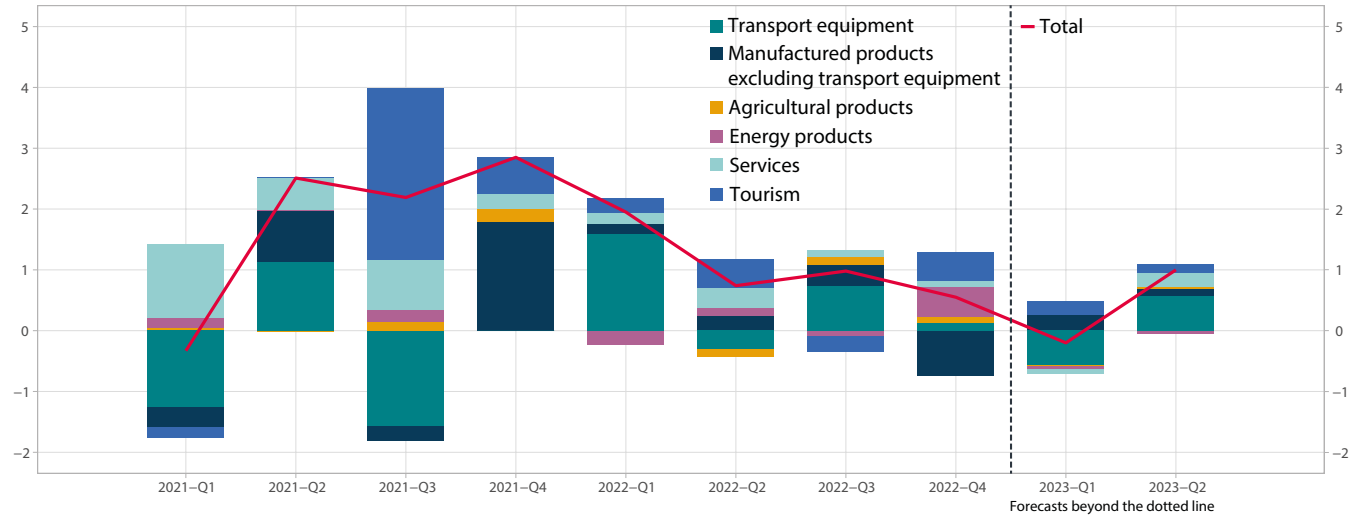
(quarterly changes in total imports, in %, and contributions of individual products, in points)



How to read it: French imports fell back (-0.4%) in Q4 2022. Imports of energy products contributed -1.2 points.
Source: INSEE.

►3. Contributions of different products to exports

(quarterly changes in total exports, in %, and contributions of individual products, in points)



How to read it: French exports increased by 0.5% in Q4 2022. Exports of manufactured products, excluding transport equipment, contributed -0.7 points..
Source: INSEE.

Employment

In Q4 2022, payroll employment slowed: +0.2% (+44,000 jobs), after +0.4% in Q1 (+109,300 jobs) and Q2 2022 (+99,700 jobs) and +0.3% in Q3 (+84,100 jobs). This was the eighth consecutive quarter to see an increase since the end of 2020. At the end of December, payroll employment stood well above its level one year previously (+1.3%, or +337,100 jobs) and exceeded its pre-health crisis level at the end of 2019 by 4.5%, or almost 1.2 million extra jobs, a third of which were sandwich contracts. In Q4 2022, the slowdown in payroll employment affected virtually all sectors of activity, and was a little more pronounced in the market tertiary sector. After several quarters with a marked increase, work-study employment also contributed to the overall slowing in Q4 2022.

In H1 2023, payroll employment is expected to remain sluggish, both for sandwich contracts and other employment, in the wake of economic activity. Per capita productivity –the ratio of value added to employment– is likely to be almost stable. It would therefore remain well below its pre-health crisis level, especially in industry: this difference is partly explained by the substantial growth in sandwich contracts over the period (►**Focus** in *Economic Outlook* December 2022). By also taking into account an expected slowdown in self-employment, total employment is likely to increase by 43,000 during H1 2023, after +148,000 in H2 2022 and +229,000 in H1 2022. By mid-2023, the total number of jobs created since the end of 2019 should therefore reach about 1.5 million. ●

►1. Change in payroll employment

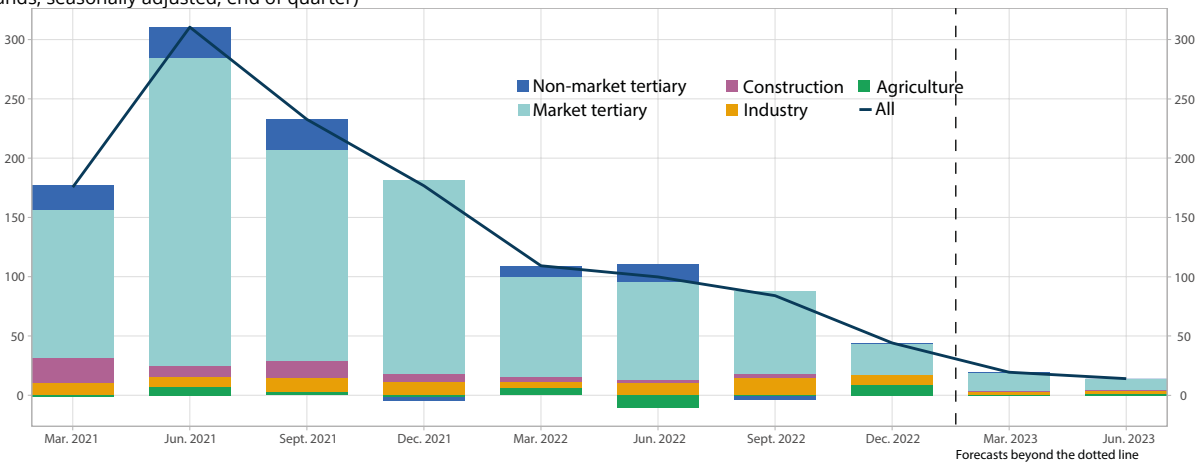
(in thousand, SA, at the end of the period)

	Evolution over 3 months														Evolution over 1 year		
	2020				2021				2022				2023				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	2020	2021	2022
Payroll employment	**-447**	**-53**	**470**	**-39**	**176**	**310**	**233**	**177**	**109**	**100**	**84**	**44**	**19**	**14**	**-69**	**895**	**337**
	-1,7%	**-0,2%**	**1,9%**	**-0,1%**	**0,7%**	**1,2%**	**0,9%**	**0,7%**	**0,4%**	**0,4%**	**0,3%**	**0,2%**	**0,1%**	**0,1%**	**-0,3%**	**3,5%**	**1,3%**
Agriculture	-5	3	1	7	-1	7	2	-1	6	-10	0	9	0	1	6	7	4
Industry	-6	-16	0	-8	10	8	12	11	6	10	14	8	2	2	-29	42	38
Construction	9	13	17	14	21	9	14	7	4	2	4	1	1	1	53	51	11
Market tertiary	-439	17	332	-79	125	260	178	164	84	83	70	26	15	10	-169	727	262
Non-market tertiary	-6	-69	120	26	20	26	26	-4	10	15	-4	1	1	0	71	69	22
Self-employment	**15**	**15**	**15**	**15**	**56**	**56**	**56**	**56**	**10**	**10**	**10**	**10**	**5**	**5**	**60**	**225**	**40**
All	**-432**	**-38**	**485**	**-23**	**232**	**367**	**289**	**233**	**119**	**110**	**94**	**54**	**24**	**19**	**-9**	**1 120**	**377**
	-1,5%	**-0,1%**	**1,7%**	**-0,1%**	**0,8%**	**1,3%**	**1,0%**	**0,8%**	**0,4%**	**0,4%**	**0,3%**	**0,2%**	**0,1%**	**0,1%**	**0,0%**	**3,9%**	**1,3%**

Forecast.
Note: in this table, temporary workers are counted in the commercial tertiary sector.
How to read it: in Q4 2022, payroll employment increase by 0.2%, or 44,000 net new jobs.
Scope: France (excluding Mayotte).
Source: INSEE.

►2. Payroll employment, quarterly evolution by sector of activity

(in thousands, seasonally adjusted, end of quarter)



Note: temporary workers are counted in the market service sector.
Scope: France (excluding Mayotte).
Source: INSEE.

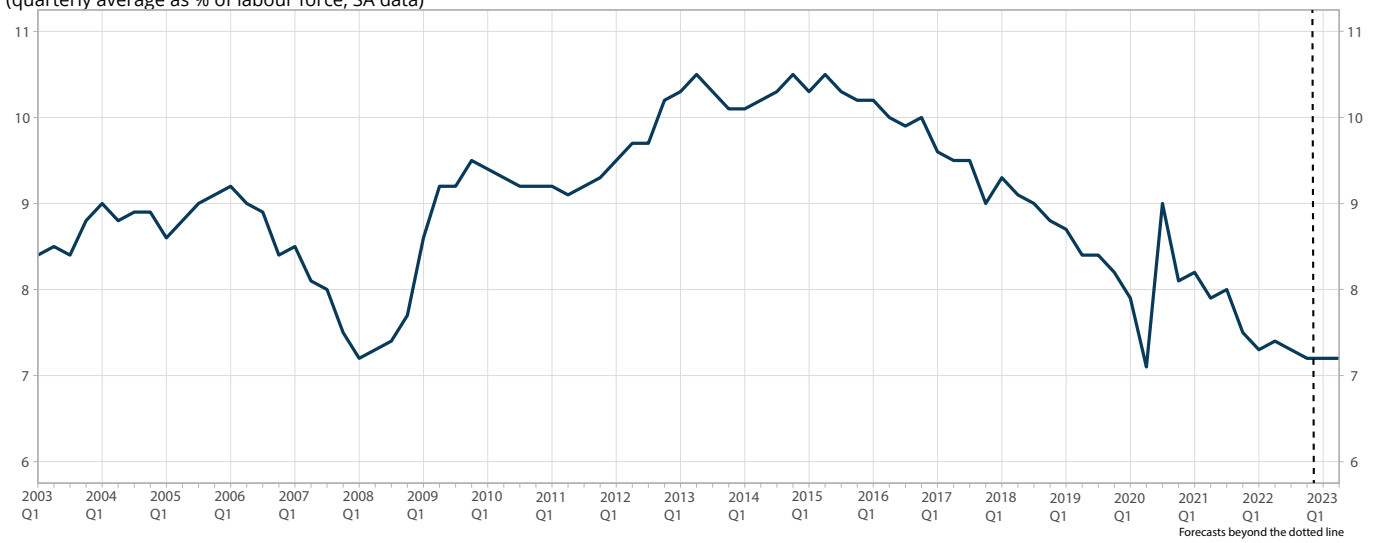
Unemployment

In Q4 2022, the unemployment rate according to the ILO definition again remained virtually stable compared to the previous quarter: –0.1 points, to 7.2% of the labour force (►**Figure 1**). This was 0.3 points below its level of Q4 2021 and its lowest level since Q1 2008 (if we exclude the exceptional artificial drop in Q2 2020, during the first lockdown). The year-on-year fall is the result of a more dynamic decline in momentum in employment than in that of the labour force: 467,000 net jobs created throughout the year for 396,000 additional workers. Employment and the labour force slowed together at the end of the year but the unemployment rate and the labour force participation rate according to the ILO definition remained at their highest ever levels since INSEE first measured them (1975).

In H1 2023, the labour force is expected to increase at a similar pace to that in Q4 2022 (+37,000 in Q1 2023 and +28,000 in Q2). Given that a slowdown is expected in employment (+39,000 on average in Q1 then +22,000 in Q2), the unemployment rate is likely to remain at 7.2% of the labour force until mid-2023 (►**Figure 2**). ●

►1. Unemployment rate (ILO definition)

(quarterly average as % of labour force, SA data)



Scope: France (excluding Mayotte), persons aged 15 or over living in ordinary housing.
Source: INSEE, Labour Force Survey.

2. Change in employment, unemployment and the active population

(variation in quarterly average in thousands, SA data)

	2021				2022				2023		Annual change		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	2020	2021	2022
Employment (1)	**104**	**299**	**328**	**261**	**176**	**115**	**102**	**74**	**39**	**22**	**50**	**992**	**467**
reminder: employment at the end of the period	232	367	289	233	119	110	94	54	24	19	-8	1 121	377
Unemployment (2)	**30**	**-62**	**33**	**-157**	**-28**	**21**	**-19**	**-45**	**-2**	**6**	**-47**	**-156**	**-71**
Active population = (1) + (2)	**134**	**237**	**361**	**104**	**149**	**135**	**83**	**29**	**37**	**28**	**3**	**836**	**396**
Trend labour force (a)	8	7	6	6	7	8	9	11	9	8	24	27	35
"Pre-crisis" cyclical bending effect (b)	10	30	33	26	18	11	10	7	4	2	6	99	46
Effect of work-linked training on youth activity (c)	31	35	37	26	16	27	36	23	14	17	38	129	102
Residue (d)	85	165	284	46	108	89	27	-12	10	0	-65	580	212
Variation in unemployment rate	**0.1**	**-0.3**	**0.1**	**-0.5**	**-0.2**	**0.1**	**-0.1**	**-0.1**	**0.0**	**0.0**	**-0.1**	**-0.6**	**-0.3**
Unemployment rate	8.2	7.9	8.0	7.5	7.3	7.4	7.3	7.2	7.2	7.2			

Forecast
Note: employment corresponds here to total employment (payroll employment including sandwich contracts + self-employment), measured as a quarterly average
(a) Trend based on adjusted 2022 active population projections.
(b) This flexibility effect represents the fact that new workers enter the labour market when the employment situation improves.
(c) Effect based on sandwich contract numbers from DARES, calculations by INSEE.
(d) In 2020 and 2021, the residue covers the specific effect of the health crisis on activity behaviour.
How to read it: between Q3 2022 and Q4 2022, employment increased by 74,000 on average, unemployment decreased by 45,000 and the labour force increased by 29,000. The unemployment rate declined by 0.1 points and reached 7.2%.
Scope: France (excluding Mayotte), persons aged 15 or over.
Source: INSEE, Labour Force Survey, Quarterly employment estimates

Consumer prices

In 2022, the consumer price index rose by 5.2% as an annual average, an increase unprecedented since the mid-1980s. Driven primarily by energy, inflation gradually spread to most other goods and services, with food becoming the main contributor from autumn onwards. Since mid-2022, the year-on-year variation in consumer prices has hovered around 6%: energy inflation has slipped back overall whereas food inflation has continued to rise as has, to a lesser extent, that of manufactured products.

Inflation should ease somewhat by the end of H1 2023, to a little under 5.5% in June, as a result mainly of a "base effect", in other words the fact that prices have risen less briskly than the previous year (►**Focus** on inflation in the western economies). This effect is likely to affect March in particular, when inflation is expected to fall more sharply (the CPI looks set to increase by +0.5% in March 2023 against +1.4% the previous year ►**Figure 3**). Notably, assuming that the price of a barrel of Brent is €78 over the forecasting period, energy inflation should fall considerably, after increasing in January (end of the reduction at the pump in January, 15% increase in regulated gas tariffs) then drop slightly in February (due to petroleum products and despite the increase in regulated electricity tariffs). The year-on-year variation in energy prices could therefore be slightly negative at the end of H1, as these prices had increased substantially the previous year at the start of the war in Ukraine.

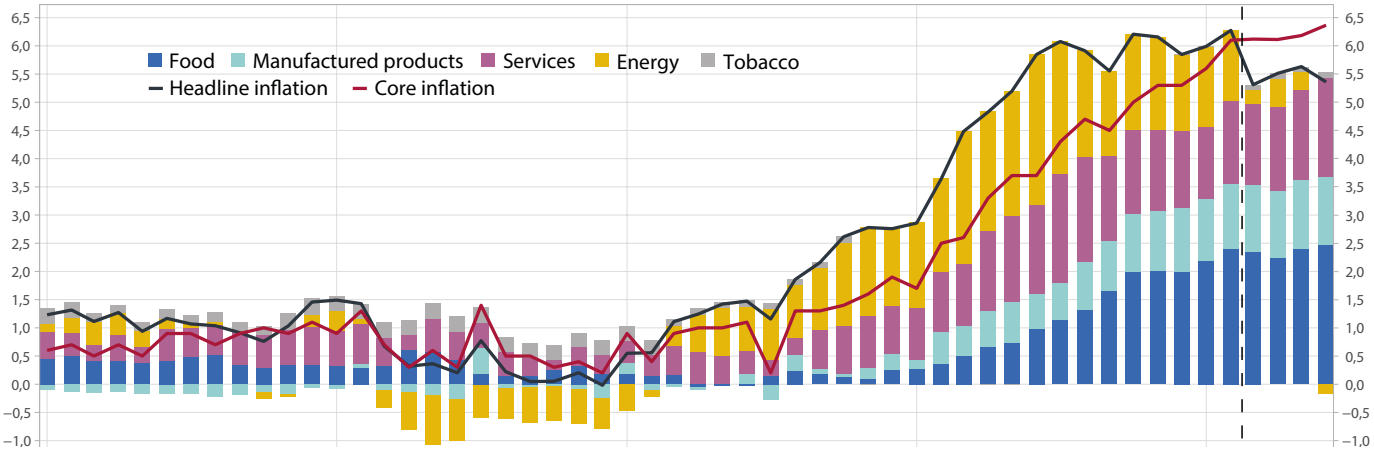
Meanwhile, food prices are expected to remain particularly dynamic, despite the drop in world prices of food commodities (such as wheat, for example). The shocks of last year, including that experienced by energy costs, are still expected to exert upward pressure on consumer prices, as can be seen from recent trade negotiations between producers, suppliers and distributors. The impact of these negotiations on prices is unlikely to be immediate, however, but is more likely to be gradual, dependent mainly on the disposal of food product inventories. Given this context, food prices could take off once again and their year-on-year variation would then stand at just under 15.5% in June. This forecast is still surrounded by uncertainty regarding the impact of trade negotiations, however, whether in terms of the speed at which consumer prices are affected or the measures taken by distributors to offset this.

In addition, the 50-centime increase in the price of tobacco on 1st March is likely to add around +0.1 points to headline inflation. With regard to manufactured products, inflation is expected to rise slightly across the whole of the forecasting period, from 4.7% year-on-year in February to 5.2% in June. It will probably be driven by production prices, which are still buoyant in industry, reflecting the continuing effect of earlier shocks, despite the drop in certain commodity prices.

The contribution of services to headline inflation is expected to increase slightly throughout the half-year: the year-on-year variation in the price of services is likely to increase from 3.0% in February to 3.5% in June. This slight acceleration would mainly reflect the rise in production costs, including wages, taking into account successive increases in the SMIC since the start of the inflation surge.

►1. Headline inflation and contributions by item

( )



Note: the table shows the definitive CPI for February, published on 15 March 2023, while forecasts for the following months were based on the provisional CPI estimate.
How to read it: in January 2023, headline inflation was 6.0%. Food contributed 2.2 points whereas manufactured products contributed a little over one point.
Source: INSEE.

Core inflation excludes prices of the most volatile products (especially energy, also fresh produce and some non-fresh food products) and the effects of fiscal measures, and it looks set to increase across H1 2023, reaching +6.4% in June and thus overtaking headline inflation from March. This is because some items that are expected to push inflation down in 2023 -primarily energy, via the base effect- are not included in core inflation. Conversely, among the items whose prices are likely to accelerate year-on-year in the coming months, most are included in core inflation (e.g. services, manufactured goods and most non-fresh food products) and are therefore likely to drive it upwards.

► 2. Headline inflation, past and forecast

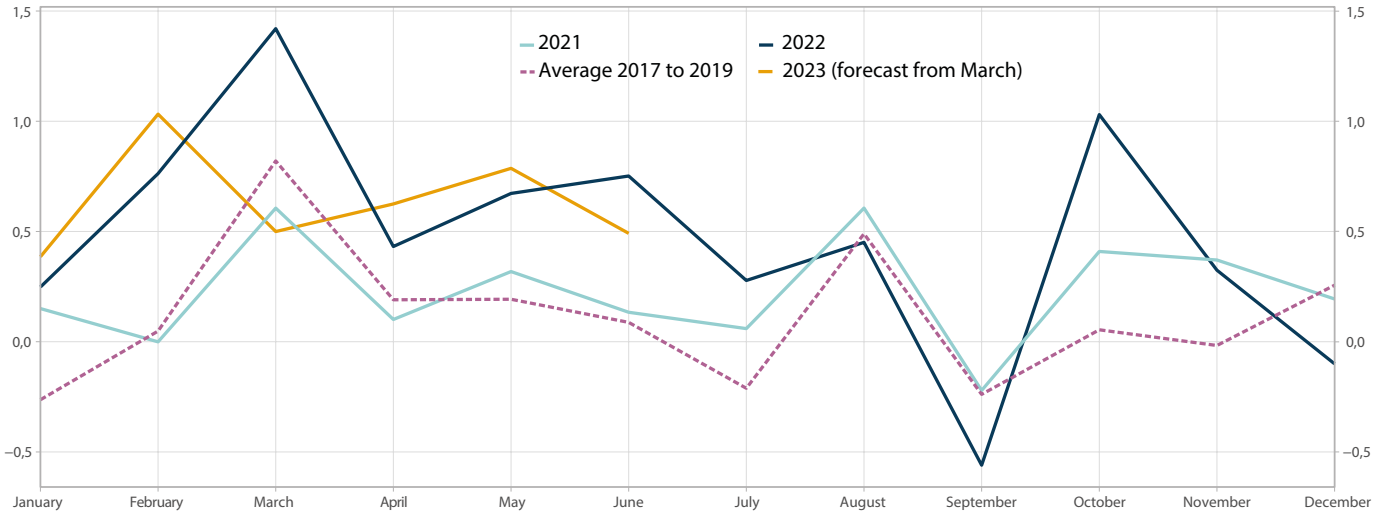
(change in %, contributions in points)

CPI groups* (2023 weightings)	Jan. 2023		Feb. 2023		Mar. 2023		Apr. 2023		May 2023		June 2023		Annual averages	
	yoy	cyoy	yoy	cyoy	yoy	cyoy	yoy	cyoy	yoy	cyoy	yoy	cyoy	2021	2022
Food (16.2%)	**13.3**	**2.2**	**14.8**	**2.4**	**14.6**	**2.3**	**13.9**	**2.2**	**14.9**	**2.4**	**15.4**	**2.5**	**0.6**	**6.8**
including: fresh food (2.4%)	10.2	0.3	15.0	0.4	12.6	0.3	7.8	0.2	13.8	0.3	14.5	0.3	1.9	7.7
excluding: fresh food (13.9%)	13.9	1.9	14.8	2.0	15.0	2.0	15.0	2.0	15.1	2.1	15.6	2.1	0.4	6.6
Tabacco (1.9%)	**0.2**	**0.0**	**0.2**	**0.0**	**5.3**	**0.1**	**5.4**	**0.1**	**5.5**	**0.1**	**5.6**	**0.1**	**5.5**	**0.1**
Manufactured products (23,2%)	**4.5**	**1.1**	**4.7**	**1.1**	**5.0**	**1.2**	**5.1**	**1.2**	**5.2**	**1.2**	**5.2**	**1.2**	**0.3**	**3.0**
including: clothing and footwear (3.4%)	2.4	0.1	2.3	0.1	3.6	0.1	4.1	0.1	4.6	0.2	5.2	0.2	0.1	2.7
medical products (3.8%)	-0.6	0.0	-0.5	0.0	-0.6	0.0	-0.6	0.0	-0.5	0.0	-0.6	0.0	-1.2	-1.2
other manufactured products (16.0%)	6.2	1.1	6.5	1.1	6.6	1.1	6.6	1.1	6.6	1.1	6.6	1.1	0.7	4.1
Energy (8.6%)	**16.3**	**1.4**	**14.1**	**1.3**	**2.9**	**0.3**	**5.5**	**0.5**	**3.6**	**0.3**	**-1.3**	**-0.2**	**10.5**	**23.1**
including: oil products (4.3%)	16.3	0.7	8.8	0.4	-7.7	-0.4	-1.5	-0.1	-4.6	-0.3	-13.3	-0.8	13.5	29.0
Services (50.1%)	**2.6**	**1.3**	**3.0**	**1.5**	**2.9**	**1.4**	**3.0**	**1.5**	**3.2**	**1.6**	**3.5**	**1.8**	**1.2**	**3.0**
including: rent-water (7.4%)	2.0	0.2	2.7	0.2	1.6	0.1	1.6	0.1	1.1	0.1	1.2	0.1	1.1	2.0
health services (6.4%)	-0.4	0.0	-0.2	0.0	0.0	0.0	-0.7	0.0	-0.6	0.0	-0.7	0.0	-0.5	-0.1
transport (3.0%)	10.2	0.1	11.1	0.2	10.2	0.2	6.8	0.2	7.3	0.2	6.5	0.2	3.8	10.4
communications (2.1%)	-1.4	0.0	-2.0	0.0	-1.9	0.0	-2.5	-0.1	-1.4	0.0	-1.1	0.0	2.9	0.6
other services (31.2%)	3.5	1.0	3.7	1.1	3.9	1.2	4.2	1.3	4.6	1.4	5.0	1.6	1.2	3.7
All (100%)	**6.0**	**6.0**	**6.3**	**6.3**	**5.3**	**5.3**	**5.5**	**5.5**	**5.6**	**5.6**	**5.4**	**5.4**	**1.6**	**5.2**
All excluding energy (91.4%)	5.0	4.6	5.5	5.0	5.6	5.1	5.5	5.0	5.9	5.3	6.1	5.5	0.9	3.6
All excluding tabacco (98.2%)	6.1	6.0	6.4	6.3	5.3	5.2	5.5	5.4	5.6	5.5	5.4	5.3	1.6	5.3
Core inflation ** **(60.6%)**	**5.6**	**3.4**	**6.1**	**3.6**	**6.1**	**3.6**	**6.1**	**3.6**	**6.2**	**3.7**	**6.4**	**3.8**	**1.1**	**3.9**

Forecast.
yoy: year-on-year; cyoy: contribution to the year-on-year value of the overall index.
* Consumer price index (CPI).
** Index excluding public tariffs and products with volatile prices, corrected for tax measures.
Note: the table shows the definitive CPI for February, published on 15 March 2023, while forecasts for the following months were based on the provisional CPI estimate.
Source: INSEE.

►3. Monthly variations in headline inflation in 2023, 2022, 2021 and the 2017-2019 average

(evolution in %)



How to read it: in January 2023 prices increased by 0.4% on average compared to the previous month. In 2022, as in 2021, this variation was about +0.2%. The average monthly variation from 2017 to 2019 was about -0.3% in January.
Source: INSEE.

Wages

In H2 2022, the average wage per capita (SMPT) in the non-agricultural market branches accelerated sharply (+0.7% in Q3 then +1.7% in Q4, ►**Figure 1**). This momentum was due to the context of high inflation which favoured wage renegotiations and led to an automatic revision of the minimum wage (SMIC) in August (+2.0%), but also and more importantly to massive payouts at the end of the year of the value sharing bonus (PPV), which replaced the extraordinary purchasing power bonus (PEPA) from 1st July 2022 (►**Focus**).

On average across 2022 the SMPT increased by 5.7% in nominal terms and by 0.4% in real terms, given the buoyancy of prices. However, 2.2 points of this increase was due to the automatic decline in the use of short-time working in 2022, compared to the level in 2021, which was still high and the allowances paid were not counted as wages. Apart from this automatic effect, the SMPT fell in 2022 in real terms (-1.8%), and in similar proportions to the decline in the basic monthly wage (SMB[1], -2.0%). The scale of these declines is unprecedented and indicates the strong acceleration in prices in 2022, also unprecedented since the early 1980s.

In H1 2023, wages look set to remain dynamic, despite a temporary slowdown at the start of the year associated with smaller payouts of PPV compared to Q4 2022. Thus the SMPT is expected to rise by 0.9% in Q1 then by 1.4% in Q2. This buoyancy will probably be driven by taking the increase in consumer prices into account in wage negotiations and by further revisions of the SMIC (automatic increase in January of 1.8%, and probably a further revision of at least 2% in the spring). However, the increase in the SMPT is expected to only partially offset the rise in prices. Thus the purchasing power of the SMPT is expected to decline further in H1 2023. By mid-year, the real SMPT is likely to be 2.8% below its level one year earlier (►**Figure 2**). As usual in the *Economic Outlook*, these forecasts for the purchasing power of wages are produced using household consumption as a deflator in a framework consistent with the quarterly national accounts. This differs from the consumer price index, a reference tool for measuring inflation (CPI; ►**Box** in the *Household income* sheet). If the CPI were used as a deflator, the drop in the purchasing power of wages over one year would be less by mid-2023 (-0.8% year-on-year in Q2 2023).

In general government, the nominal SMPT rose by 4.3% in 2022 on average, after +2.2% in 2021, driven mainly by the review of category C personnel wages and of the index point on 1st July (+3.5%). However, as in the private sector, the purchasing power of the SMPT in general government slipped back in 2022 (0.9% as an annual average). At the start of 2023, the SMPT in general government is likely to continue to weaken in real terms: the annual growth overhang by mid-year is expected to be -3.1% (-1.5% using the CPI as deflator). ●

1 The SMB corresponds to the core component of the SMPT, alongside the short-term component which was particularly affected during the health crisis.

►1. Variation in the average wage per capita (SMPT) and the basic monthly wage (SMB)

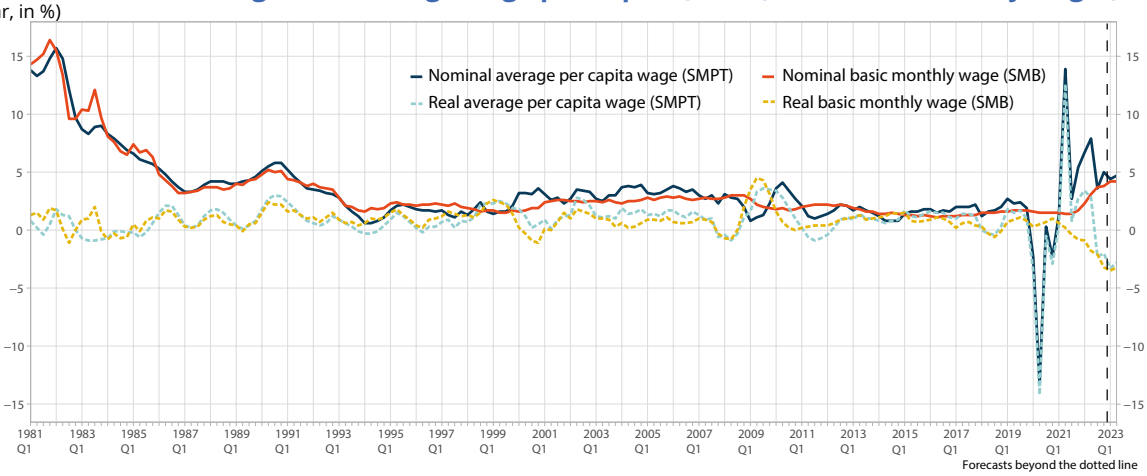
(changes in %, seasonally adjusted data)

	Quarterly growth rates										Average annual change				
	2021				2022				2023		2019	2020	2021	2022	2023 (ovhg)
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2					
Average wage per capita (SMPT) in non-agricultural market branches	0.1	-0.1	4.9	0.3	1.4	1.1	0.7	1.7	0.9	1.4	2.3	-4.4	5.6	5.7	3.8
Basic monthly wage (SMB)	0.3	0.3	0.4	0.8	0.8	1.1	1.0	0.8	1.2	1.1	1.7	1.5	1.5	3.2	3.5
SMPT in general government											1.4	2.6	2.2	4.3	3.0
Real SMPT* in the non-agricultural market branches	-0.5	-0.4	4.2	-0.5	0.1	-0.9	-1.0	-0.3	-1.2	-0.4	1.5	-5.3	3.9	0.4	-2.4
Real SMB*	-0.4	-0.1	-0.3	-0.1	-0.5	-1.0	-0.7	-1.1	-0.9	-0.6	0.9	0.6	-0.1	-2.0	-2.7
Real SMPT* in general government											0.5	1.7	0.6	-0.9	-3.1
Real SMPT** in non-agricultural market branches	-0.5	-0.3	4.1	-0.7	-0.2	-0.7	-0.6	0.5	-0.5	-0.1	1.2	-4.9	3.8	0.5	-0.7
Real SMB**	-0.4	0.0	-0.4	-0.2	-0.8	-0.7	-0.3	-0.4	-0.1	-0.4	0.6	1.0	-0.1	-1.9	-1.1
Real SMPT** in general government											0.2	2.1	0.6	-0.9	-1.5

Forecast.
* in the sense of the household consumption price (quarterly national accounts).
** in the sense of the CPI - household consumption price index.
How to read it: in Q2 2023, the basic monthly wage (SMB) would grow by 1.1% compared to the previous quarter.
Source: DARES, INSEE.

►2. Nominal and real changes* in average wage per capita (SMPT) and basic monthly wage (SMB)

(year-on-year, in %)



* in the household consumption price sense (quarterly national accounts).
How to read it: in Q2 2023, year-on-year growth in nominal SMPT would be 4.7%.
Scope: non-agricultural market sector.
Source: DARES, INSEE.

Value sharing bonus: massive payouts at the end of 2022, with potential windfall effects

In 2022, almost 5 million employees in non-agricultural market branches received a value sharing bonus (PPV), for an average of €806 per beneficiary. The PPV was set up on 1st July, replacing the extraordinary purchasing power bonus (PEPA). It was limited to a €3,000 bonus per calendar year and per employee (€6,000 in the case of a profit-sharing agreement and participation), and was exempt from social contributions and tax. PPV payouts were particularly high in December, contributing to the acceleration in wages at year's end. However, while the use of this bonus cannot, in theory, replace wage revisions or other bonuses provided for by a wage agreement or in the employment contract, the sluggishness of basic wages in Q4 suggests the generation of windfall effects: without the PPV scheme, employers would undoubtedly have paid out at least some of the bonus amounts to their employees – estimated at first analysis at around 30%– albeit in a different form.

Since 1st July 2022, the value sharing bonus (PPV) has replaced the extraordinary purchasing power bonus (PEPA), which had first been introduced at the start of 2019 (►**Box**). The PPV adopts the same principles as the PEPA, but triples the payout ceilings: thus between July 2022 and December 2023, companies were able to pay out up to 3,000 euros in bonuses per calendar year and per employee (and even 6,000 euros in the case of a profit-sharing agreement) all exempt from social contributions and tax. Employers were under no obligation to implement this scheme, however.

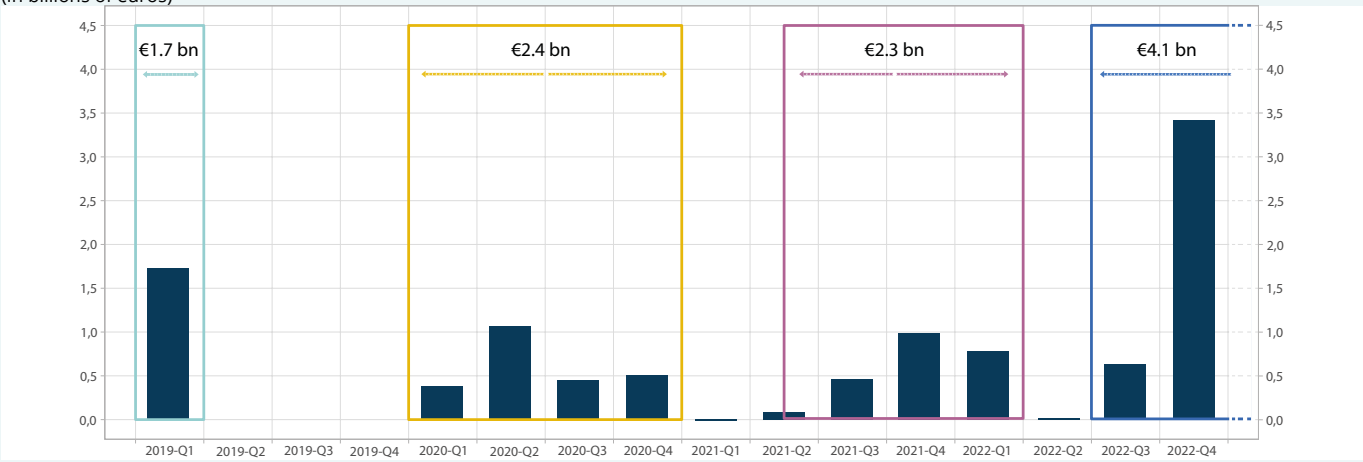
Since these schemes were put in place, the amounts paid out by employers have varied widely (►**Figure 1**): €1.7 billion (€bn) in the non-agricultural market branches during the initial period of the PEPA payouts at the beginning of 2019, then €2.4 billion for the whole of 2020 and €2.3 billion from June 2021 to March 2022, during the two renewal periods. In H2 2022, when inflation was high and the payment ceilings were tripled by the PPV, employers made considerable use of this scheme: as a result, €4.1 billion were paid out between July and December, peaking at €1.7 billion for December alone.

According to data from the URSSAF national fund, almost 5 million employees in the non-agricultural market branches received a PPV payment between July and December 2022, with an average of €806 per beneficiary (►**Figure 2**). These recipients made up 30% of all employees, with proportions varying from 17% in accommodation-catering to 80% in coke and refined petroleum production (the PPV having been specifically announced in the agreement bringing strikes in the refineries to an end in autumn 2022). Amounts paid out per beneficiary were, on average, higher in finance and some sectors of industry and, conversely, lower in transport, trade and accommodation-catering.

The massive amounts of PPV payouts contributed to the acceleration in the average wage per capita (SMPT) at the end of 2022 (the SMPT in the non-agricultural market branches increased by 1.7% in Q4 2022, after +0.7% in the previous quarter). The bonus cannot, in theory, replace wage increases or bonuses provided for in a wage agreement or stipulated in the employment contract. However, analysis of past schemes of the same type shows that in the absence of this measure,

►1. Amounts of PEPA then PPV bonuses per quarter and per payout window

(in billions of euros)



Note: the coloured rectangles indicate the payout windows for the bonuses; to learn more about the various changes to the modalities of the schemes, ►**Box**.
How to read it: in H2 2022, 4.1 billion euros of PPV were paid out to employees.
Scope: non-agricultural market branches.
Source: DSN provisional data, INSEE processing.

employers would undoubtedly have paid out at least part of the bonus amount to their employees, in a different form. The impact of the scheme on wage increases in Q4 2022 is therefore probably less than the amount paid by companies under this bonus scheme ("windfall effect"). This is suggested, for example, by the lack of momentum, compared to previous quarters and given the context of high inflation, of the basic monthly wage (SMB) at the end of the year; the SMB reflects underlying change in wages and, in particular, it does not include the PPV, nor other bonuses paid out to employees. It increased by 0.8% in Q4 2022, after +1.0% in the previous quarter.

In the first analysis, in the non-agricultural market branches, the PPV scheme would appear to have contributed 1.4 points to year-on-year variation in SMPT in Q4 2022 (which increased by 5.0% between Q4 2021 and Q4 2022). Around 30% of this contribution (or 0.4 points) would seem to be the result of a windfall effect. This estimate was reached by comparing the increase observed in the basic monthly wage to the increase that there would have been if the PPV scheme had not been in place. By definition, this absence cannot be observed, but it can be estimated (►**Box** "Forecasting changes in the basic monthly wage", *Economic Outlook* March 2022). In other words the PPV payouts would appear to have replaced about 30%, on average, of basic wage pay increases. The windfall effect calculated for the quarter-on-quarter variation is around the same.

At this stage, the margin of error for this estimate of the windfall effect remains significant and the effect measured is that of possible substitutions, by PPV payouts, for pay increases in just the basic salary, without taking into account substitutions that may also affect the other components of pay. However, the scale of the windfall effect thus identified is well within the range of a previous estimate (between 15% and 40%) made during payments of the extraordinary purchasing power bonus in Q1 2019 (►**Frel-Cazenave and al.**).

The scale of the PPV payouts that will be distributed in 2023, and the potential associated windfall effect, represent a high degree of uncertainty for wage forecasts in H1 2023. In the central scenario used for this *Economic Outlook*, based mainly on the first observations of payouts in January (provisional DSN data), a sharp decline in PPV payouts is assumed for Q1 2023, then relative stability in Q2. This assumption results in a less buoyant SMPT in Q1 2023, in reaction to the significant rise in Q4 2022. Other scenarios for implementing the PPV scheme could produce forecasts for quarterly change in SMPT that deviate by up to plus or minus 0.4 percentage points from the forecasts in the central scenario chosen here. ●

Melchior Archibald Fosse, Fabien Guggemos, Hélène Thélot

►2. Distribution of PPV payouts in H2 2022

	Employees receiving PPV		Average amount received per employee benefiting from PPV (in €)	Share of PPV in total payroll	
	Number of employees receiving PPV	Share of employees receiving PPV		Share in Q3 2022	Share in Q4 2022
Agrifood industries	109,600	21%	723	0.5%	1.1%
Coke and refined petroleum	6,800	80%	3416	0.0%	14.8%
Capital goods	157,000	39%	784	0.5%	2.1%
Transport equipment	215,500	64%	855	0.4%	3.8%
Other industrial branches	574,900	42%	795	0.7%	2.5%
Energy, water and waste	203,800	52%	724	0.2%	3.3%
Construction	522,800	34%	815	1.0%	2.9%
Trade	948,600	30%	667	0.4%	2.0%
Transport	389,200	27%	630	0.4%	1.6%
Accommodation and food	200,500	17%	689	0.4%	1.6%
Information and communication	203,900	23%	924	0.2%	1.4%
Financial services	362,000	46%	1242	0.4%	3.6%
Real estate services	76,200	29%	848	0.5%	2.2%
Services to businesses	795,900	23%	876	0.4%	1.8%
Services to households	194,500	24%	734	0.4%	2.0%
All	**4,961,100**	**30%**	**806**	**0.4%**	**2.2%**

How to read it: in H2 2022, 4,961,100 employees benefited from the PPV, or 30% of employees. They received 806 euros on average.
Scope: non-agricultural market branches.
Source: Provisional DSN data, Urssaf National Fund and INSEE processing.

The Pepa and PPV schemes

The extraordinary purchasing power bonus (Pepa) scheme was initially adopted at the end of 2018 as a social emergency measure in response to the yellow waistcoats movement. In the first quarter of 2019, all employers could pay up to €1,000 in de-socialised and tax-free bonuses per employee with an annual remuneration of less than 3 times the SMIC. The scheme was reactivated in the first half of 2020 only for companies with a profit-sharing agreement, before being extended at the end of March 2020, in the context of the health crisis, to all companies. The payment ceiling was then raised to 2,000 euros for companies with a profit-sharing agreement. At the beginning of the summer, the payout window was finally extended to the whole year 2020. The Pepa scheme was then extended again, with the same terms and conditions, between June 2021 and March 2022.

Since July 2022, the value-sharing bonus (PPV) has replaced the Pepa: it extends the scheme to all employees (but the bonus is tax-free only for employees with an annual remuneration of less than three times the minimum wage) and triples the payment ceilings (3,000 euros maximum bonus per calendar year in the general case, 6,000 euros in the case of a profit-sharing agreement), over a period extending to December 2023. ●

Bibliography

Urssaf Caisse Nationale (2023), "*Prime partage de la valeur : 4,43 milliards d'euros versés en cumul à fin décembre 2022*", Communiqué de presse : **https://www.urssaf.org/accueil/espace-medias/communiques-et-dossiers-de-press/communiques-de-presse/CP230223.html**

INSEE (2022), Box "Forecasting changes in the basic monthly wage", pages 35-37 of the *Econmic outlook* from March 2022, INSEE.

Frel-Cazenave E., Guggemos F. (2020), "*Prime exceptionnelle de pouvoir d'achat en 2019 : entre hausse des salaires et aubaine pour les entreprises*", Employment, unemployment, labour income 2020. ●

Household income

On average during 2022, the purchasing power of household gross disposable income was at a standstill (+0.2% after +2.3%, -0.2% per consumption unit) in an unprecedented inflationary context, not seen since the mid-1980s. Thus the buoyancy of household gross disposable income (GDI) was similar to that seen in consumer prices (+5.5% against +5.3%), due to the support measures put in place during H2 2022 and also to the dynamism of property income. However, the average change in purchasing power may cover very different situations from one household to another.

In Q1 2023, in the wake of earned income (+0.8% forecast after +1.5%), gross disposable income is also expected to slow (+1.3% after +2.9%), due to the slowdown in payroll employment and fewer payouts under the value sharing bonus (PPV) scheme after very large sums in late 2022. It is likely that social benefits will be maintained by the payment of a fuel allowance of €100 to low-income households who use their vehicle for work or for getting to work, despite a potentially high non-take-up rate, and also by a review of basic pensions on 1st January. In a context of rising interbank rates and buoyancy of dividends, households' property income (including the gross operating surplus of pure households[1]) is expected to remain very dynamic (+5.1% after +5.6%); however, the rise in interest rates is also likely to be reflected in the prices of financial intermediation services provided to households, thus increasing the already brisk rise in household consumer prices (►**Box**[2]). The increase in interbank rates would therefore have a neutral impact on household purchasing power. In Q1 2023, household consumer prices are expected to increase significantly (+2.1% after +2.0%) and substantially reduce GDI purchasing power per consumption unit (-0.8% forecast in Q1 2023).

In Q2 2023, household GDI is expected to slow once again (+1.0% after +1.3%). Earned income is likely to accelerate, driven mainly by a probable review of the SMIC at mid-year. However, social benefits look set to fall back with the end of the fuel allowance on 31 March. Given the momentum in consumer prices (+1.7% after +2.1%), purchasing power per consumption unit is expected to fall again (-0.8% forecast).

For 2023, the mid-year overhang for change in purchasing power per consumption unit (i.e. the annual change forecast if purchasing power per consumption unit were to remain frozen in H2 at its Q2 level) is expected to be -0.7%. However, this mid-year overhang does not anticipate variation in purchasing power over the whole of 2023 as, by definition, it does not include possible shifts in GDI and consumer prices in H2. ●

1 The gross operating surplus (GOS) of "pure households" corresponds to the rents that individual homeowners receive from their tenants or would receive if they rented out their property (then called "imputed rents"), minus intermediate consumptions and property tax.
2 See also the Box "Accounting effect of the rise in interbank rates on household income consumer prices", *Economic Outlook*, December 2022.

►1. Components of household gross disposable income

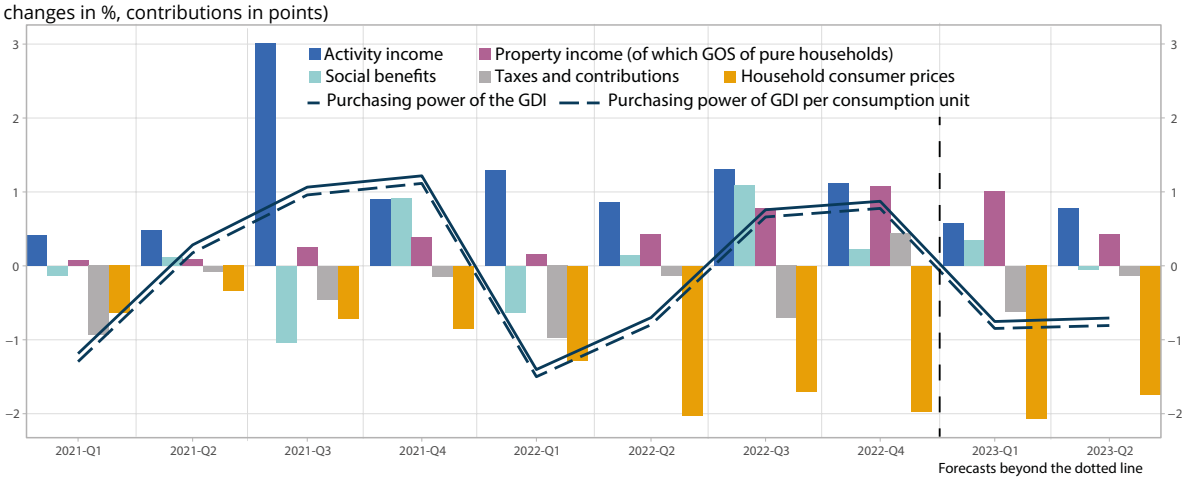
(variations in %)

	Quarterly changes										Annual changes			
	2021				2022				2023		2020	2021	2022	2023 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2				
Gross disposable income (100%)	**-0,6**	**0,6**	**1,8**	**2,1**	**-0,1**	**1,3**	**2,5**	**2,9**	**1,3**	**1,0**	**1,1**	**4,0**	**5,5**	**5,9**
including:														
Earned income (72%)	0,6	0,7	4,3	1,2	1,8	1,2	1,8	1,5	0,8	1,1	-3,8	7,2	7,4	4,0
Gross wages and salaries (64%)	0,7	0,8	5,1	1,4	1,8	1,4	1,7	1,7	0,8	1,2	-3,9	7,4	8,1	4,2
GOS of sole proprietors* (8%)	-0,2	-0,2	-2,0	0,0	2,1	-0,7	2,3	0,4	0,8	0,3	-2,9	6,0	1,7	2,3
Social benefits in cash (35%)	-0,4	0,3	-2,8	2,6	-1,8	0,4	3,2	0,7	1,0	-0,1	9,3	-1,5	0,8	3,1
Property income, of which GOS of pure households (20%)	0,4	0,5	1,3	2,1	0,9	2,3	4,1	5,6	5,1	2,2	-1,6	3,5	8,8	14,2
Social contributions and taxes (–27%)	3,8	0,3	1,8	0,6	3,8	0,5	2,7	-1,7	2,5	0,5	-3,5	4,6	6,6	3,1
Household consumer prices	**0,6**	**0,3**	**0,7**	**0,8**	**1,3**	**2,0**	**1,7**	**2,0**	**2,1**	**1,7**	**0,9**	**1,6**	**5,3**	**6,3**
Purchasing power of gross disposable income	**-1,2**	**0,3**	**1,1**	**1,2**	**-1,4**	**-0,7**	**0,8**	**0,9**	**-0,8**	**-0,7**	**0,2**	**2,3**	**0,2**	**-0,4**
Purchasing power per consumption unit	**-1,3**	**0,2**	**1,0**	**1,1**	**-1,5**	**-0,8**	**0,7**	**0,8**	**-0,8**	**-0,8**	**-0,3**	**1,9**	**-0,2**	**-0,7**

Forecast.
***** the gross operating surplus (GOS) of sole proprietors is the balance of the operating account of sole proprietorships. This is mixed income as it remunerates work carried out by the owner of the sole proprietorship, and possibly members of their family, but it also contains profit made as a sole proprietor.
Note: figures in brackets give the structure for 2019.
How to read it: after an increase of 2.9% in Q4 2022, household gross disposable income would continue to rise in Q1 2023 (+1.3%).
Source: INSEE.

►2. Quarterly variation in purchasing power of household gross disposable income (GDI) and its main contributions

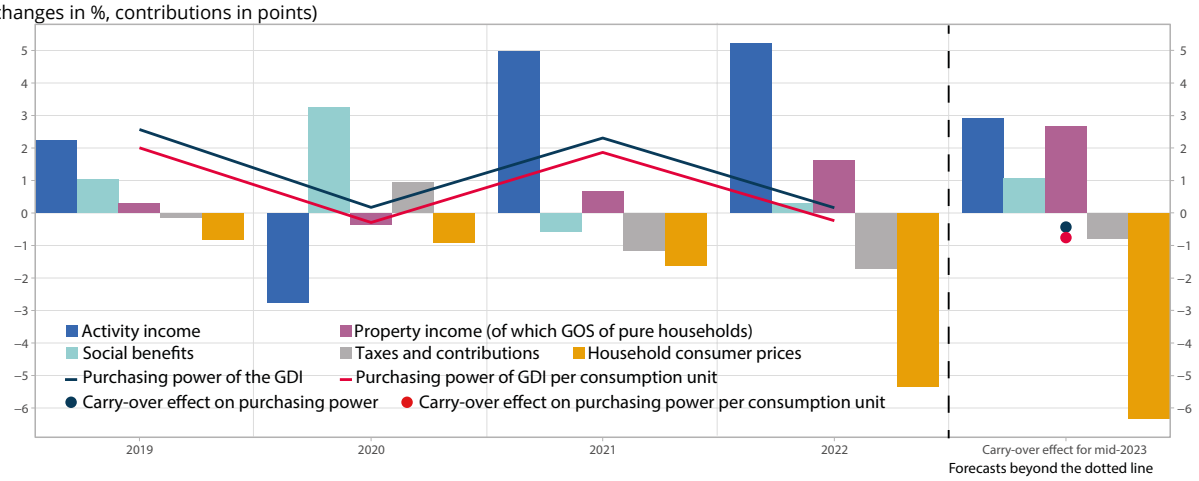
(quarterly changes in %, contributions in points)



Source: INSEE.

►3. Annual variation in purchasing power of household gross disposable income (GDI) and its main contributions

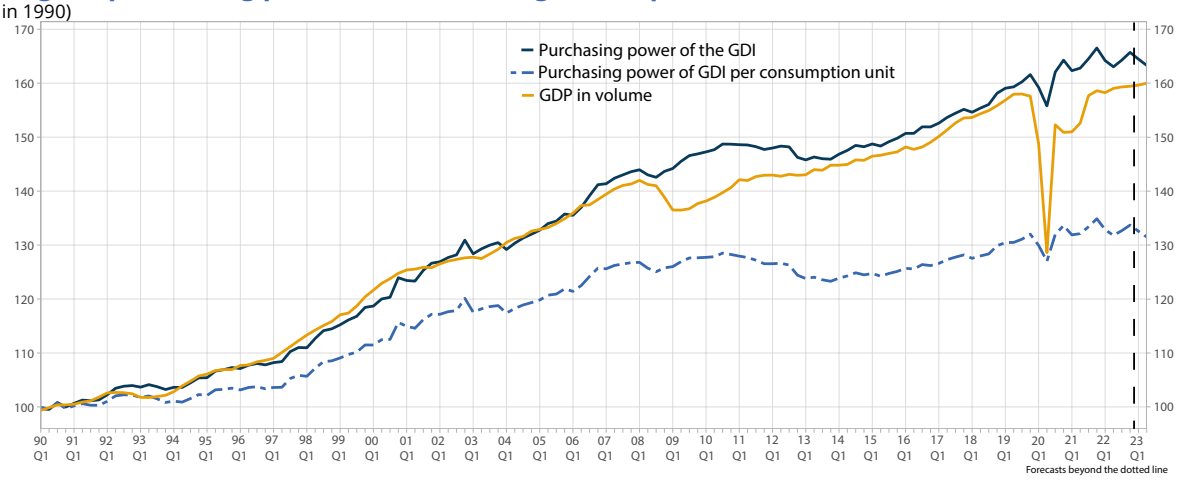
(annual changes in %, contributions in points)



Source: INSEE.

►4. Change in purchasing power of household gross disposable income (GDI) and of GDP since 1990

(base 100 in 1990)



Source: INSEE.

At the end of 2022, the household consumption deflator was more buoyant than the consumer price index

"Household consumer prices" within the meaning of national accounting, as used in the definition of purchasing power, are not exactly the same as the consumer price index (CPI) used to measure inflation. In particular, household consumer prices are linked to the conceptual framework of the national accounts, where household consumption covers a broader scope than the CPI: for example, it includes imputed rents, which are not present in the CPI, and which represent rents that homeowning households would pay for their dwelling if they were tenants.

Changes in household consumer prices and the CPI (seasonally adjusted, SA) are generally similar quarter by quarter. However, differences may appear when there are sizeable shifts in specific prices: thus in Q1 2022, consumer prices increased less quickly than the CPI (SA) but more quickly in the quarters that followed.

Thus in Q1 2022, the rise in energy prices resulted in a sharp acceleration in the CPI (SA) (+1.7% after +0.9% in Q4 2021). This acceleration appeared to be weaker for household consumer prices because of their broader scope, with energy given a lower weighting than in the CPI.

In H2 2022, the stronger momentum in household consumer prices was the result of the strong movement in Financial Intermediation Service Indirectly Measured (FISIM) prices, which are included in the scope of household consumer prices but not in the CPI. FISIMs represent services provided by financial intermediaries but not invoiced as such, because they are paid via margin interest rates on their clients' deposits or loans they are granted: as they are not invoiced, strictly speaking, these services are not included in the CPI, but they are counted in household consumption within the terms of national accounting, where the margin interest rates represent the price of the service provided. Because of the monetary tightening operated by the European Central Bank since summer 2022, the rise in the interbank refinancing rate has led to an increase in margin interest on households' deposits. In fact, the rise in the interbank refinancing rate was much faster than the rise in the rates on deposits, which are regulated for the most part (especially the Livret A) or very inert regarding any increase in the interbank rate. The result was a rise in the price of FISIMs, which are included in household consumer prices but not in the CPI.

For the forecast, household consumer prices are expected to become more dynamic than the CPI again in H1 2023, once more due to the increase in the price of FISIMs in the context of continuing monetary tightening.

►Consumer price index (SA) and household consumer prices (quarterly accounts)
(quarterly changes in %)

	2021				2022				2023		2021	2022	2023 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Consumer price index (SA)	0.5	0.4	0.8	0.9	1.7	1.9	1.2	1.2	1.3	1.5	1.6	5.3	4.4
Household consumption prices (quarterly accounts)	0.7	0.3	0.7	0.8	1.3	2.0	1.7	2.0	2.1	1.7	1.6	5.3	6.3

Forecast.
Source: INSEE.

Household consumption and investment

In Q4 2022, household consumption fell back sharply (-1.2% compared to the previous quarter). Gas and electricity consumption tumbled due to the mild weather in October and November and also probably to behavioural adjustments in a context of rising energy prices and encouragement to save energy. In addition, this decline was accentuated by the recording in the accounts of the "energy cheque" paid out to households as consumption by general government, not by households. Food purchases also declined significantly, as they had done throughout 2022, in line with the rise in food prices. This decline may also reflect purchases more focused on lower quality products (►**Focus** on changes in consumption habits in 2022). Despite the continuing catch-up in purchases of transport equipment, purchases of goods (including energy and food) declined for the fifth consecutive quarter. In services, consumption increased moderately, driven mainly by transport services.

In Q1 2023, consumption is expected to pick up slightly (+0.2% forecast). Energy consumption is likely to rebound significantly, sustained by temperatures more in line with seasonal norms than in the previous quarter, but without completely offsetting the sharp drop at the end of 2022 as energy-saving behaviours are likely to continue. Purchases of refined petroleum products are also expected to rebound, mainly driven by the consumption of heating oil. The catch-up is also likely to continue in purchases of transport equipment, which remain well below their pre-health crisis level, despite a rebound in H2 2022. Food consumption is expected to continue to decline, in a context of high inflation, but less markedly than during 2022. Thus, all in all it is likely that the consumption of goods will make a positive contribution to growth in consumption, for the first time since the end of 2021. In services, consumption is expected to rebound in accommodation and catering, after a slight decline in the previous quarter, but with a concern over the impact of strikes, which would weigh more heavily on the consumption of transport services.

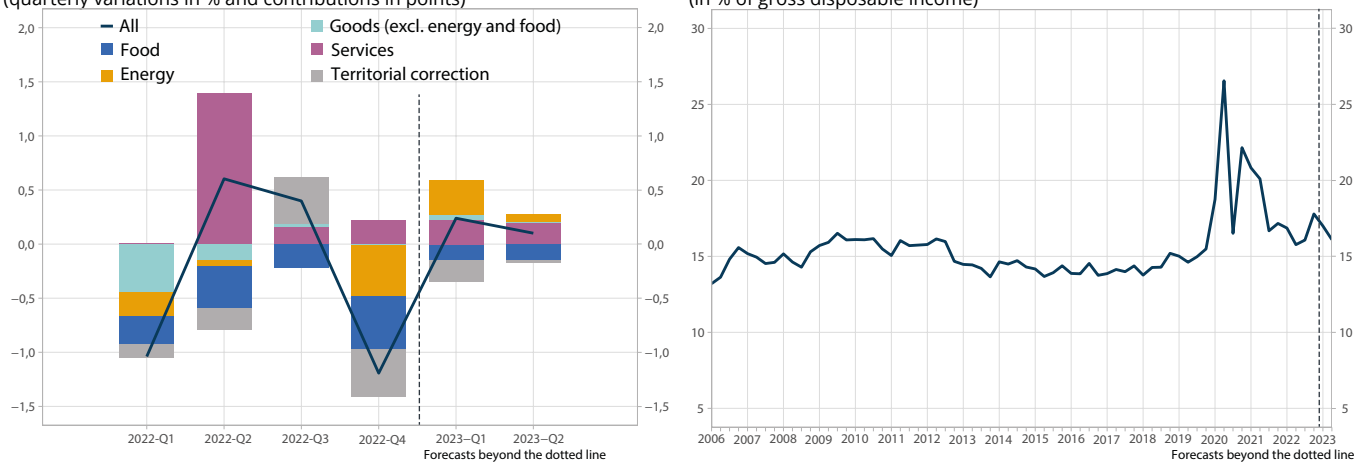
In Q2 2023, consumption is expected to remain virtually stable (+0.1% forecast), assuming stability in the purchase of goods and a trend increase in services. The share of electricity and gas consumption attributed to households is likely to increase substantially when data are seasonally adjusted, mainly due to the end of energy cheques providing aid to households (and at the same time a reduction in consumption by general government). Food consumption could continue to decline amid high inflation, unless households choose to restrict themselves to other goods and services.

Given the expected decline in purchasing power in H1 2023, the slight rebound in household consumption early in the year then its virtual stability in Q2 are expected to lead to a slipping back of the savings ratio, after the strong rise in Q4 2022. It should remain above its pre-health crisis level, however.

Finally, household investment, in decline since Q2 2022, is likely to continue to fall throughout H1 2023. The production of individual housing is expected to drop further, against a backdrop of rising interest rates. Investment in services, which has been faltering since Q3 2022, is also expected to follow the same downward trend, linked to a sluggish real estate market. ●

►1. Past and expected quarterly consumption (left) and household savings ratio (right)

(quarterly variations in % and contributions in points) (in % of gross disposable income)



Note: territorial correction represents purchases made by French residents abroad (also counted in imports) minus purchases by non-residents made in France (counted in exports). The other contributions to household consumption (food, energy, etc.) refer exclusively to consumption in France.
How to read it: in Q1 2023, household consumption is expected to increase by 0.2% compared to the previous quarter. The household savings rate is expected to rise by 17.0% of gross disposable income.
Source: INSEE.

►2. Estimated and projected quarterly household consumption

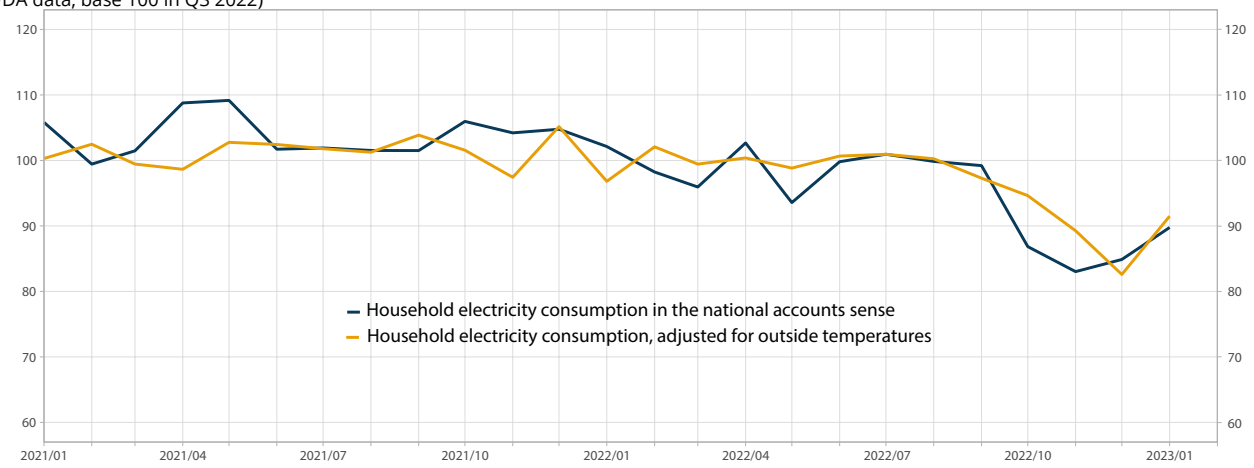
(quarterly and annual variations, in %, SA-WDA)

Products	weight(1)	2021				2022				2023		2021	2022	2023 ovhg
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Agricultural products	**3 %**	**1.0**	**-3.8**	**-1.7**	**2.3**	**-1.8**	**-0.8**	**-1.1**	**-3.8**	**1.2**	**1.2**	**-2.5**	**-4.0**	**-1.5**
Manufactured products	**40 %**	**2.4**	**-3.3**	**3.8**	**-0.5**	**-1.6**	**-1.3**	**-0.4**	**-1.0**	**-0.4**	**-0.4**	**4.4**	**-2.5**	**-2.0**
Food products	15 %	0.9	-2.3	-0.1	0.1	-1.3	-2.4	-1.3	-2.7	-1.3	-1.3	-0.5	-4.9	-5.4
Coke and refined petroleum	4 %	10.2	-2.1	10.4	0.2	-2.8	-2.2	1.0	-1.4	1.1	0.0	14.1	0.1	0.0
Capital goods	3 %	1.4	-3.5	-0.5	-3.0	0.6	-0.4	1.2	-2.6	1.2	-0.2	6.9	-3.1	-0.4
Transport equipment	6 %	1.0	-1.4	-0.8	-1.1	-2.1	-2.0	1.3	2.5	1.0	0.0	5.4	-3.8	3.0
Other industrial products	12 %	3.1	-5.8	10.3	-0.8	-2.0	0.5	-0.9	-0.1	-0.7	0.2	7.6	0.6	-1.0
Energy, water, waste	**5 %**	**-0.7**	**4.0**	**-3.7**	**2.2**	**-4.4**	**-1.2**	**0.0**	**-10.0**	**7.5**	**1.4**	**4.2**	**-6.9**	**0.0**
Construction	**2 %**	**-0.7**	**7.1**	**-1.0**	**-0.4**	**-1.3**	**5.4**	**-1.7**	**-3.1**	**0.0**	**0.1**	**13.8**	**1.9**	**-1.8**
Trade(2)	**1 %**	**3.3**	**1.3**	**0.8**	**0.8**	**-0.7**	**-0.8**	**-1.1**	**1.8**	**0.9**	**0.2**	**10.5**	**-0.1**	**1.6**
Market services excluding trade	**46 %**	**-1.6**	**5.1**	**11.6**	**1.4**	**0.1**	**2.8**	**0.4**	**0.5**	**0.4**	**0.4**	**5.7**	**10.5**	**2.0**
Transport	4 %	6.9	6.6	39.8	8.0	3.4	6.5	0.3	2.0	-0.1	0.3	16.3	35.9	3.3
Accommodation and food	8 %	-21.6	44.1	59.5	-0.4	-2.3	12.6	0.2	-0.2	0.5	0.3	15.3	39.3	3.6
Information-communication	3 %	-0.5	1.6	2.1	1.0	0.0	-0.8	1.3	1.0	0.1	0.5	2.5	2.5	1.6
Financial services	5 %	1.1	0.7	0.8	0.3	0.2	0.3	0.3	0.3	0.4	0.3	3.0	1.5	1.1
Real estate services	19 %	0.8	0.5	0.3	0.5	0.3	0.4	0.2	0.4	0.4	0.3	1.5	1.4	1.1
Business services	2 %	0.1	3.8	7.0	2.6	0.5	0.0	0.5	0.6	0.4	0.6	11.2	7.3	1.5
Household services	4 %	-1.5	4.0	25.3	5.9	0.6	2.7	1.4	1.0	1.1	1.1	14.2	21.2	4.1
Non-market services	**5 %**	**2.7**	**0.6**	**1.3**	**2.2**	**-0.1**	**0.1**	**-0.1**	**0.3**	**0.2**	**0.1**	**11.8**	**2.5**	**0.5**
Territorial correction	*-1 %*	*-7.2*	*-66.3*	*658.8*	*6.9*	*11.8*	*17.6*	*-31.9*	*47.1*	*15.0*	*2.0*	*17.2*	*91.6*	*32.4*
Imports of tourism services		*-3.4*	*16.3*	*35.3*	*10.4*	*2.3*	*2.6*	*9.6*	*-4.7*	*-1.9*	*2.0*	*17.6*	*37.1*	*1.1*
Exports of tourism services		*-4.1*	*0.6*	*74.9*	*9.5*	*4.9*	*6.9*	*-3.5*	*6.8*	*3.3*	*2.0*	*17.5*	*49.1*	*10.0*
Total	**100 %**	**0.5**	**1.2**	**5.4**	**0.6**	**-1.0**	**0.6**	**0.4**	**-1.2**	**0.2**	**0.1**	**5.2**	**2.7**	**-0.2**

Forecast.
(1) weight in household final consumption expenditure in current euros in Q4 2019.
(2) this item corresponds to sale and repair of motor vehicles and motorbikes. Expenditure in retail trade excluding motor vehicles and motorbikes is allocated to the corresponding products.
How to read it: in Q1 2023, household consumption of energy, water and waste would increase by 7.5% compared to the previous quarter.
Source: INSEE calculations from various sources.

►3. Monthly household electricity consumption, with and without correction for outside temperatures

(SA-WDA data, base 100 in Q3 2022)



Last point: January 2023.
How to read it: in October 2022, household electricity consumption was 13% less than its average level in Q3 2022. Of this 13% decline, about 8 points would seem to be due to the mild weather in October.
Source: INSEE.

►4. Household consumption, investment and savings ratio

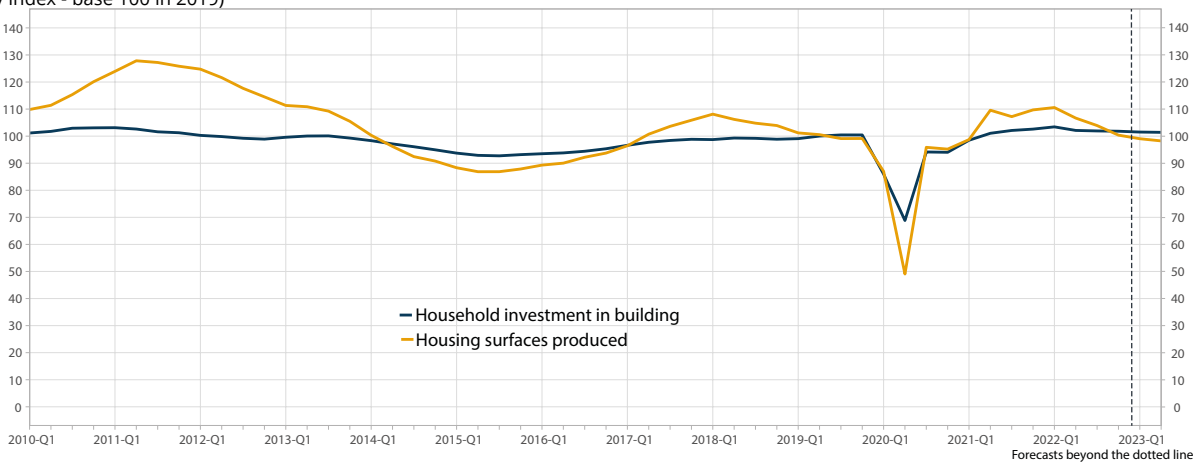
(quarterly changes and difference to Q4 2019, in %)

	2021				2022				2023		2021*	2022*	2023* ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Consumption: *quarterly changes*	0.5	1.2	5.4	0.6	-1.0	0.6	0.4	-1.2	0.2	0.1	5.2	2.7	-0.2
difference to Q4 2019	-5.9	-4.8	0.4	1.0	0.0	0.6	1.0	-0.2	0.0	0.1	-1.9	0.7	0.6
Savings ratio: *as % of gross disposable income*	20.8	20.1	16.7	17.2	16.9	15.8	16.1	17.8	17.0	16.3	18.7	16.6	16.5
difference in points to Q4 2019	5.3	4.6	1.2	1.7	1.4	0.3	0.6	2.3	1.5	0.8	3.2	1.1	16.5
Investment: *quarterly changes*	0.4	4.0	1.2	-0.7	0.0	-0.1	-0.7	-0.9	-0.4	-0.3	17.0	0.3	-1.7
difference to Q4 2019	-1.5	2.4	3.6	2.9	2.9	2.7	2.0	1.0	0.6	0.3	3.1	3.4	1.6

Forecast.
* annual variations for the last three columns (apart from the annual average for savings ratio).
Source: INSEE.

►5. Household investment in construction and housing space produced

(quarterly index - base 100 in 2019)



Note: housing space produced represents one of the two components of household investment in construction, the other being major maintenance work (not shown in this figure). Note that housing space produced in a given quarter is distinct from housing starts in that quarter as it is based on considering the distribution over time of investments made while the construction work is in progress. In the national accounts, a housing space is not considered as fully produced at the time of the housing start, but its value is spread over the duration of the work, estimated statistically.
How to read it: in Q1 2023, household investment in construction -expressed as base 100 in 2019- is expected to reach 101.5. Housing space produced -expressed as base 100 in 2019- is expected to be 99.1.
Source: INSEE.

Entreprises' earnings

After reaching a historic high in 2021, the margin rate of non-financial corporations (NFC) slipped back in 2022, mainly due to the end of the support measures associated with the health crisis. It stood at 32.0% of value added, or a level close to its average for 2018[1] (31.5%). On average across all NFCs, the substantial increases in input costs during 2022 did not affect change in the margin rate: on average, companies passed on these increases in costs *via* their production prices (►**Box**), i.e. in industry, for example, "factory-gate" prices. However, this change at the aggregated level of NFCs may mask considerable sectoral variations.[2]

In H1 2023, the margin rate of NFCs is expected to increase sharply. The improvement in companies' profitability is likely to result mainly in a decline in real wages –with the after-effects notably of large value sharing bonuses (PPV) paid out towards the end of 2022– but also in a further reduction in taxes on production (reduction in the corporate value added contribution). However, prices of intermediate consumptions –especially the price of energy inputs as a result of recent renegotiations of gas and electricity contracts[3] – are likely to increase a little more quickly than production prices: the price of value added is therefore expected to deteriorate slightly relative to consumer prices, which could affect companies' margin rate. All in all, at the end of Q2 2023, the margin rate is expected to stand at 33.5%, two points above its 2018 average. ●

1 2018 can be considered as a suitable reference year for margin rate. From 2019 to 2021, margin rate experienced some upheavals due to the "double" payment of the Competitiveness and Employment Tax Credit (CICE) in 2019 then during the health crisis.
2 "Recent trends in margin rates: wide disparities between branches in a context of general price increases", *Economic Outlook*, December 2022.
3 "Companies coping with rising energy prices: contrasting situations and reactions", *Economic Outlook*, December 2022.

►1. Decomposition of margin rate of non-financial corporations (NFC)

(margin rate in %, variation and contributions in points)

	2021				2022				2023		2019	2020	2021	2022	2023 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2					
Margin rate	**36.4**	**35.9**	**32.5**	**32.2**	**31.7**	**32.1**	**31.9**	**32.4**	**33.2**	**33.5**	**33.4**	**31.8**	**34.2**	**32.0**	**33.5**
Variation in margin rate*	**1.8**	**-0.5**	**-3.4**	**-0.2**	**-0.6**	**0.4**	**-0.2**	**0.5**	**0.8**	**0.3**	**1.9**	**-1.7**	**2.4**	**-2.2**	**1.4**
Contributions to variation in margin rate:															
productivity gains	-0.3	0.3	1.1	-0.5	-0.5	0.0	-0.2	-0.2	0.0	0.1	0.8	-5.4	2.4	-0.4	-0.1
real cost of labour per capita	0.2	0.3	-2.4	0.5	-0.4	0.9	1.0	0.2	0.8	0.2	0.9	3.3	-2.5	0.1	1.9
ratio of price of value added to consumer prices	-0.1	0.0	0.0	0.0	0.5	0.0	-1.0	0.4	-0.4	-0.1	0.7	0.7	0.5	0.1	-0.7
other factors (including subsidies and taxes on production)	2.0	-1.0	-2.1	-0.2	-0.1	-0.4	0.0	0.1	0.4	0.0	-0.4	-0.3	2.0	-1.9	0.4

Forecast.
* The variation shown here is a difference calculated before rounding.
Note: the margin rate (*MR*) measures the share of value added that remunerates the capital.
This variation can be broken down additionally into:
- changes in productivity (*Y/L*), where *Y* is value added and *L* is employment, and in the ratio of the price of value added to consumer prices, or terms of trade *(Pva/Pc*), which have a positive effect;
- changes in the real cost of labour (*W/Pc*, where *W* represents the cost of labour per capita), which have a negative effect on the margin rate;
- other factors: these are mainly taxes on production net of subsidies, including the Solidarity Fund.

This breakdown can be synthesised in the equation:

$$TM = \frac{GOS}{VA} \approx 1 - \frac{WL}{Y\,P_{VA}} + other\ factors = 1 - \frac{L}{Y}\frac{W}{P_C}\frac{P_C}{P_{VA}} + other\ factors$$

Source: INSEE.

►2. Margin rate of non-financial corporations (NFC)
(in % of value added)

Source: INSEE.

In 2022, on average in the non-agricultural market branches, the increase in the cost of inputs was generally passed on to production prices

During 2022 and on average across the non-agricultural market branches, the margin rate grew quarter on quarter (►**Figure 1**). However, this average change masks some much more pronounced movements at sectoral level. This is the case in the agrifood industries where the margin rate increased sharply during 2022: from its very degraded level at the end of 2021, it managed to gain about 15 points to overtake its 2018 level by the end of 2022. As an annual average in this branch, the margin rate in 2022 stood at its 2018 level, whereas it was well below this level (-4.3 points) in 2021.

The sharp rise in the margin rate of agrifood industries in 2022 can be analysed through the change in production price in the branch (i.e. in the "factory-gate" price) and in the contributions of its different components (unit cost of inputs, unit wage cost, unit gross operating surplus, i.e. the "profit" on each unit produced, etc.). This analysis is based on the detailed results from the quarterly accounts for Q4 2022, but may need to be revised when new information is included with the publication of the quarterly and annual versions of the accounts.

After being compressed in 2021 as the price of inputs increased, the margin rate of agrifood industries then picked up throughout 2022

In 2021 and even more so in 2022, production prices in the agrifood industries were particularly dynamic (►**Figure 2**). Until mid-2022, this momentum was mainly the result of the rising prices of inputs –composed mainly, in this branch, of agricultural and agrifood products.

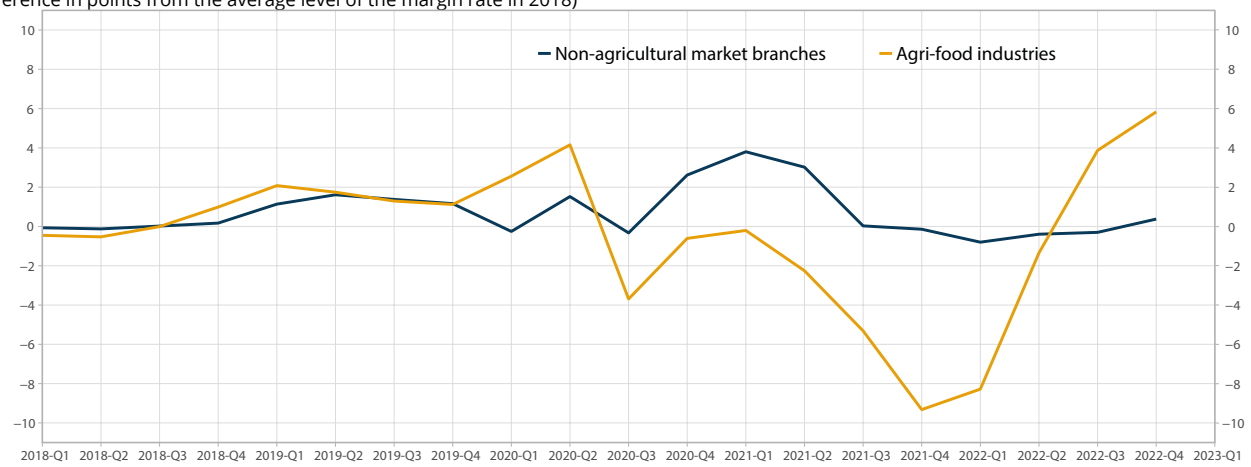
In 2021, in a context of rising agricultural commodity prices, following the end of the health crisis, the increase in the price of inputs in the agrifood industries was only partly passed on to production prices. This resulted in a compression of margin rates: the gross operating surplus (GOS) per unit decreased every quarter in 2021. The margin rate therefore declined continuously in the agrifood industries during 2021.

During 2022, the unit cost of inputs continued to rise significantly, although it slowed in the second half of the year, and the GOS per unit picked up gradually. Overall, the buoyancy of production prices in agrifood industries in 2022 was driven as much by the increase in the cost of inputs as by the recovery in margins after they had been compressed the previous year.

These same trends can be found, albeit to a lesser extent, in the non-agricultural market branches as a whole. In 2021, the sharp rise in the unit cost of inputs was only partially passed on to production prices and from Q2 onwards it was accompanied by a drop in the unit GOS of these branches. In 2022, however, the unit GOS picked up: the unit cost of inputs continued to make up the main contribution to change in production prices in the non-agricultural market branches, but the unit GOS also contributed significantly to its momentum, especially at the end of 2022. ●

►1. Margin rate in all non-agricultural market branches and in agrifood industries

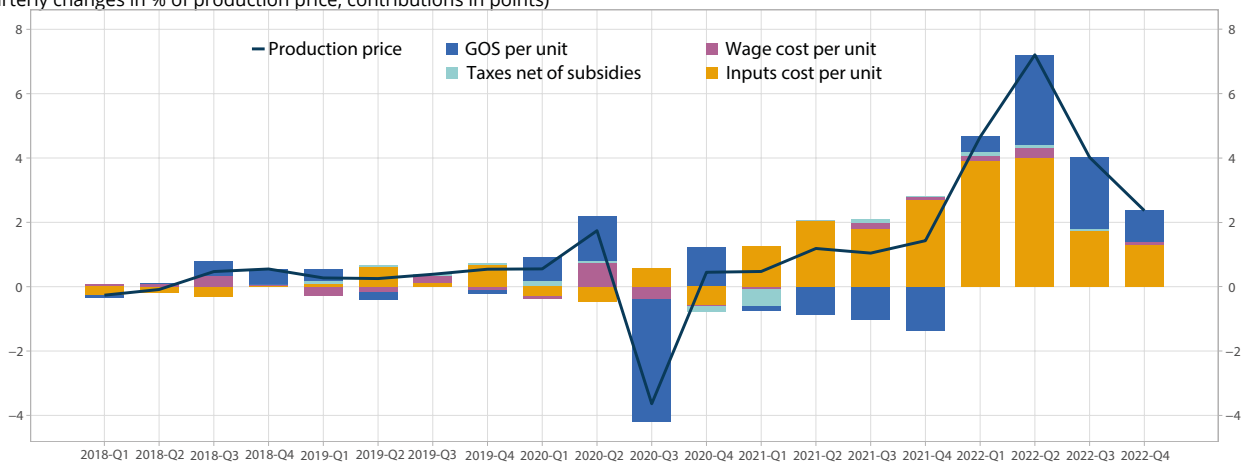
(difference in points from the average level of the margin rate in 2018)



Note: the margin rates represented here cover all institutional sectors of the branches concerned (non-financial corporations, sole proprietors, financial corporations, etc.) and not only non-financial corporations.
Source: quarterly national accounts, INSEE.

►2. Change in production price of agrifood industries by contributions of their components

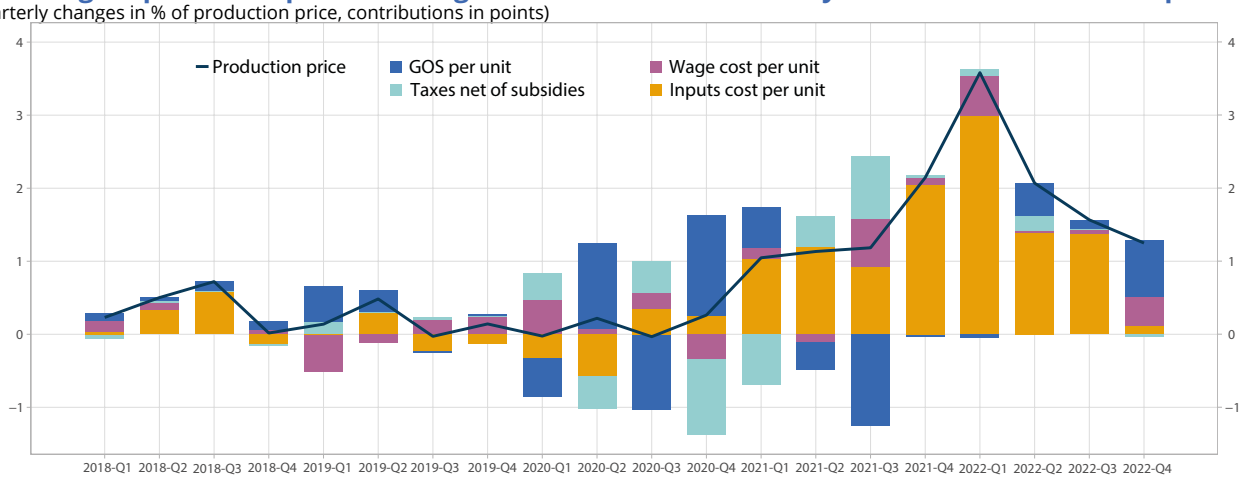
(quarterly changes in % of production price, contributions in points)



Note: starting from the accounting identity according to which the production in value of a branch represents the sum of its intermediate consumptions, remuneration paid, taxes net of subsidies and its gross operating surplus, the production price of the branch –i.e. the value of each unit produced– can be expressed as the sum of the unit components of production. The change in production price is then broken down according to the contributions of these unit components.
Source: quarterly national accounts, INSEE calculations.

►3. Change in production price of non-agricultural market branches by contributions of their components

(quarterly changes in % of production price, contributions in points)



Note: starting from the accounting identity according to which the production in value of a branch represents the sum of its intermediate consumptions, remuneration paid, taxes net of subsidies and its gross operating surplus, the production price of the branch –i.e. the value of each unit produced– can be expressed as the sum of the unit components of production. The change in production price is then broken down according to the contributions of these unit components.
Source: quarterly national accounts, INSEE calculations.

Corporate investment

After a significant rise in Q3 2022 (+3.8%), investment by non-financial enterprises (NFE) rose again in Q4, but at a slower pace (+0.6%, ►Figure 1). Investment in manufactured products continued to grow, although more moderately than in the previous quarter (+1.3% after +7.5%). Investment in capital goods drove most of this increase, while investment in transport equipment fell back, after a very sharp rise over the summer. Investment in construction remained virtually stable (-0.1%), after two consecutive quarters of decline. Lastly, investment in services lost a lot of its momentum, although it continued to grow (+0.6% after +3.5%). This growth was still driven mainly by investment in information and communication services, which nevertheless slowed. As an annual average, NFE investment increased by 3.3% in 2022 (after +11.4% in 2021).

In H1 2023, NFE investment is expected to increase at a similar pace to that at the end of 2022 (+0.6% then +0.5% forecast) in an uncertain international context and against a background of rising interest rates. Investment in services should remain dynamic, once again driven by information and communication. The balance of opinion on expected demand for services has actually been on the rise since the beginning of the year. Conversely, investment in manufactured produce is likely to weaken slightly. This decline is likely to result, in particular, in a reduction in purchases of transport equipment, after the sustained momentum in H2 2022, whereas investment in machinery and equipment is expected to remain sluggish, in the wake of manufacturing activity. At the same time, investment in construction is expected to rally very slightly, driven by the production of non-residential buildings. In this context of uncertainty, although driven by investment in services, the mid-year growth overhang in NFE investment is expected to be 3.6% for 2023. ●

►1. Investment by non-financial enterprise (NFEs)

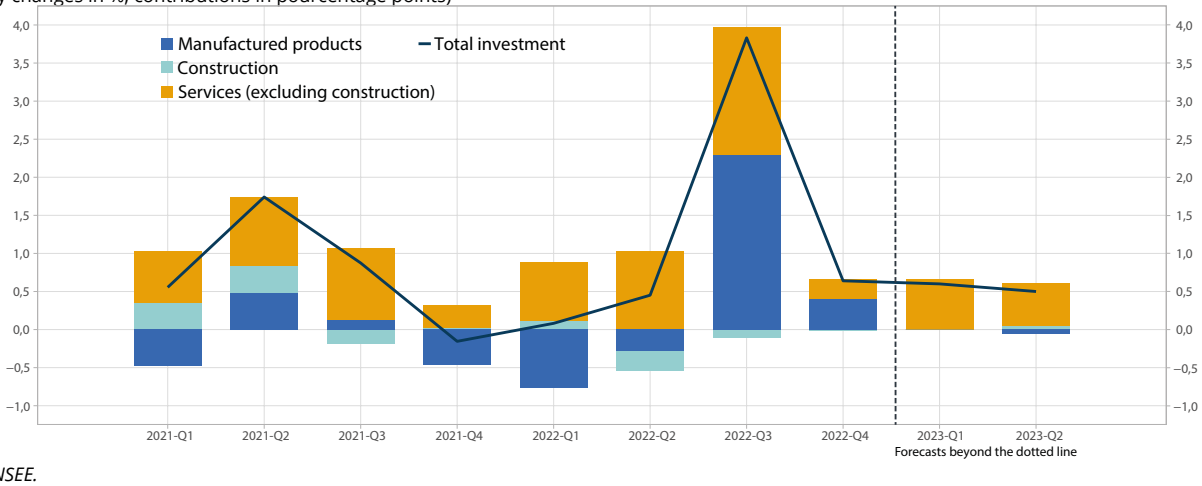
(quarterly and annual changes, in %, seasonally and working day adjusted)

	Quaterly changes										Annual changes		
	2021				2022				2023		2021	2022	2023 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Manufactured product (32%)	-1.5	1.5	0.4	-1.5	-2.4	-0.9	7.5	1.3	0.0	-0.2	13.3	0.4	4.2
Construction (23%)	1.5	1.5	-0.8	0.1	0.5	-1.2	-0.5	-0.1	0.0	0.2	15.9	-0.6	-0.5
Services (45%)	1.5	2.0	2.1	0.6	1.7	2.2	3.5	0.6	1.4	1.2	8.0	7.5	5.0
All products (100%)	**0.6**	**1.7**	**0.9**	**-0.2**	**0.1**	**0.5**	**3.8**	**0.6**	**0.6**	**0.5**	**11.4**	**3.3**	**3.6**

Forecast.
Source: INSEE.

►2. Investment of non-financial enterprises by product

(quarterly changes in %, contributions in pourcentage points)



Source: INSEE.

International economic outlook

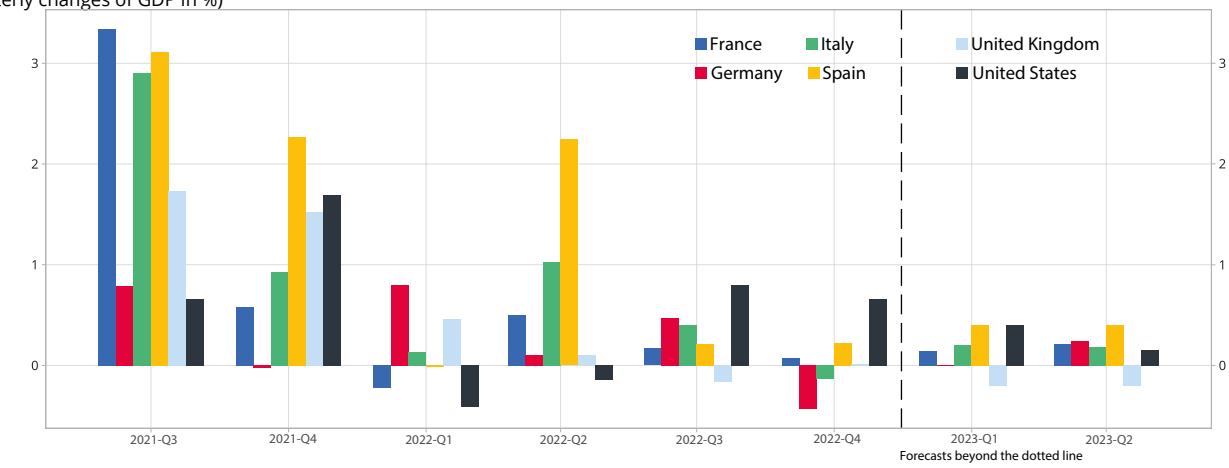
International synthesis

In 2022, the global economy slowed considerably, but without really declining (►**Figure 1** for western economies), despite the shocks it was experiencing (war in Ukraine, lockdowns in China, inflationary tensions, etc.). The substantial growth in GDPs recorded throughout 2022 (between +1.9% in Germany and +5.5% in Spain for the main European economies, +2.1% in the United States and +3.0% in China) are largely explained by the high growth overhangs at the end of 2021, the result of the post-Covid catch-up during 2021 (►**Figure 2**). Gains in activity in 2022 thus appear limited, especially in the United States, France and the United Kingdom, reflecting activity that only increased moderately on average in each quarter. As a result, growth overhangs at the end of 2022 appear to be much lower than they were a year previously: in 2023, the figures for annual GDP growth will not have such an advantage with the "carry-over effect", and to this has to be added sluggish growth in H1 2023.

The European economies are certainly starting 2023 with no great impetus: household consumption in particular suffered at the end of 2022 with the high level of inflation. Despite this, European manufacturing output has resisted the rise in the price of energy inputs quite well, with the decline limited to the most energy-intensive branches (►**Box** on manufacturing output in the Eurozone sheet). In addition, in the United States, despite dynamic activity in H2 2022, signs of a slowdown in domestic demand have appeared, while in China, the economy found itself faced with a resurgence of the epidemic

►1. The main European economies are expected to remain sluggish in H1 2023

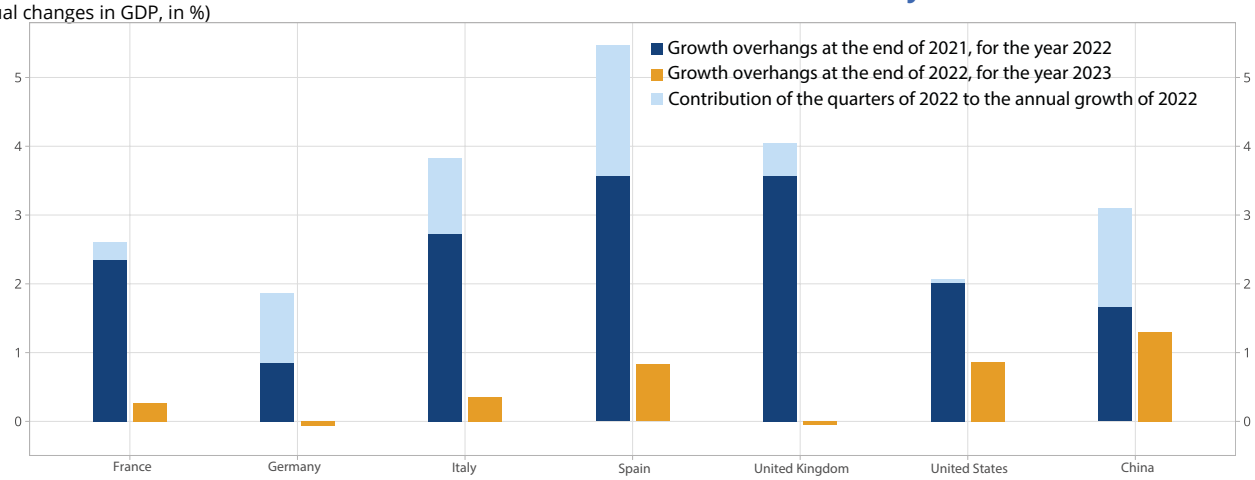
(quarterly changes of GDP in %)



How to read it: in Q4 2022, the United States GDP increased by 0.7%.
Source: INSEE, Destatis, Istat, INE, ONS, BEA.

►2. The GDP of western economies will not benefit as much from the "carry-over effect" in 2023 as in 2022

(annual changes in GDP, in %)



How to read it: at the end of 2021, the growth overhang of GDP in France for 2022 was 2.3%, i.e. if GDP had maintained the Q4 2021 level during all four quarters of 2022, then GDP in 2022 would have been 2.3% higher than in 2021. However, the annual variation of GDP in 2022 was 2.6%: the growth resulting from the four quarters of 2022 thus contributed 0.3 points of growth to the annual variation. For 2023, the growth overhang at the end of 2022 was 0.3%.
Source: INSEE, Destatis, Istat, INE, ONS, BEA.

and then the sudden lifting of health restrictions at the end of 2022. All in all, world trade weakened in Q4, with imports declining in the advanced economies and slowing down significantly in the emerging economies (►**Figure 3**).

Linked with this economic slowdown and the drop in demand, the prices of energy and other commodities slipped back generally in H2 2022 (►**Energy and commodities**). Year-on-year consumer prices have therefore fallen in recent months in several western economies, mainly due to the drop in oil prices, but also to "base effects" (►**Focus**), however, price levels remain high and core inflation has not fallen as much as headline inflation (►**Figure 4**). In some countries, it even continued to grow slightly, testifying to the persistence of inflationary pressures. In the course of 2023, the reopening of the Chinese economy could also accentuate these pressures, in the event of an excessively vigorous recovery in Chinese demand, especially for energy products.

High prices are expected to continue to affect household consumption in the western economies: it should nevertheless improve slightly, supported in particular by wage revisions and public policies. In addition, although the continuing monetary tightening by the central western banks should slow in H1, it is still likely to hamper household and corporate investment, especially in the United States and the United Kingdom.

In H1 2023, activity is expected to improve moderately overall. In the Eurozone, the fall in energy prices on the markets and the timid recovery in consumption expected in Q1 should enable activity to grow slightly in Spain and to a lesser extent in Italy and France (►**Figure 5**). Meanwhile, the German economy is expected to remain at a standstill in Q1 before rebounding slightly in Q2. Domestic demand is likely to hamper economic activity in the USA and the United Kingdom: the United Kingdom looks set to be in recession in H1 2023, while the US economy is expected to slow substantially. As for China, if its economy were to reopen, this would result in a gradual but vigorous recovery in its economic activity, bringing with it a rebound in world trade. ●

►3. World trade is expected to bounce back in H1 2023

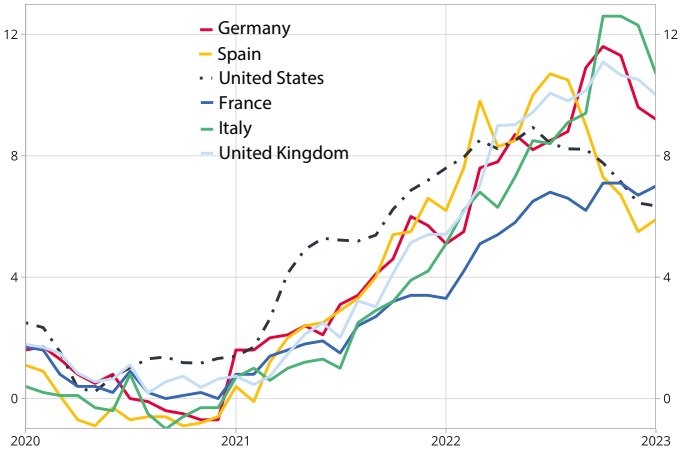
(levels, quarterly variations in %; annual variations in % for the last three columns)

	2021				2022				2023		2021	2022	2023 ovhg
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2			
Euro-dollar exchange rate	1.20	1.21	1.18	1.14	1.12	1.06	1.01	1.02	1.07	1.06	1.18	1.05	
Barrel of Brent (in dollars)	61.0	68.9	73.5	79.5	100.8	113.6	100.6	88.6	82.9	83.0	70.9	100.9	
Barrel of Brent (in euros)	50.7	57.1	62.4	69.6	89.8	106.7	99.9	86.8	77.6	78.3	59.9	95.8	
World trade (variations)	2.3	1.8	1.1	3.5	1.2	0.4	1.7	-0.5	0.3	0.7	10.8	5.9	1.4
Imports by advanced economies	0.9	2.3	1.4	3.6	2.1	1.3	1.1	-1.0	0.1	0.3	10.1	7.5	0.4
Imports by emerging economies	5.8	0.5	0.3	3.2	-1.3	-1.6	3.3	0.6	0.9	1.5	12.4	1.9	3.8
World demand for French products (variations)	0.8	2.4	1.8	3.3	1.6	0.7	1.3	-0.5	0.2	0.4	10.3	6.7	0.9

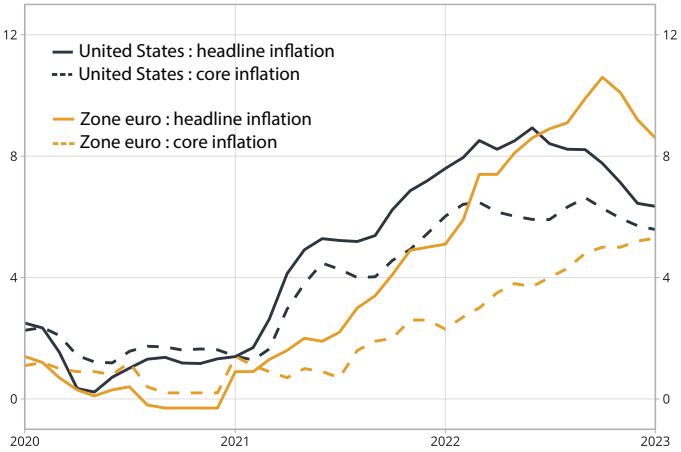
Forecast.
Note: the scope considered here is that of goods and services. The "advanced economies" category consists of the main Eurozone countries, the United Kingdom, Switzerland, Japan, the United States, Canada and South Korea. The "emerging economies" category consists of China, India, Turkey, the OPEC countries, Russia, Poland, Brazil and Mexico.
Source : Commodity Research Bureau, IHS Markit, Statistiques.

►4. Despite the fall in headline inflation in some countries, core inflation (excluding energy and food) remains high

(inflation year-on-year in %)



(headline and code inflation year-on-year in %)



Last point: January 2023.
Note: here core inflation represents inflation excluding energy and food. For the Eurozone countries and the United Kingdom, inflation is calculated as the year-on-year variation in the Harmonised Index of Consumer Prices (HICP). For the United States, inflation is calculated as the year-on-year variation in the CPI provided by the BLS.
How to read it: in January 2023, in the United States, inflation was 6.4% year-on-year, whereas core inflation (excluding energy and food) was 5.6%.
Source: Eurostat, ONS, BLS, INSEE calculations.

►5. Past and forecast GDP growth in the main economies

(in %)

	2021				2022				2023						
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	2020	2021	2022	mid-2023 ovhg	Difference between Q4 2022 and Q4 2019
France	0.1	1.1	3.3	0.6	-0.2	0.5	0.2	0.1	0.1	0.2	-7.9	6.8	2.6	0.6	1.2
Germany	-1.5	1.9	0.8	0.0	0.8	0.1	0.5	-0.4	0.0	0.2	-4.1	2.6	1.9	0.1	0.0
Italy	0.5	2.4	2.9	0.9	0.1	1.0	0.4	-0.1	0.2	0.2	-9.0	7.0	3.8	0.7	1.9
Spain	-0.2	1.4	3.1	2.3	0.0	2.2	0.2	0.2	0.4	0.4	-11.3	5.5	5.5	1.5	-0.9
United Kingdom	-1.1	6.5	1.7	1.5	0.5	0.1	-0.2	0.0	-0.2	-0.2	-11.0	7.6	4.0	-0.4	-0.8
United States	1.5	1.7	0.7	1.7	-0.4	-0.1	0.8	0.7	0.4	0.2	-2.8	5.9	2.1	1.4	5.1
China	0.9	1.6	0.3	1.5	1.3	-2.4	3.9	0.0	1.0	2.0	2.2	8.1	3.0	3.8	13.7

Forecast.
Source: INSEE, Destatis, Istat, INE, ONS, BEA, NBSC.

At the start of 2023, "base effects" are automatically alleviating year-on-year consumer price variations

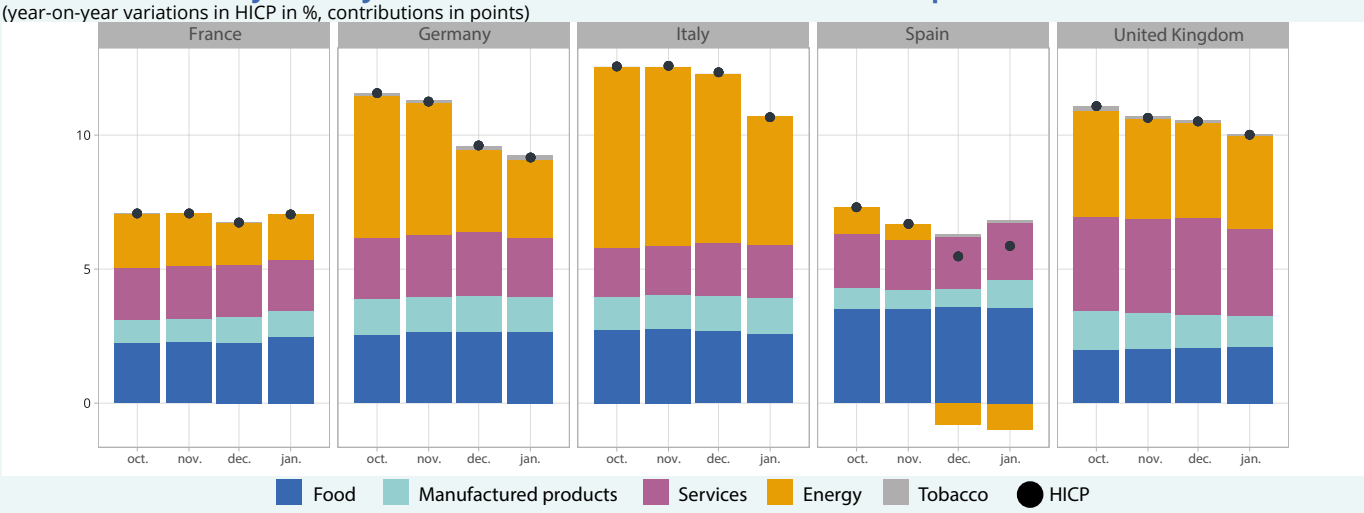
In the Eurozone, but also in the United Kingdom and the United States, the year-on-year variation in consumer prices has fallen back or stabilised in the last few months. This trend is mainly the result of a base effect, as consumer prices for the most part are continuing to increase from month to month but less rapidly than a year earlier. Given the vigorous momentum in prices in 2022, these base effects are likely to be even greater this year and have a significant downward impact on inflation in H1 2023.

Inflation is stabilising or falling in all countries, mainly as a result of more moderate energy prices

In recent months, inflation has remained on a high plateau in the United Kingdom (+10.1% year-on-year in January), it has been lower in France (+7.0% in January for the HICP), and has started to decline in Germany and Italy, after a high point in October, and in Spain it has continued to decline since mid-2022. These trends continue to be linked mainly to energy prices, with contributions from other components remaining fairly stable or up slightly (►**Figure 1**).

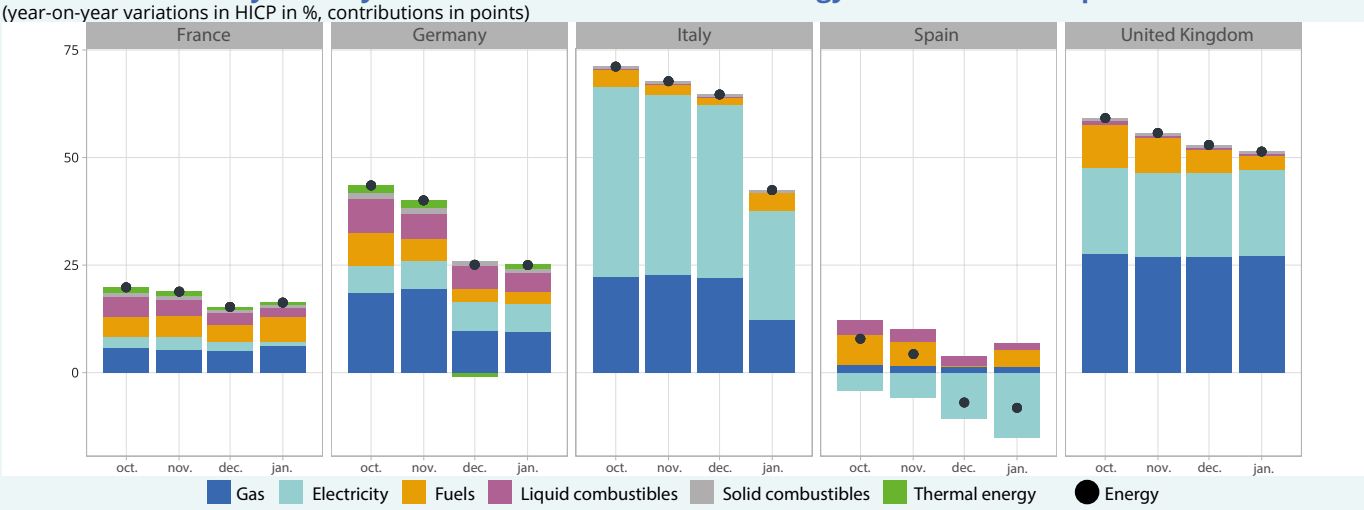
In fact, energy inflation has fallen markedly in the four main Eurozone economies and the United Kingdom in recent months, despite the rise in France in January, partly linked to the revaluation of regulated gas tariffs. The drop in the price of oil resulted in fuel prices weighing much less heavily, or even only marginally, on energy inflation in these five countries at the end of 2022 (►**Figure 2**). This effect seemed to be less pronounced in Italy and France, however, linked to the gradual abolishing of the reduction at the pump.

►1. Breakdown of year-on-year variation in the HICP in the main European economies
(year-on-year variations in HICP in %, contributions in points)



How to read it: in France, in January 2023, the harmonised index of consumer prices increased by 7.0% year-on-year, with food contributing 2.5 points.
Source: INSEE, Destatis, Istat, INE, ONS, INSEE calculations.

►2. Breakdown of year-on-year variation in the HICP for energy in the main European economies
(year-on-year variations in HICP in %, contributions in points)

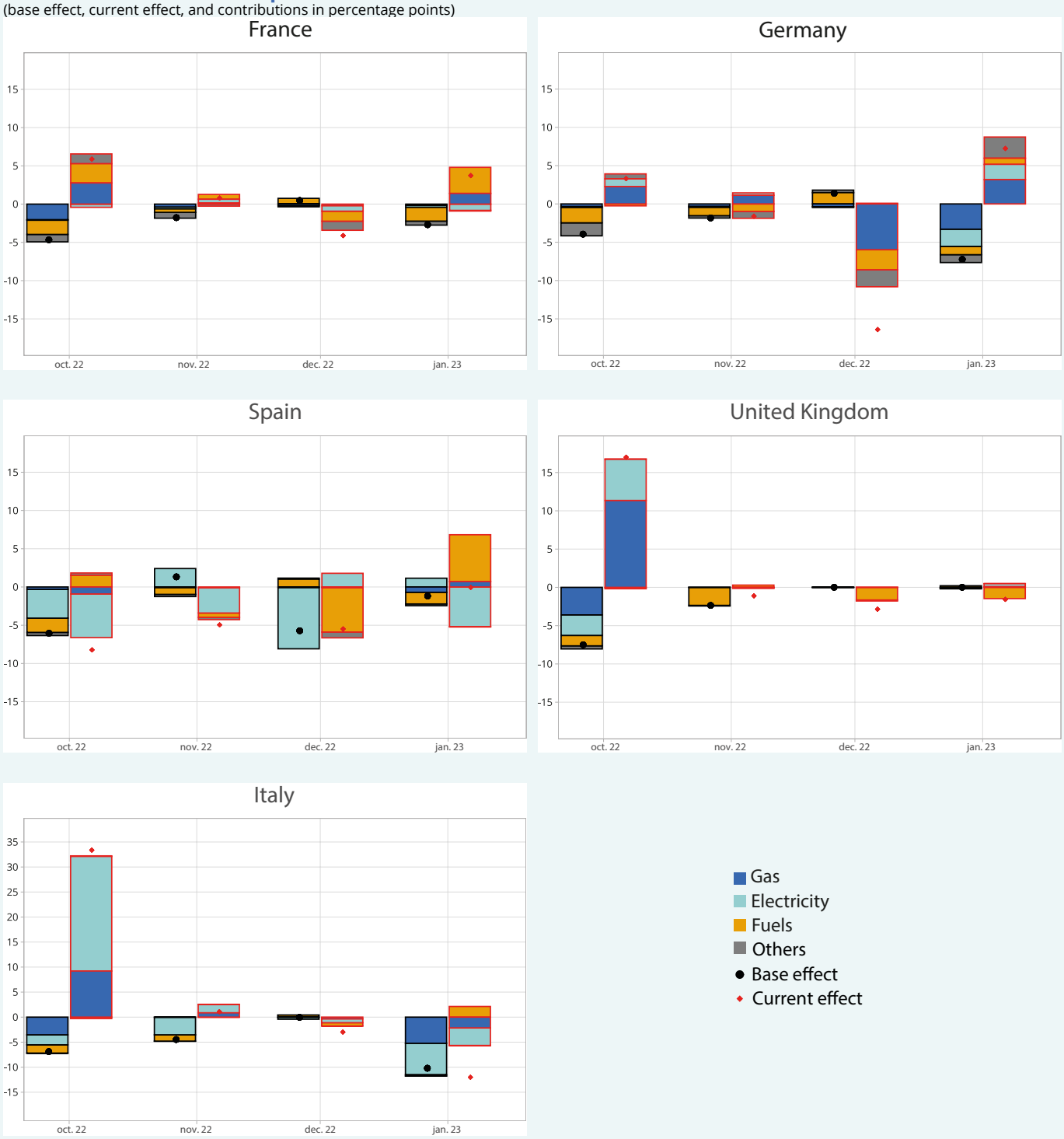


How to read it: in France, in January 2023, the HICP energy component increased by 16.3% year-on-year, with gas contributing 6.1 points.
Source: INSEE, Destatis, Istat, INE, ONS, INSEE calculations.

Specific developments in the different countries have also contributed to the drop in energy inflation in recent months. In Germany, the government paid part of the gas bills of German households in December, bringing down the contribution of the consumer price of gas to energy inflation significantly. Although this measure came to an end in January, the contribution of gas to energy inflation continued to decline: the weight of gas in the German HICP basket of goods was halved in 2023, bringing down its contribution to headline inflation by the same amount. In Spain, the consumer price of electricity fell sharply between September and November linked to the fall in the price of gas used in electricity production. Although the price of electricity rose again in

►3. Contribution to the year-on-year variation in the energy HICP of its components by base effect and current effect in European countries

(base effect, current effect, and contributions in percentage points)



Note: the calculation of the contributions of the different types of energy to the base effect and the current effect is based on an approximation that is valid only for for small variations. Given the size of some monthly price variations, this could explain why the sum of the contributions does not correspond exactly to the base effect or the current effect. However, this approximation does not negate the qualitative messages that come out of the analysis.
How to read it: the base effect linked to the change in the price of fuel contributed -1.8 points to year-on-year variation in the HICP energy component. The contribution of the current effect of the price of fuel was 3.4 points.
Source: INSEE, Destatis, Istat, INE, ONS, INSEE calculations.

December, it continued to drive energy inflation sharply downwards, due to its very strong momentum of the previous year ("base effect", see below). In Italy, the contribution of the price of electricity has also tended to ease slightly since the sharp rise recorded in October, in the wake of the continuous decline in the price of gas since the autumn. In January, the prices of regulated energy products fell, accounting for the substantial decline in energy inflation and headline inflation.

In the United Kingdom, inflation again fell slightly in January, from 10.5% to 10.1%, due to a smaller contribution from fuel prices and lower prices for transport and catering services.

In the four main Eurozone economies, harmonised inflation remained high in February, driven mainly by non-energy components. Thus it was up slightly in Germany (9.3% after 9.2%), France (7.3% after 7.0%) and Spain (6.0% after 5.9%), but fell back in Italy (9.9% after 10.7%, according to the provisional estimate). The detailed figures are not yet all available, but qualitative analyses based on national publications are possible. In all four countries, changes in food prices contributed to the increase in inflation, while fuel prices had the opposite effect. In addition, electricity prices increased in France with the revision of the regulated tariff and in Spain due to rising prices, but they fell in Italy for the second consecutive month. Lastly, services pushed up inflation in France, Germany and Italy.

Base effects contribute automatically to bring down the year-on-year variation in consumer prices, even if they often continue to rise

Apart from Spain, where the HICP energy component has been falling continuously since mid-2022, the decline in energy inflation does not mean that energy prices are falling in the different countries. For the year-on-year variation to decline, prices must increase less quickly, or decrease more strongly, than a year earlier.

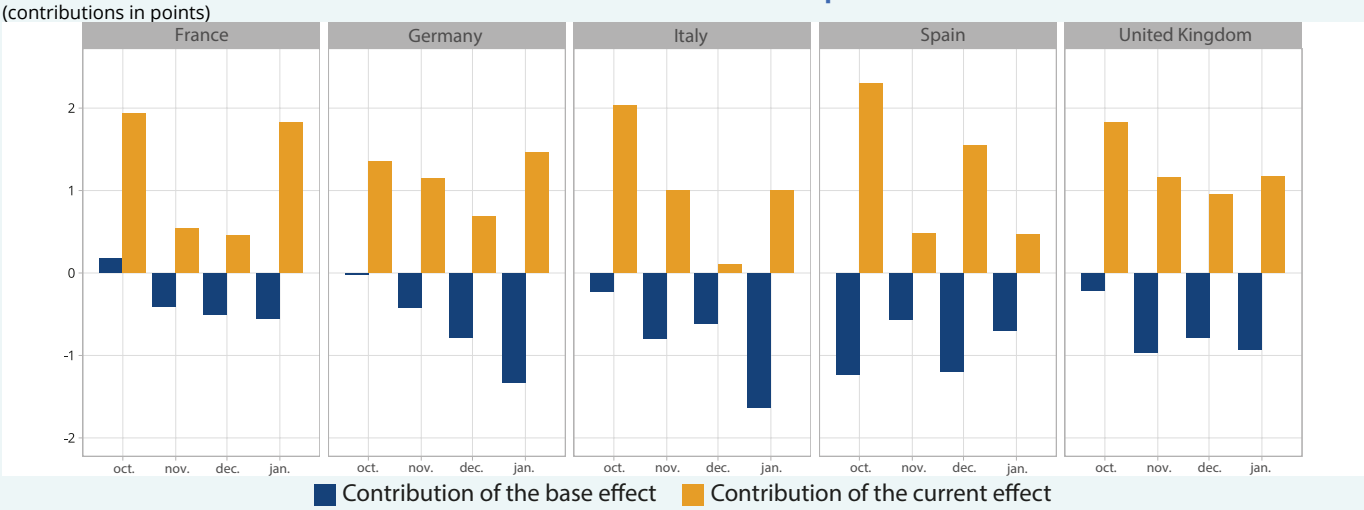
Since inflation is measured as the year-on-year rate of change in the HICP, its change from month to month depends not only on variations contemporary with prices ("current effect") but also on their variations a year earlier ("base effect", ►**Box 1**). A sharp rise in prices a year earlier will therefore have a downward impact on contemporary inflation (negative base effect). Thus in Spain, the price of electricity increased in December 2022 compared to November (+7%, i.e. a positive current effect), but this increase is smaller than that observed in December 2021 (+20%, i.e. a strong negative base effect). Ultimately, the year-on-year variation in electricity prices declined in December in Spain, with the negative base effect outweighing the current effect. The base effect and the current effect are not always in opposition, they may both work in the same direction: for example, electricity prices rose in October 2021 in Spain, resulting in a negative base effect on inflation in October 2022. The contribution of the current effect is also negative due to the fall in the price of electricity.

In Spain, the drop in energy inflation in recent months is therefore partly the result of base effects, especially on electricity in October and December, given its upward movement a year earlier. This was also the case in Italy in January 2023, and in Germany, due to the sharp increases in gas and electricity prices at the beginning of 2022, which automatically pulled down the year-on-year shift in energy prices in January 2023. In France and the United Kingdom, base effects appear to be slightly smaller in scale, except in October for the United Kingdom, when the strong base effect reflects the half-yearly revaluation of gas and electricity prices.

Base effects have also had an impact on food inflation in recent months, pulling it down overall in the five countries, but to varying degrees (►**Figure 4**). At the end of 2021, the dynamics of food prices were fairly similar in all five countries. On the one hand, in Spain and the

►4. Base and current effects on food inflation in the main European economies

(contributions in points)



How to read it: in France, in January 2023, the base effect linked to the change in food prices contributed -0.6 points to year-on-year variation in the HICP food component. The contribution of the current effect of food prices was 1.8 points.
Source: INSEE, Destatis, Istat, INE, ONS, INSEE calculations.

United Kingdom, these prices increased sharply from the end of 2021, resulting in significantly negative base effects on food inflation at the end of 2022-beginning of 2023. In Italy and Germany, on the other hand, the rise in food prices started later then became more significant in January 2022, leading to base effects that gradually gained in strength, thus toning down the momentum of food inflation at the beginning of 2023. Lastly, in France, the momentum of food prices started out more moderately, generating base effects that were more limited in scale at the end of 2022-beginning of 2023.

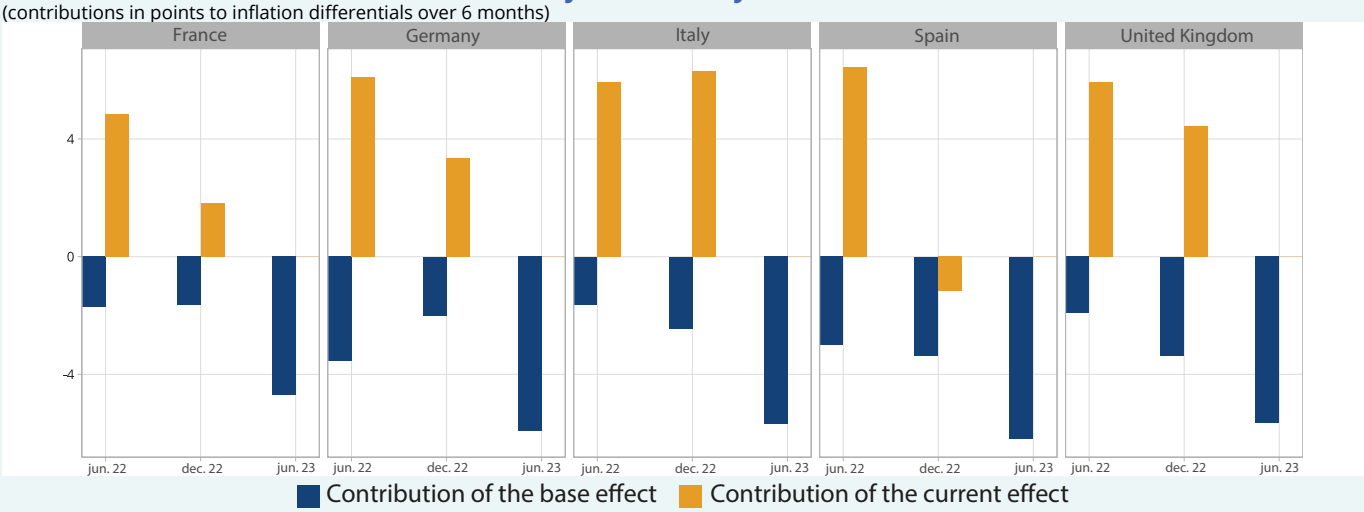
In most countries, headline inflation in H1 2023 should be automatically cushioned by base effects

At the level of headline inflation, base effects helped significantly in tempering change in inflation during 2022. This was particularly the case in H2 2022 in Spain and the United Kingdom, where prices had already started to rise substantially the previous year. However, this effect was even more visible in the United States, where the decline in inflation since summer 2022 was primarily the result of a base effect (►**Box 2**). In France, Germany, Italy and the United Kingdom, current effects were of such magnitude that inflation rose between H1 and H2 (►**Figure 5**). But in Spain, the current effects were negative in Q2 due to a significant drop in the price of energy products, which magnified the decline in inflation.

Given the sharp rise in consumer prices in 2022, base effects are expected to be even more pronounced in H1 2023 than they were in the previous half-year. This is still the case in Spain and Germany, and also in Italy and the United Kingdom, however in France, these base effects remain more moderate. ●

Jules Baleyte, Narjis Benchekara, Hugues Ravier

►5. Headline inflation should be automatically cushioned by base effects in H1 2023
(contributions in points to inflation differentials over 6 months)



How to read it: in France, base effects cumulated over 6 months contributed -1.6 points to the year-on-year variation in consumer prices between June and December 2022. The contribution of cumulated current effects was +1.8 points.
Source: INSEE, Destatis, Istat, INE, ONS, INSEE calcuations.

Box 1. Breakdown of the variation in inflation from one month to the next between the base effect and the current effect

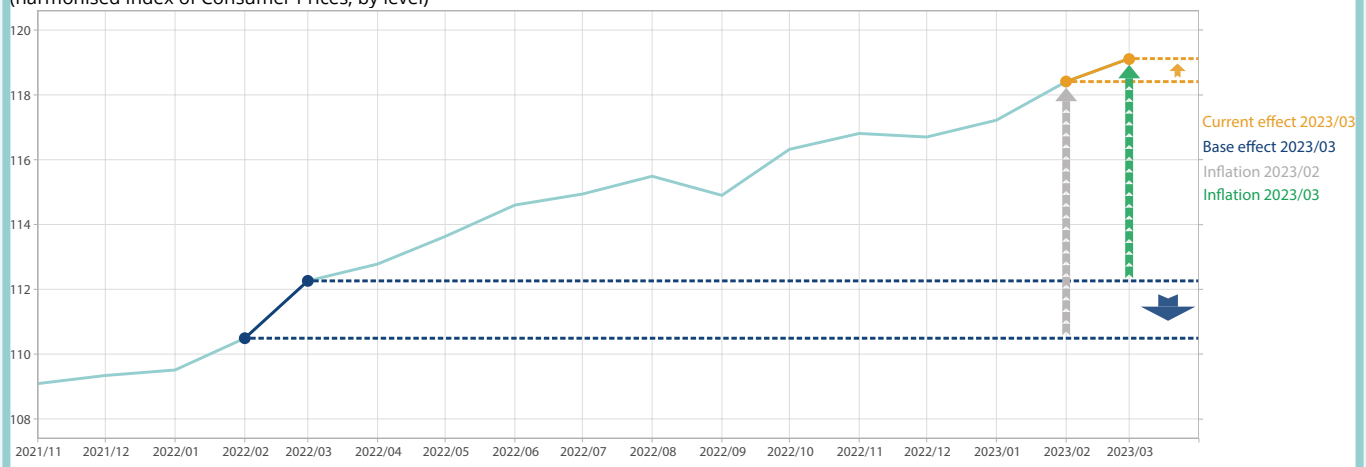
For a given month M and a given year A, inflation, defined as the year-on-year rate of change in the HICP, can be approached using the following breakdown (►**Figure 6**):

Inflation in month M of year A ≈ inflation in month M-1 of year A
+ monthly variation in the IPCH in month M of year A
- monthly variation in the IPCH in month M of year A-1

The monthly variation in the HICP in month M of year A is then called the "current effect". The opposite of the monthly variation in prices between M and M-1 of year A-1 is called the "base effect". In the change in inflation from one month to the next, the current effect corresponds to the part of this change that is due to the contemporary variation in prices, while the base effect corresponds to the part due to the price change that occurred a year earlier. These price changes 12 months earlier have an impact on the profile of the year-on-year variation in the HICP, since they determine the "starting point" for this variation.

►6. Graph of inflation (year-on-year rate of change in the HICP), the base effect and the current effect for March 2023, case of France

(harmonised Index of Consumer Prices, by level)



Note: inflation, base effect and current effect are defined as variations in the HICP between two dates. In this graph, it is rather the differences between two dates that are shown for illustration. Data for March are forecasts.
How to read it: in France, in March 2023, the harmonised index of consumer prices is expected to increase compared to February 2023. The current effect in March 2023 (yellow arrow) is therefore expected to be positive. The HICP also rose between February 2022 and March 2022, the base effect for March 2023 (blue arrow) is therefore negative. As the base effect has a greater absolute value than the current effect, inflation in March 2023 (green arrow) is likely to be less than inflation in February 2023 (green arrow).
Source: INSEE, INSEE calculations.

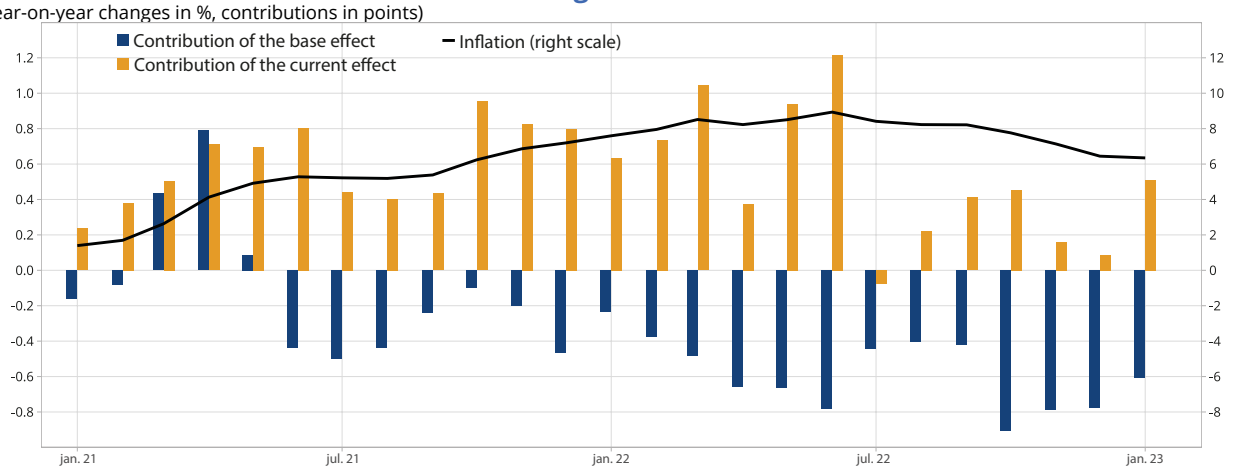
Box 2. In the United States, the decline in inflation stems from base effects

In the United States, inflation increased rapidly from 2021: the year-on-year variation in consumer prices increased from 1.4% in January 2021 to 7.5% a year later, driven by a significant rise in prices from month to month. This increase in inflation in 2021 resulted in 2022 in a significant negative contribution by base effects to the year-on-year variation in the consumer price index. In H1 2022, the continuing rise in prices month to month (positive current effect) outweighed the negative contribution of the base effect, leading inflation to continue to rise. However, this increase in inflation eased compared to 2021, even when the monthly increase in prices was greater, precisely because of the negative base effects.

From the summer of 2022, the year-on-year variation in consumer prices has fallen back, dropping from 9.1% in June to 6.4% in January 2023. This decline was due exclusively to the negative contribution of base effects; in fact, consumer prices, for their part, continued to rise month on month, but more slowly, resulting in positive current effects but which were gradually diminishing.

▶7. The decline in US inflation is the result of negative base effects

(CPI year-on-year changes in %, contributions in points)



How to read it: in January 2023, the consumer price index increased by 6.4% year-on-year, or 0.1 points less than in December 2022. The contribution of the current effect to this variation was 0.5 points, while the contribution of the base effect was -0.6 points.
Source: Bureau of Labor Statistics, INSEE calcuations.

Energy and commodities

After reaching historically high levels in H1 2022, global commodity prices fell back sharply in H2, in a context of darkening prospects for growth. They are still on a downward trend generally at the start of 2023 but both macroeconomic and geopolitical uncertainties are keeping them well above their pre-health crisis levels.

In Q4 2022, the price of oil (Brent) stood at $88.6 per barrel (after $100.6 in Q3), then around $83 in January and February 2023 (►**Figure 1**). When expressed in euros, the price of a barrel fell more than in dollars, because the euro has appreciated since November. The markets have remained uncertain at the start of 2023, with the price of a barrel of Brent fluctuating between $80 and $87 since mid-January. On the one hand, there is still excess supply globally: Russian exports are holding up better than expected and the reduction in OPEC output targets, decided in October, had a limited effect on quantities actually produced. In addition, the tightening of monetary policies is affecting demand and has been exerting downward pressure on prices since the end of 2022. On the other hand, the gradual reopening of the Chinese economy and the resistance of activity in the western economies in Q4 2022 may suggest a rebound in demand in the next few months.

The price of gas on the European market (TTF) was divided by 4.5 between August 2022 and February 2023 (►**Figure 2**), with notably a sharp fall in mid-December – in the context of a mild winter and inventories back to their early 2020 levels (►**Figure 3**). The price came down again in February to €52.5/MWh, a threshold that had not been reached since September 2021. It is still well above its 2019 average, however, and above the price of gas on the North American market (Henry Hub). While this hub experienced increases in 2022 due to a greater European demand, these were a far cry from those experienced by the TTF and at the beginning of 2023, it was back to its pre-health crisis level.

Finally, the price of carbon dioxide (CO_2) on the European Union Emissions Trading System (►**Figure 4**) remained above €80 per tonne at the beginning of 2023 (compared to €25 on average in 2019), after the announcement at the end of December that this market was to be reformed by the European Union. This would include a gradual end to free emissions allowances for industrialists by 2034 and the extension of the carbon market to new sectors.

At the same time, global commodity prices (excluding energy) fell back after peaking following the invasion of Ukraine (►**Figure 5**). They nevertheless remain well above pre-health crisis levels, in a context where geopolitical tensions and climate risks seem to be constantly weighing on the markets (►**Figure 6**). In January 2023, the prices of food commodities imported into France were around 52.9% above their 2019 average. Prices of agro-industrial and mineral commodities were up by 29.1% and 45.0% respectively over the same period.

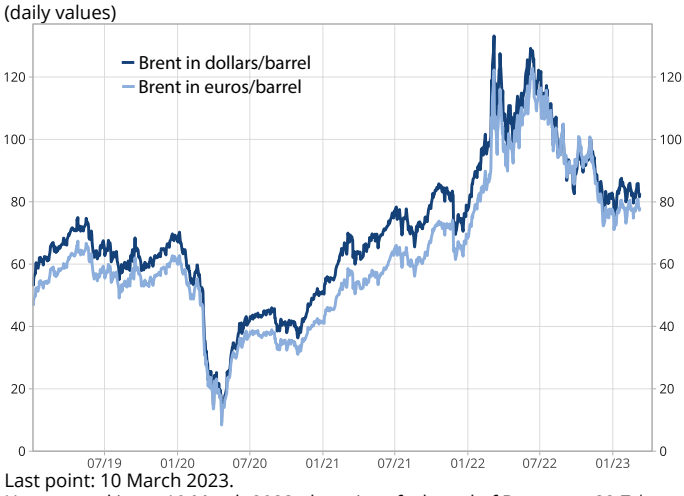
In France, the repercussions of these changes in world prices are gradually being felt: agricultural production prices have fallen slightly since they peaked in May 2022 (-5% between May 2022 and January 2023) but remain 30% above their January 2020 level. Industrial production prices (excluding the energy sector) seemed to have plateaued at the end of 2022, but started to rise again in January 2023, reaching 22% above their level of January 2020.

Over the forecasting period (mid-2023), the assumption is that of constant oil prices, set at $83 per barrel (or €78 assuming a euro-dollar exchange rate of 1.06 dollars for 1 euro). The markets seem to remain cautious and sensitive to changes in the various economic indicators –particularly those from China– and to announcements from the central banks. ●

International economic outlook

►1. Price of oil (Brent) in dollars and euros

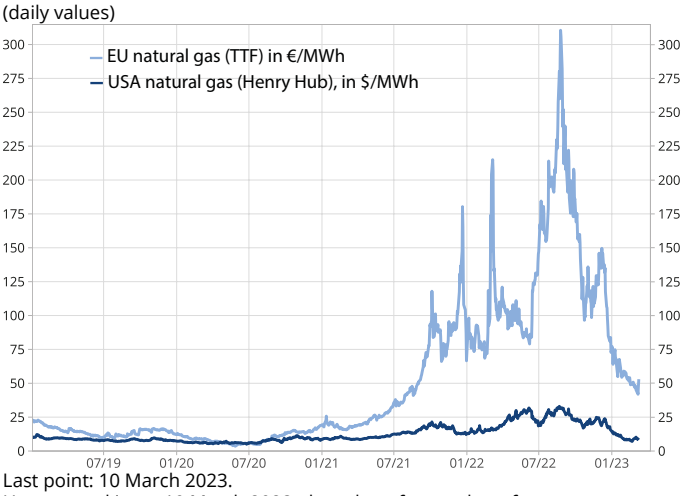
(daily values)



Last point: 10 March 2023.
How to read it: on 10 March 2023, the price of a barrel of Brent was 82.7 $.
Source : Commodity Research Bureau.

►2. Prices of natural gas in Europe and in the United States

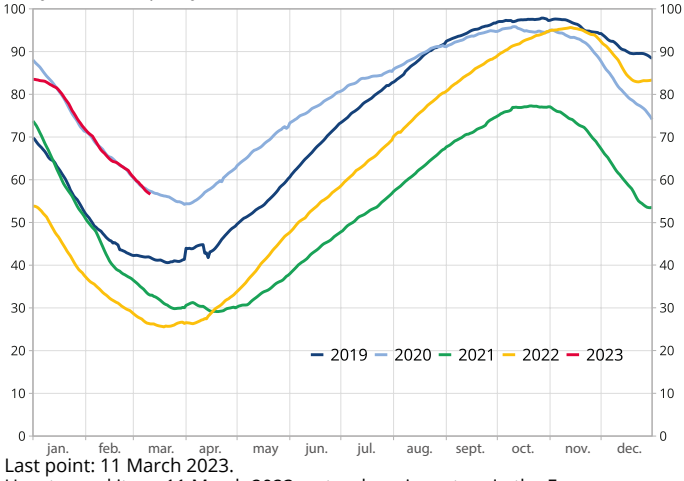
(daily values)



Last point: 10 March 2023.
How to read it: on 10 March 2023, the value of natural gas futures contracts at the next expiry date in the Netherlands (TTF) is €53.0 per megawatt-hour.
Source: ICE Futures Europe, New York Mercantile Exchange.

►3. Natural gas inventory in the European Union

(daily values – capacity rate, in %)



Last point: 11 March 2023.
How to read it: on 11 March 2023, natural gas inventory in the European Union countries stood at 56.6% of total inventory capacity.
Source: Gas Infrastructure Europe – AGSI+.

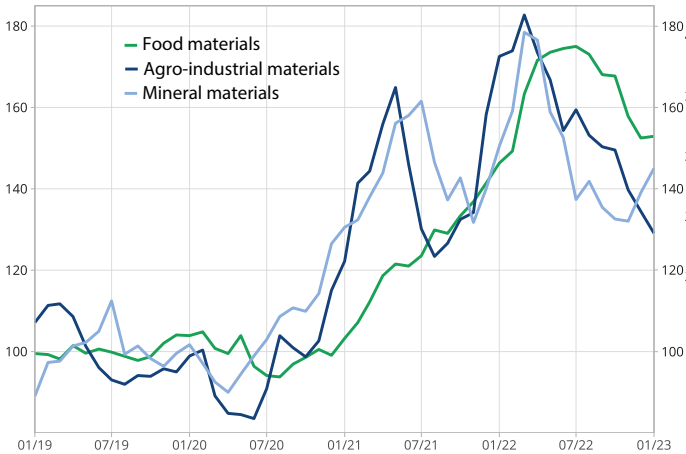
►4.Price of a tonne of CO_2 on the European Union Emissions Trading System

(daily values, in euros)

Last point: 10 March 2023.
How to read it: on 10 March 2023, the price of a tonne of CO_2 on the European Union Emissions Trading System was €96.7.
Source: ICE Futures Europe.

►5. Prices indices for imported commodities in France

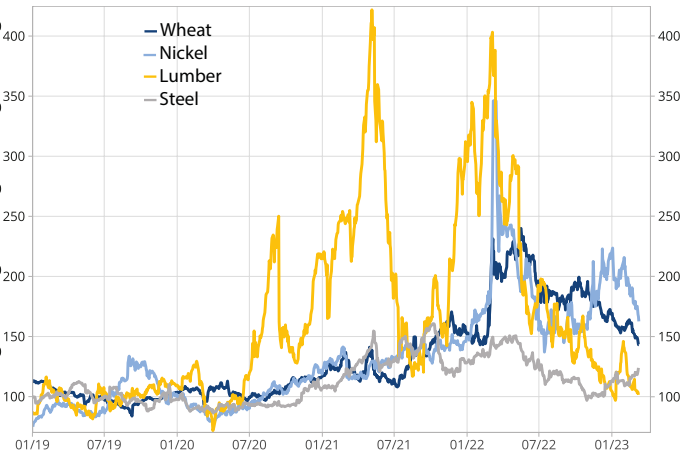
(mensual index – base 100=2019)



Last point: January 2023.
Note: the indices measure price changes in euros.
How to read it: in January 2023, prices in euros of imported food commodities were 52.9% above their 2019 average.
Source: INSEE.

►6. Prices of wheat, nickel, lumber and steel

(daily index - base 100=2019)



Last point: 10 March 2023.
Note: the indices measure price changes in euros.
How to read it: on 10 March 2023, the price of wheat in euros was 43.2% above its 2019 average.
Source: Euronext Paris, London Metal Exchange, Chicago Mercantile Exchange, Shanghai Futures Exchange.

Eurozone

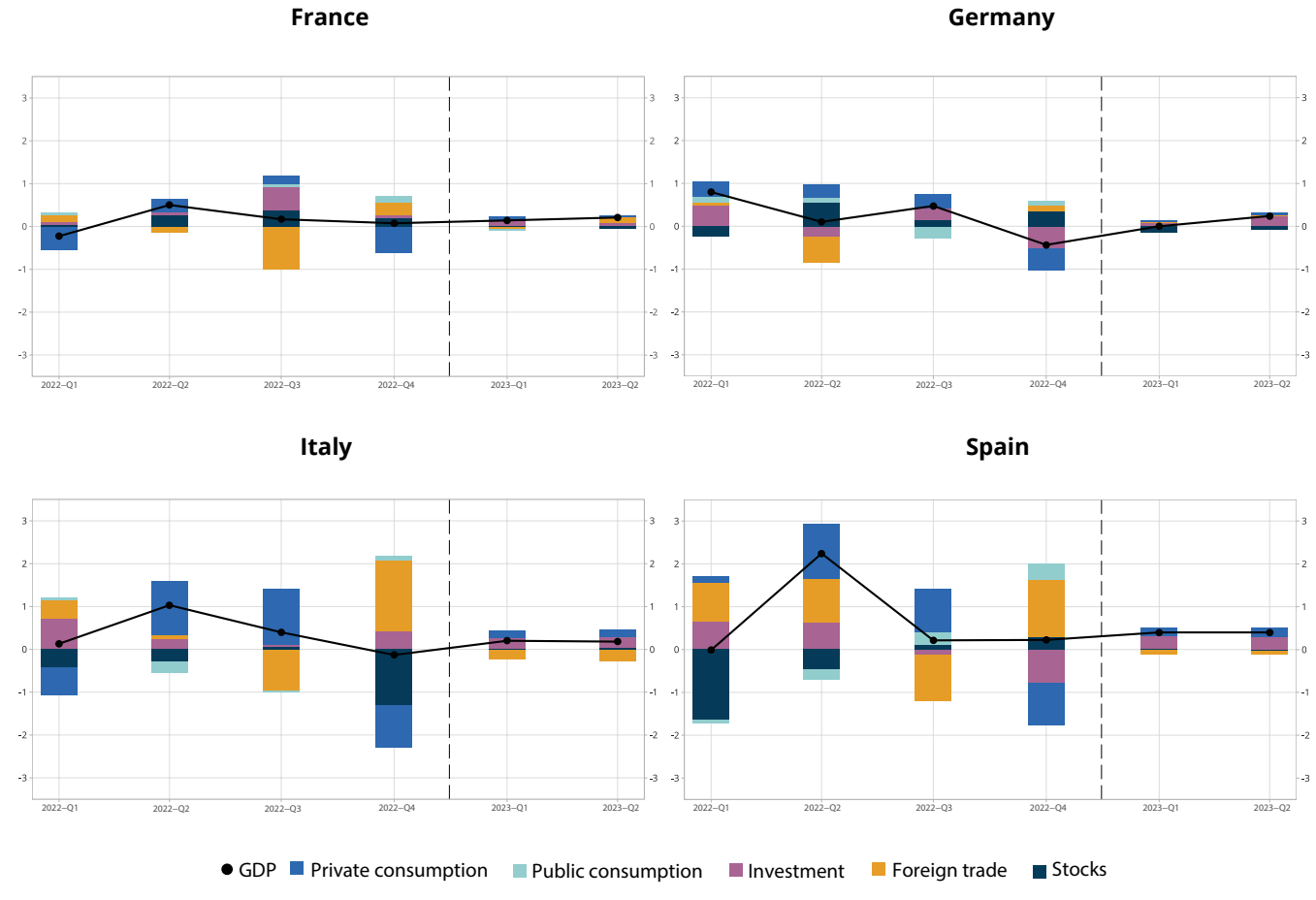
In Q4 2022, economic activity in the Eurozone was sluggish overall, penalised by the decline in household consumption

In Q4 2022, activity was generally sluggish in the main Eurozone economies, in a context of persistently high inflation, particularly with regard to energy, with consequences both for household demand and manufacturing output. In Germany and Italy, activity declined (-0.4% in Germany and -0.1% in Italy after +0.5% and +0.4% respectively in Q3, ►**Figure 1**), while in Spain and France, GDP continued to grow modestly (+0.2% and +0.1% respectively after +0.2% in Q3 in both countries), supported by a manufacturing industry that was less penalised than that of their neighbours. Domestic demand, on the other hand, fell sharply in all four countries, leading to positive variations in inventories (except in Italy where there was significant destocking) and also a positive contribution to the trend in activity by foreign trade.

Household consumption, which had driven growth in the two previous quarters, fell, or even plummeted, in the main Eurozone economies (-1.7% in Spain, -1.6% in Italy, -1.2% in France and -1.0% in Germany). Part of this decline can be attributed to energy saving by households in a context of high prices and encouragement to adopt "energy sobriety", although in some countries they did have the benefit of particularly mild weather (►**Box 1**). In addition, the high levels of energy and food inflation may have led households to restrict their consumption of other types of goods as well as energy. Lastly, in France, Italy and Spain, households travelled abroad less, which may have brought down total consumption, as the reduction in spending abroad was not totally offset by more spending at home.

►1.Quarterly variations in GDP and contributions of demand items

(quarterly variations in % and contributions in points)



How to read it: in France, in Q4 2022, GDP improved compared to Q3 2022 (+0.1%), and the foreign trade contributed around +0.3 points to this increase.
Source: INSEE, Destatis, Istat, INE, INSEE calculations

Meanwhile, investment continued to increase in France and even more so in Italy, where it probably benefited from the last months before the adjustment of the *Superbonus* scheme (which allowed households to deduct up to 110% of the cost of work in their home to improve energy efficiency; this ceiling was reduced to 90% at the beginning of 2023). Conversely, investment declined in Germany (-2.5%) and even more in Spain (-3.8%). In Germany, several days of frost late in the year penalised activity in the construction sector, while in Spain the delay in introducing the European recovery and resilience plan continued to affect this branch. Investment in equipment also fell back in both these countries.

In all four countries, foreign trade made a positive contribution to growth in Q4 2022, even though exports were sluggish (except in Italy). Imports fell sharply in Spain (-4.2%, partly due to lower spending by Spaniards abroad), Italy (-1.7%), Germany (-1.3%) and to a lesser extent France (-0.4%), in line with low domestic demand.

Inflation continues to hamper the situation for households in H1 2023

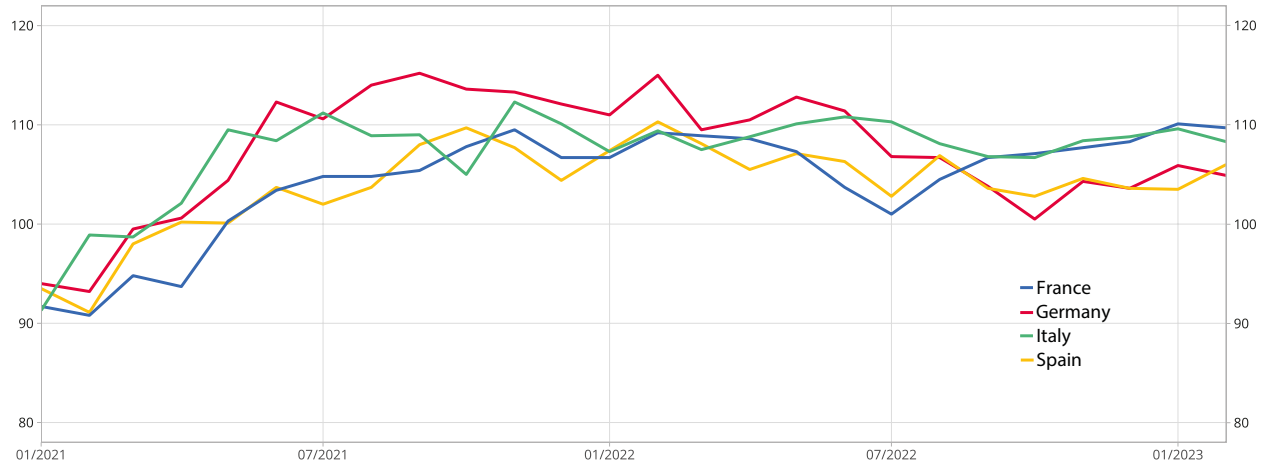
At the start of 2023, inflation was still high in the main Eurozone economies. In Spain, it fell sharply at the end of 2022, from 10.5% in August to 5.5% in December, before settling at around 6% for the last two months. In Germany and Italy the year-on-year variation in the Harmonised Index of Consumer Prices (HICP) began to decline from November, although in France it has been generally stable since the summer. Spain is therefore different as it has seen a distinct decline in the year-on-year variation in the HICP in recent months, partly due to falling prices and not only to a "base effect". In Germany, the reduction in December of part of household gas bills resulted automatically in a drop in the HICP. Energy inflation in Germany subsequently rose again in January but headline inflation nevertheless continued to decline, driven down by transport services, before picking up again in February.

In H1 2023, inflation should continue or begin to fall back in all four countries, especially in Q2, mainly due to "base effects": prices are expected to continue to rise –as a consequence of the higher cost of energy inputs, previous increases in commodity prices and also wage increases– but their pace of change is likely to be slower than last year. These base effects are likely to be great in Spain, where the acceleration in prices has been brisk since the start of 2022 (►**Focus** on inflation in the western economies).

In all four countries, employment improved at the end of 2022 and the unemployment rate fell or stabilised at particularly low levels. Wages too continued to be dynamic, especially in Germany with the introduction of the last increase in the minimum wage scheduled for 2022, or in France with massive payments under the value sharing bonus scheme. At the beginning of 2023, the labour market is expected to continue in the right direction in the main Eurozone economies, according to the expectations of companies in the business tendency surveys (►**Figure 2**). Growth in wages is likely to be

►2. In January 2023, in France and Italy in particular, companies continue to expect employment to perform well

(employment indicator centred and reduced; long-term average 100; standard deviation 10)



Note: data are from outlook surveys of companies in industry and services. This monthly indicator is calculated as the weighted average of balances of opinion across all branches, balances from European surveys centralised and harmonised by the DG ECFIN, responsible mainly for seasonal adjustment. It is also centred around an average of 100 and standard deviation is set at 10. These values may therefore differ from employment climate data calculated and disseminated by INSEE from the same source but using factor analysis; the trends are similar, however.
How to read it: in February 2023, in France, the harmonised centred-reduced employment indicator was 9.7 points above its long-term average.
Source: DG ECFIN, INSEE calculations.

driven by taking rising prices into account in wage negotiations, although possibly with varying dynamics at the start of 2023 depending on the country. In Spain in particular, wages are expected to be dynamic, supported by the 8% increase in the minimum wage in January. In France, after the massive payouts under the value sharing bonus scheme at the end of 2022, wages look set to slow at the start of 2023 as a backlash. In Germany, wage negotiations that are already finalised will probably not take effect until later in the year.

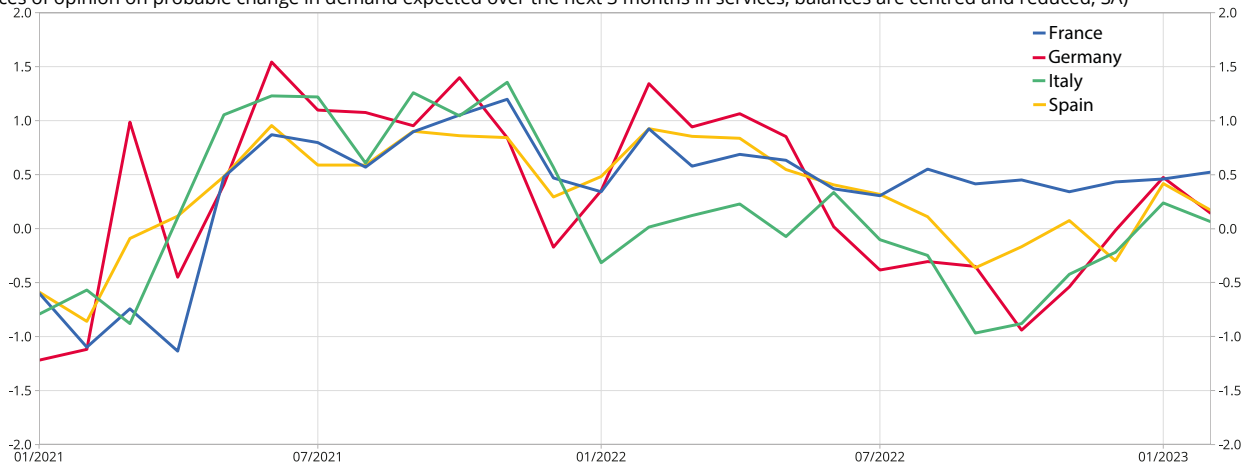
Household income in current euros should therefore continue to rise in H1 2023 in the main Eurozone economies, supported by employment and especially by wage increases. However, this will not offset the continuing price rises, except in Spain, due to the strong wage increase at the beginning of 2023. All in all, household purchasing power is expected to be sluggish or may even fall back in France, Italy and Germany, but it should increase at the start of the year in Spain.

Manufacturing output is still hampered in energy-intensive industries, but in other branches it benefits from a relative easing of supply chain problems

Looking at businesses, the outlook is improving in services but remains more contrasting in industry. In services, business leaders anticipate an increase in demand over the coming months (►**Figure 3**). In Germany, Spain and Italy, the balance of opinion in January exceeded its long-term average for the first time since the summer.

In the manufacturing industry, which is more exposed to higher energy input prices, output continued to decline in the energy-intensive branches in Q4 2022. However, this trend is on a smaller scale than that announced by the industries concerned, and in addition it is offset by the improved performance in other branches, some as a result of the start of the easing of supply chain difficulties (transport equipment, machinery and equipment, ►**Box 2**). All in all, according to the Industrial Production Index, manufacturing output held up at the end of 2022: it increased in Spain (+0.7% in Q4) and France (+0.2%), stagnated in Germany and fell back in Italy (-0.4%). These trends are expected to continue into the beginning of 2023: it is likely that those branches that consume the most energy will continue to be penalised by the increase in the prices of their energy inputs, whereas other branches are expected to benefit both from improved supply chains and relatively full order books. For example, in industries manufacturing other transport equipment, essentially aeronautics, their order books currently guarantee more than 20 months of production in Italy and Spain and more than 10 months in France.

►3. At the start of 2023, service companies are optimistic overall over prospects for demand
(balances of opinion on probable change in demand expected over the next 3 months in services, balances are centred and reduced, SA)



Note: data are from business tendency surveys of companies. These balances are monthly and correspond to European surveys centralised and harmonised by the DG ECFIN, mainly regarding seasonal adjustment. They have been centred (average of balance between January 2005 and January 2023) and reduced in order to facilitate comparisons between countries.
How to read it: in February 2023, in France, service companies expect a rise in demand in the next three months: the balance of opinion is 0.5, above its long-term average (average of balance between January 2005 and January 2023).
Source: DG ECFIN, INSEE calculations.

International economic outlook

In Q1 2023, the German economy is expected to remain more exposed to high prices, whereas activity is likely to improve moderately in Italy, France and Spain

In Q1 2023, activity is expected to develop in contrasting ways in the main Eurozone economies. It is expected to grow in Spain (+0.4%), to increase more moderately in France (+0.1%) and Italy (+0.2%) and to remain stable in Germany.

In Spain in particular, the fall in energy prices, which in this country quickly impacts on consumer prices, should support household consumption and company production. The country is also still expected to benefit from catch-up effects, as private consumption and especially investment are still below their pre-health crisis level.

In Italy, activity is expected to pick up again after its downturn at the end of 2022. Consumption is likely to rebound slightly, while investment should continue to improve, although slowing a little, since although aid for renovations was extended at the beginning of the year, it was in a less generous form.

In Germany, domestic demand looks set to remain sluggish. Household consumption in particular, is likely to be affected by the decline in purchasing power. However, exports are expected to regain some momentum, mainly as a result of the automobile industry.

In Q2 2023, activity is expected to increase in the main Eurozone economies. The decline in inflation and the buoyancy of wages are likely to contribute to a rebound in private consumption in Germany. Maintaining energy prices at low levels (forecast assumption) and coming out of winter, thus driving back the risk of shortages, would support production in the energy-intensive branches. ●

Box 1: European households substantially reduced their energy consumption in Q4 2022

As well as in France, household energy consumption also fell back at the end of 2022 in the other main Eurozone economies. In Germany, the federal network agency (*Bundesnetzagentur*) estimates[1] that gas consumption by households and small businesses dropped by more than 10% in Q4 2022 compared to the Q4 levels between 2018 and 2021. The decline was even more pronounced than that already observed in Q3 2022.

In an analysis published in December 2022, the Bank of Spain[2] made a similar observation for the same scope: gas consumption in October and November 2022 would appear to have declined by about 10% compared to the same months in 2019-2021, adjusted for temperatures.

Finally, in Italy, according to data[3] from the agency responsible for the Italian electricity network (Terna), consumption by households and non-industrial businesses also appears to have decreased significantly, also after adjustment for the effect of the weather. ●

1 https://www.bundesnetzagentur.de/DE/Gasversorgung/aktuelle_gasversorgung/start.html#SVG.
2 https://www.bde.es/f/webbde/SES/Secciones/Publicaciones/InformesBoletinesRevistas/BoletinEconomico/22/T4/Files/be2204-it-Box4.pdf.
3 https://www.terna.it/en/electric-system/publications/monthly-report.

Box 2: in Q4 2022, the resistance of manufacturing output in the Eurozone masked some major sectoral disparities

At the end of 2022, in a context of tensions over energy prices, manufacturing output in the main Eurozone economies resisted relatively well overall, however, this masked some contrasting trends in different branches. Output in energy-intensive branches declined in Germany in particular, and more moderately in Italy. In contrast, the pharmaceutical and machinery and equipment branches drove production in the manufacturing industry.

In the main Eurozone economies, manufacturing output held up at the end 2022

At the end of summer 2022, the manufacturing industry in the Eurozone was faced with tensions over volumes and energy prices. These pressures were in addition to difficulties surrounding supply chains, which were certainly in decline, but had been present since the post-covid recovery, as had continuing difficulties with hiring.

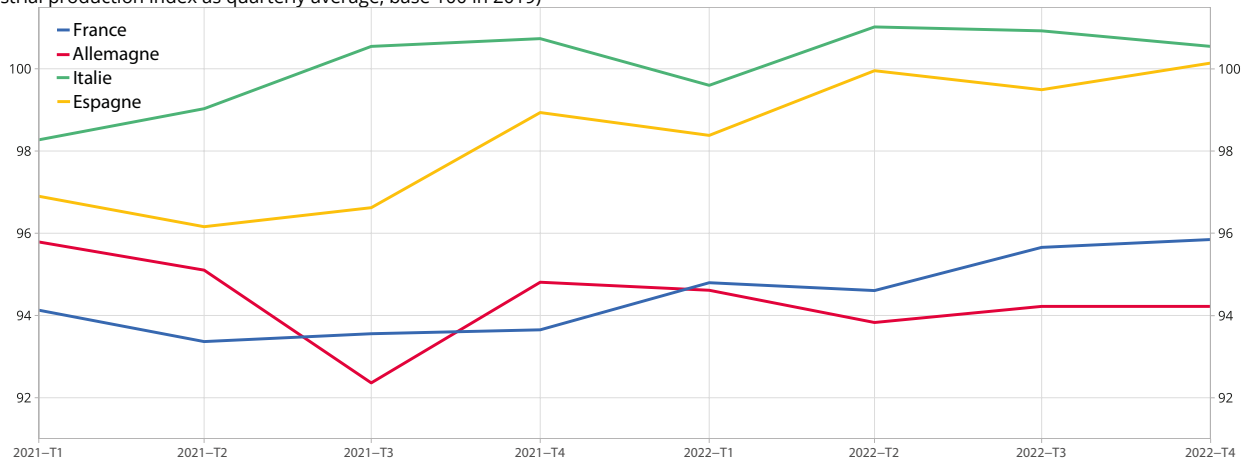
However, manufacturing output held up relatively well in Q4 2022: it recorded a slight decline in Italy (-0.4% for the industrial production index on average in Q4, compared to Q3, ►**Figure 1**), stability in Germany and even a slight upturn in France (+0.2%) and Spain (+0.7%). Nevertheless, in each country these trends mask disparities between branches.

Production in the energy-intensive branches declined overall, as in the previous quarter

Energy-intensive branches represented between 15 and 20% of value added in the manufacturing industry before the Covid-19 pandemic. This study looks at branches whose intermediate consumptions of products that derive from the extractive industries, e.g. the production of coke and refined petroleum and the production and distribution of electricity, gas and air conditioning, represent more than 5% of their value added: paper and paperboard industry, chemical industry, manufacture of other non-metallic mineral products and metallurgy. Production in these branches was particularly exposed to the energy crisis, and their output declined significantly in Q4 (►**Figure 2**).

In Germany in Q4 2022, the fall in output was more pronounced than in France, Italy or Spain, especially in the chemical industry (-11.5%) and the paper and paperboard industry (-7.3%, down for the fourth consecutive quarter). In France and Spain, output declined in a more measured way (drop of 4.2% at most in France, for the chemical industry and -3.1% at most in Spain, for the paper and paperboard industry). In Italy, the drop in output was less, not exceeding 3% over the quarter (metallurgy); the chemical industry even stood out with a slight increase in output (+0.5%), although this did follow a strong contraction in the previous quarter (-6.9%).

► 1. In Q4 2022, manufacturing output held up in the main Eurozone economies
(industrial production index as quarterly average, base 100 in 2019)



Last point: Q4 2022.
How to read it: in Q4 2022, in Italy, manufacturing output was 0.5% above its 2019 average (data adjusted for seasonal variations and working days).
Scope: manufacturing industry.
Source: Insee, Destatis, Istat, INE.

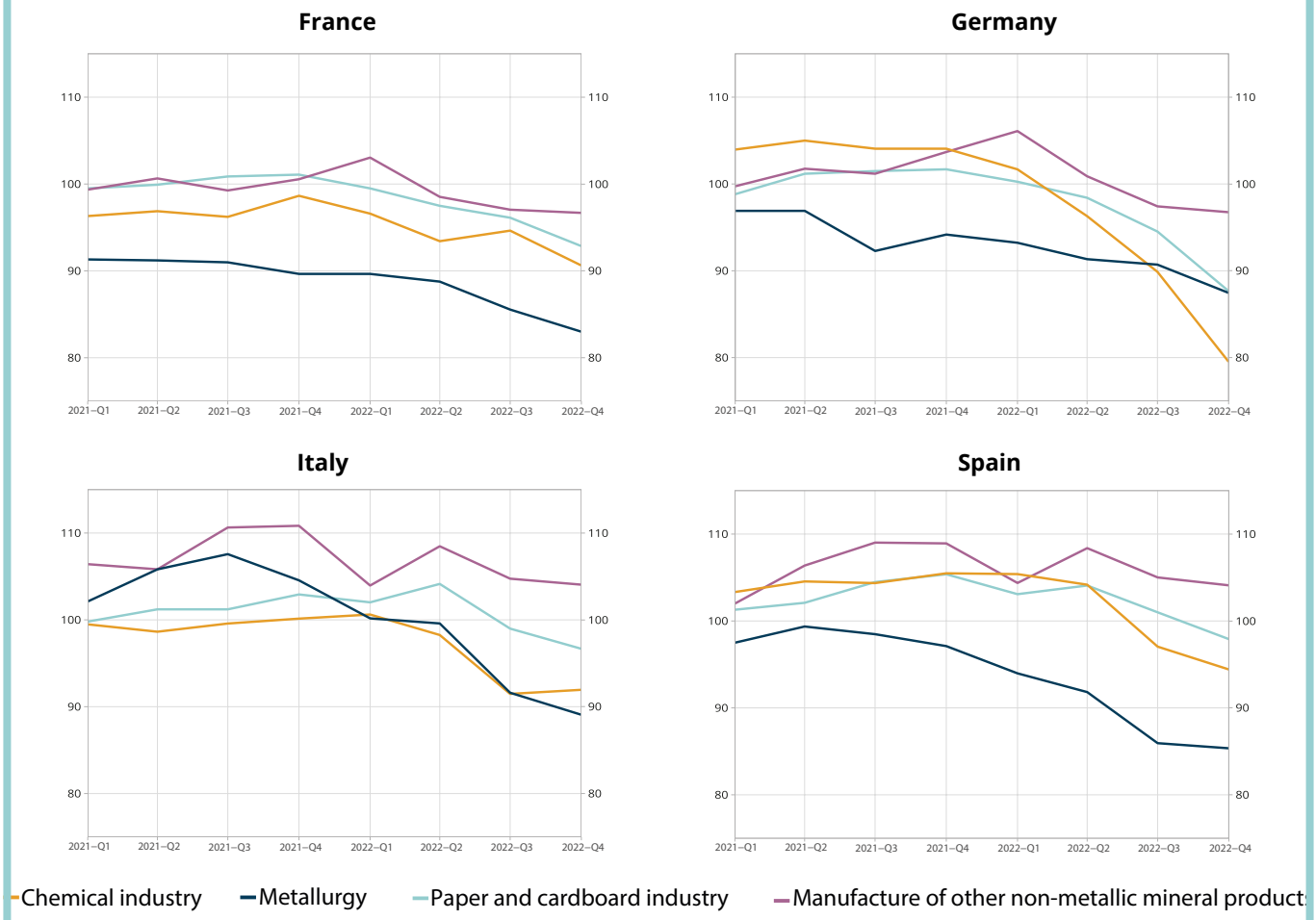
Conversely, some branches benefited from a relative easing of supply chain difficulties

In contrast to the energy-intensive industries, some branches sustained manufacturing output at the end of 2022. This was the case for the manufacture of transport equipment: in this branch, output remains well below its pre-health crisis level (except in Italy) and is therefore still benefiting from catch-up effects. This is particularly the case for the automobile industry: output increased considerably in Germany at the end of 2022 (+9.2% over the quarter), and given the weight of this branch (almost 20% of value added for the manufacturing industry in 2019) it contributed significantly to sustaining German manufacturing output. In France, production also increased considerably in the manufacture of "other transport equipment" (which mainly covers the aeronautical industry), because there was less tension over supply chain difficulties since summer 2022.

With the exception of Germany, production rose overall in the manufacture of electrical equipment and of machinery and equipment. Finally, in the four main Eurozone economies, the pharmaceutical industry was particularly dynamic in Q4. This branch is strong in exports and probably benefited from exchange rate effects and perhaps also from the context of the epidemic at the end of 2022. In France, where the pharmaceutical industry accounts for 7% of value added in manufacturing, the sharp rise in output (+6.4% in Q4) significantly supported manufacturing production as a whole. ●

►2. In Q4 2022, output declined in the energy-intensive industrial branches

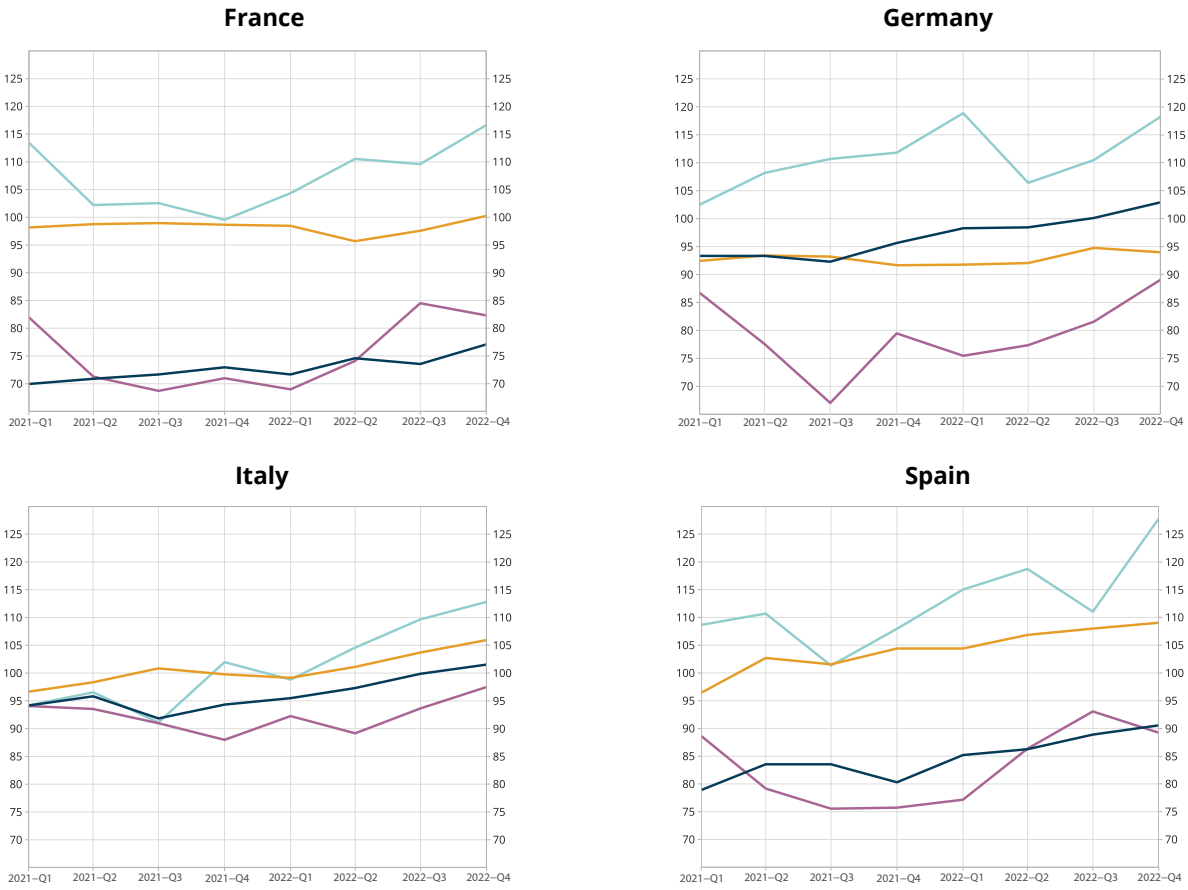
(industrial production index as quarterly average, base 100 in 2019)



Last point: Q4 2022.
How to read it: in Q4 2022, in Italy, output in metallurgy was 11.0% below its 2019 average (data adjusted for seasonal variations and working days).
Source: Insee, Destatis, Istat, INE.

►3. In Q4 2022, German and Italian automobile output increased, benefitting from potential catch-up effects

(industrial production index as quarterly average, base 100 in 2019)



Last point: Q4 2022.
How to read it: in Q4 2022, in Italy, output in the automobile industry was 2.5% below its 2019 average (data adjusted for seasonal variations and working days).
Source: INSEE, Destatis, Istat, INE.

United Kingdom

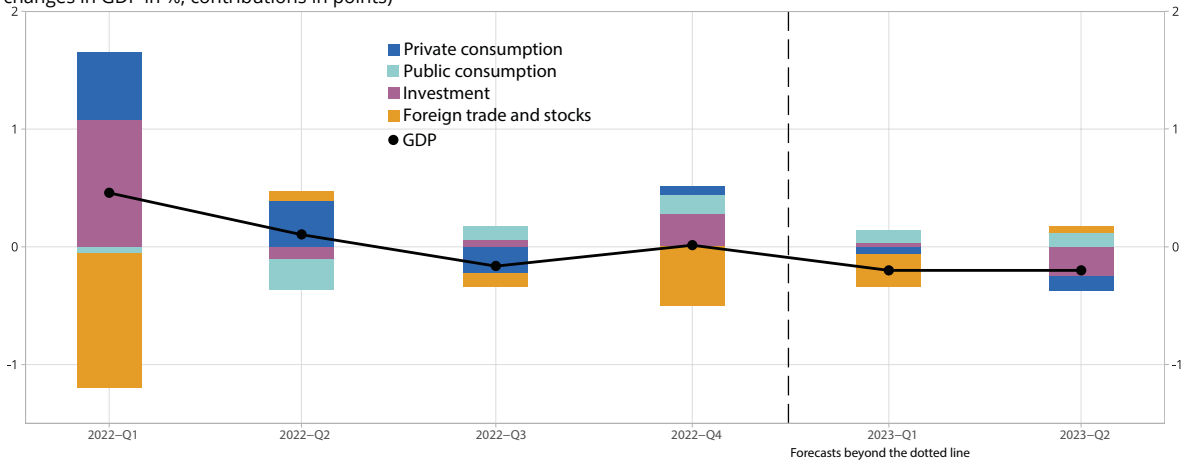
Since the start of 2022, the UK economy has been sluggish, in a deteriorating economic context and against a background of political and social tensions. In Q4 2022, affected by some major strikes in December, GDP remained stable (+0.0%, after -0.2% in Q3, ►**Figure 1**). Annual growth was 4.0% in 2022, driven mainly by the rebound in activity during 2021 as the country came out of the health crisis.

Consumption continued to be penalised in Q4 2022 (+0.1% after -0.4%) due to the continuing erosion of households' real income in a context of high inflation. Nevertheless, domestic demand was sustained at the end of the year by relatively dynamic investment (+1.5%) although with contrasting trends. Household investment (-4.3%, ►**Figure 2**) appeared to be particularly affected by the loss of purchasing power and by the Bank of England's monetary tightening policy. On the other hand, corporate investment rebounded (+4.8% after -3.2%), although returning only to its pre-health crisis level despite fiscal support (Super-deduction scheme) set up after Brexit. Foreign trade, however, which has shown a great deal of movement over several quarters, had a considerable effect on activity: imports rebounded (+1.5%, driven by imports of industrial and transport equipment, linked to strong corporate investment) while exports fell back (-1.0%), mainly in services.

At the beginning of 2023, inflation was still high (+10.1% year-on-year in January), despite falling back since October 2022, mainly due to the decline in world energy prices. However, in H1 2023, there are some factors that are likely to keep prices high. The support programme that the government put in place to cap household energy bills is to be revised downwards in April, while the labour market, which has been tense since the health crisis (unemployment at 3.7% in December with still more than a million vacant jobs), is likely to continue to promote wage growth. Wages are still less dynamic than consumer prices, however –wage increases were +5.9% including bonuses year-on-year in December– and purchasing power could therefore continue to decline in H1 2023.

In this context, activity is expected to fall back throughout H1 2023 (-0.2% per quarter). This recession would be due mainly to the decline in domestic demand: inflation is likely to weigh heavily on household consumption and residential investment is also expected to continue its decline as a result of the continuing rise in interest rates. Corporate investment, on the other hand, is expected to improve in Q1 before falling back in Q2, as the Super-deduction scheme comes to an end in April. In a context where world trade lacks vigour, exports are likely to remain weak, while imports look set to edge down in the wake of domestic demand. ●

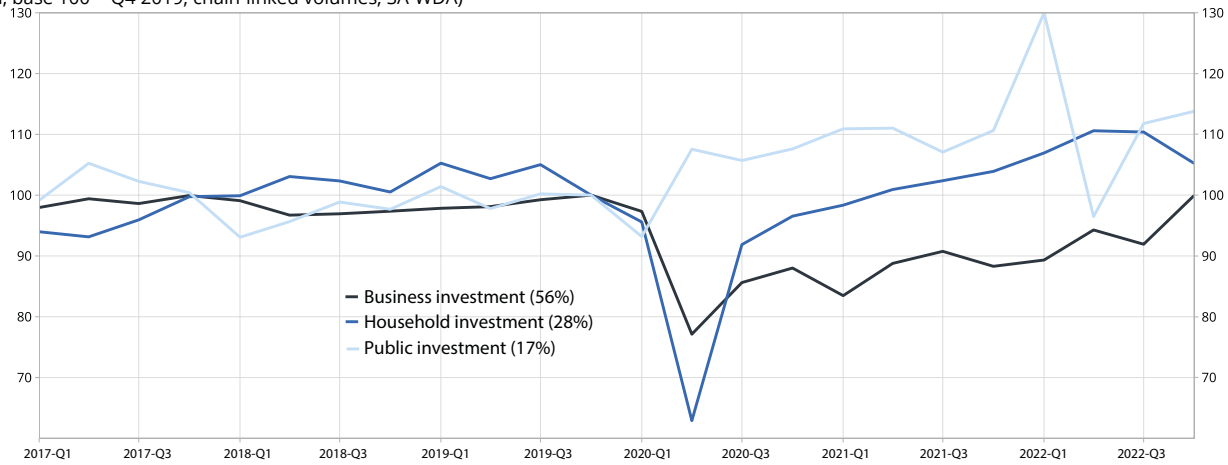
►1. Domestic demand is expected to hamper activity in H1 2023
(quarterly changes in GDP in %, contributions in points)



How to read it: in Q3 2022, GDP fell by 0.2% and private consumption contributed -0.2 points to this decline.
Source: ONS, INSEE calculations.

►2. Household and corporate investment evolved in contrasting ways at the end of 2022

(in level, base 100 = Q4 2019; chain-linked volumes, SA-WDA)



Last point: Q4 2022.
Source: ONS, INSEE calculations.

United States

In H2 2022, the United States economy grew at a vigorous pace, bringing annual growth to 2.1%, however, signs of a slowdown gradually emerged towards the end of the year. In Q4 2022, GDP growth stood at 0.7%, scarcely less than the rebound in Q3 (+0.8%), but was accompanied by a slowdown in household consumption and a weak contribution from foreign trade, resulting in a markedly positive contribution from inventory changes (►**Figure 1**).

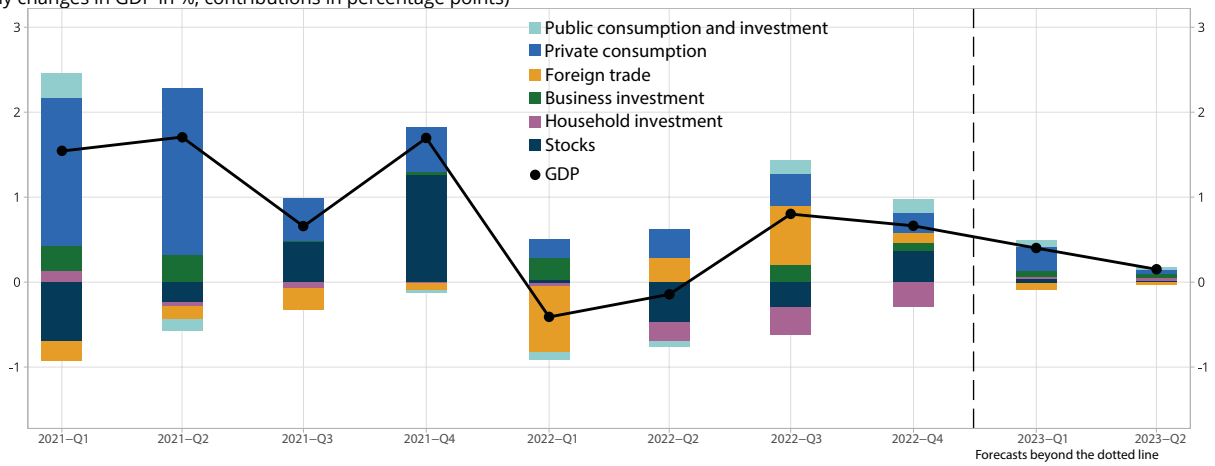
Household demand was certainly affected by inflation, which remains high, and by the ongoing monetary tightening. On the one hand, consumption declined in November and December, penalised by the consumption of goods, while consumption of services gradually lost its momentum in the course of 2022 (►**Figure 2**). On the other hand, residential investment again fell back sharply in Q4 (-7.2%, after -7.6% in Q3), against a background of rising interest rates.

In H2, public consumption and investment (+0.9% in Q3 and Q4) were driven by economic policy measures, such as the *Chips and Science Act and the Inflation Reduction Act*, intended in particular to strengthen the competitiveness of US industry and encourage investment in energy, especially non-fossil energy. Also benefitting from public support (including *the Infrastructure Investment and Jobs Act* of November 2021) and despite the rising cost of borrowing, corporate investment grew at the end of the year (+0.8% in Q4), driven by investments in infrastructure (+2.1%).

The Federal Reserve's monetary tightening now seems to be entering a slowdown phase (up 25 basis points in February 2023, against 50 or 75 in 2022), which could ease the effect of the rise in the cost of credit. However, inflation remains high (+6.4% year-on-year in January 2023), and especially its component excluding energy and food (+5.6%). The fall in inflation since September 2022 can be explained by "base effects": prices continue to rise month on month, but less quickly than a year earlier.

In the same way, despite the scale of monetary tightening, the labour market remains dynamic, with 504,000 and 311,000 job creations in January and February 2023 respectively. The high number of resignations and hirings contributed to the dynamism of wages, benefitting employees changing jobs, even more so than before the health crisis (►**Figure 3 left**). These wage increases have led to a reduction in wage differentials, with more substantial improvements for the low-paid (►**Figure 3 right**). This increase in wages should continue for the next few months, and be added to the annual cost-of-living adjustments in January (up +8.7%). Purchasing power is then expected to continue to rise at the beginning of 2023.

►1. In H1 2023, the United States economy is expected to slow but should not fall back
(quarterly changes in GDP in %, contributions in percentage points)



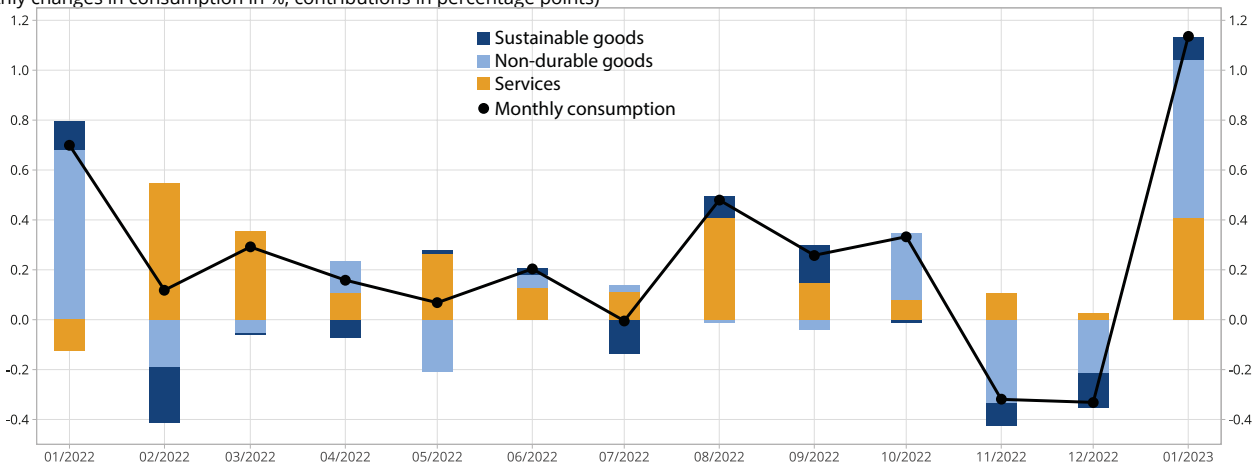
How to read it: in Q4 2022, GDP increased by 0.7% and private consumption contributed +0.2 points to this shift.
Source: Bureau of Economic Analysis.

In January, in the wake of the increase in their purchasing power, domestic household demand bounced back, both in terms of private consumption (►Figure 2) and in sales of new houses (+7.2%), but this effect is likely to peter out over the half-year, or could even be followed by a backlash.

In this context, US domestic demand is expected to slow in the course of H1 2023, in line with the less dynamic household consumption. Exports are likely to stabilise, especially exports of energy products, which had driven GDP growth after the start of the war in Ukraine; meanwhile, imports are expected to follow the trend of domestic demand. As a result, the US GDP looks set to slow in H1 2023, but should not fall back during this period.

►2. US household consumption declined at the end of 2022

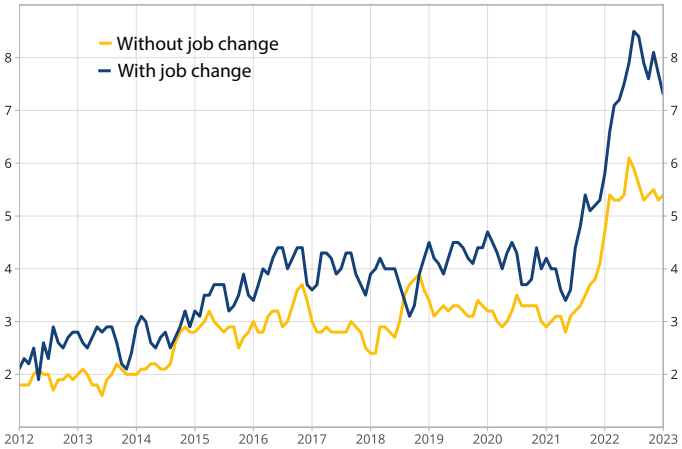
(monthly changes in consumption in %, contributions in percentage points)



How to read it: in December 2022, private consumption declined by 0.3%, and consumption of durable goods contributed -0.2 points to this change.
Source: Bureau of Economic Analysis.

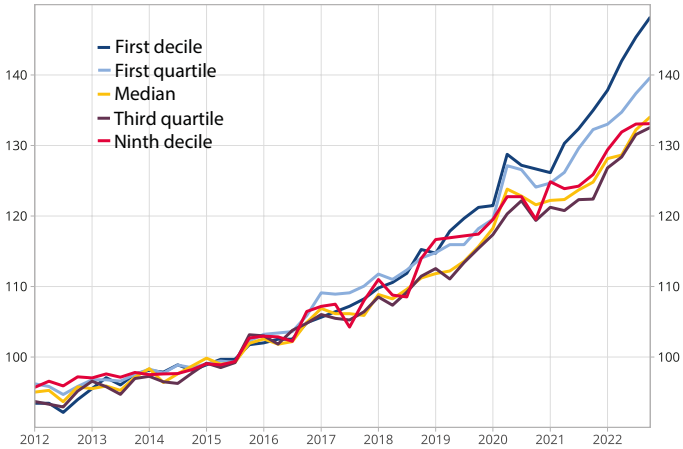
►3. The dynamism of the labour market ensured a greater increase in low wages

(change in hourly wages in %)



Last point: January 2023.
Note: variation in the hourly wage is calculated as the moving average over 3 months of the year-on-year variation in the median hourly wage for the category considered. An individual is considered to have changed jobs if they were in a different occupation or in a different industry a year ago or changed employers or jobs within the last three months.
How to read it: the median hourly wage of a person who changed jobs increased by 7.3% year-on-year.
Source: Federal Reserve Bank of Atlanta.

(weekly earnings in base 100 in 2015)



Last point: Q4 2022.
Note: the first decile defines the limit of the lowest 10% of the usual weekly wage for full-time payroll employees.
How to read it: in Q4 2022, the first decile of the weekly wage was 48% above its 2015 average.
Source: Bureau of Labor Statistics.

China

For China, totally abandoning its "zero-Covid" policy since 7 December 2022 should represent a turning point for the country's economic development. In 2022, economic activity remained strongly correlated to the restrictions imposed by the authorities, especially during the strict lockdowns in spring: GDP fell in Q2 (-2.4%) then rebounded in Q3 (+3.9%). In Q4, it was once again at a standstill (+0.0%) due to new health restrictions put in place at the start of the quarter then the resurgence of the epidemic in December, both of which hampered industrial production (–0.3% in Q4, ►**Figure 1**). Thus at the end of 2022, GDP was 2.9% above its level at the end of 2021, and over the whole of 2022, it improved by 3.0%.

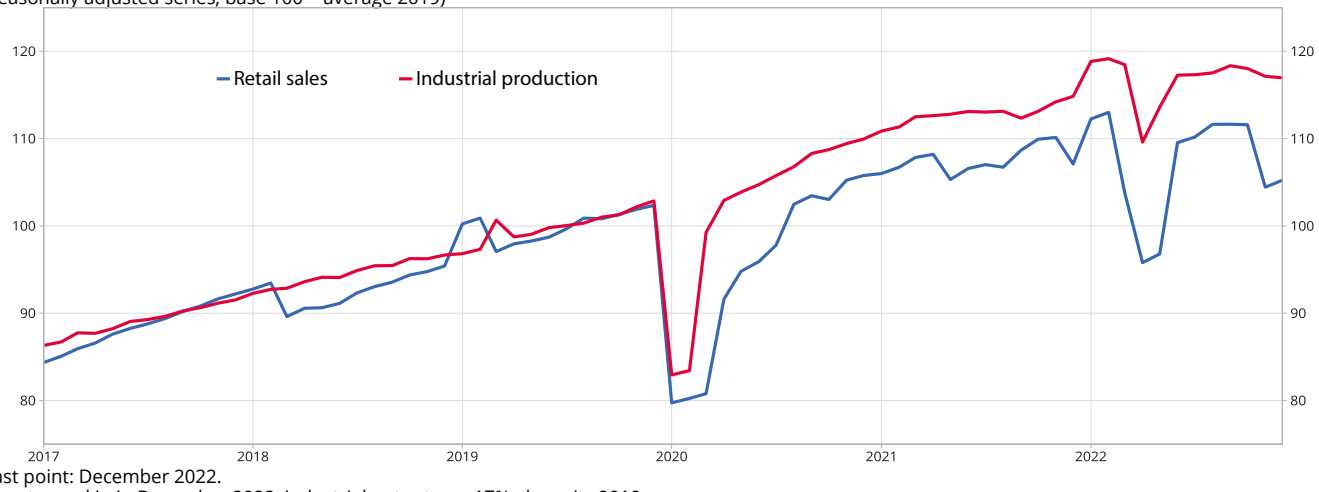
The health restrictions and the high number of contaminations, in a context of deteriorating household confidence (confidence index at 86.9 in Q4 2022 against 120.0 a year earlier), affected private consumption: retail sales fell back 3.7% in Q4 (►**Figure 1**) while consumption contributed only 0.2 points to the year-on-year change in GDP in Q4.

Conversely, investment drove most of the increase in activity over the year (contributing +3.9 points to year-on-year change in GDP in Q4) but with a strong contrast (►**Figure 2**) between the dynamism of public investment, supported by public measures in favour of the policy banks, and the continuous decline in private investment over the past year, especially real estate investment (-10% across the whole of 2022). At the end of the year, despite further announcements by the authorities to revive the real estate sector, the difficulties have continued, as can be seen from the decline in housing starts and real estate transactions in Q4.

The end of the "zero-Covid" policy could pave the way for a recovery in economic activity in H1 2023. Thus the PMI surveys show a rapid improvement in the economic situation from January, and even more so in February, especially in the non-manufacturing sector (►**Figure 3**). The reopening of the economy is expected to favour the recovery of household consumption from Q1 2023, especially consumption of services. The rise in the prices of travel services in January (+11.2% year-on-year) thus reflects the resumption of travel by the Chinese for the New Year holidays, as does the sharp increase in the number of flights, which increased almost four-fold between the beginning of December and the beginning of February. In this context, GDP is likely to increase by about 1% in Q1, before accelerating to +2% in Q2.

At the level of the global economy, the explosion in the number of contaminations in China at the turn of the year caused shortages, especially of drugs, and also gave rise to limited disruptions in value chains. However, the upswing in household consumption and the probable return of Chinese tourists abroad could benefit western economies, especially in the luxury goods sector. Chinese imports are therefore expected to be dynamic in H1 2023, but the acceleration in Chinese activity could also give rise to new inflationary tensions globally, especially in the energy markets. ●

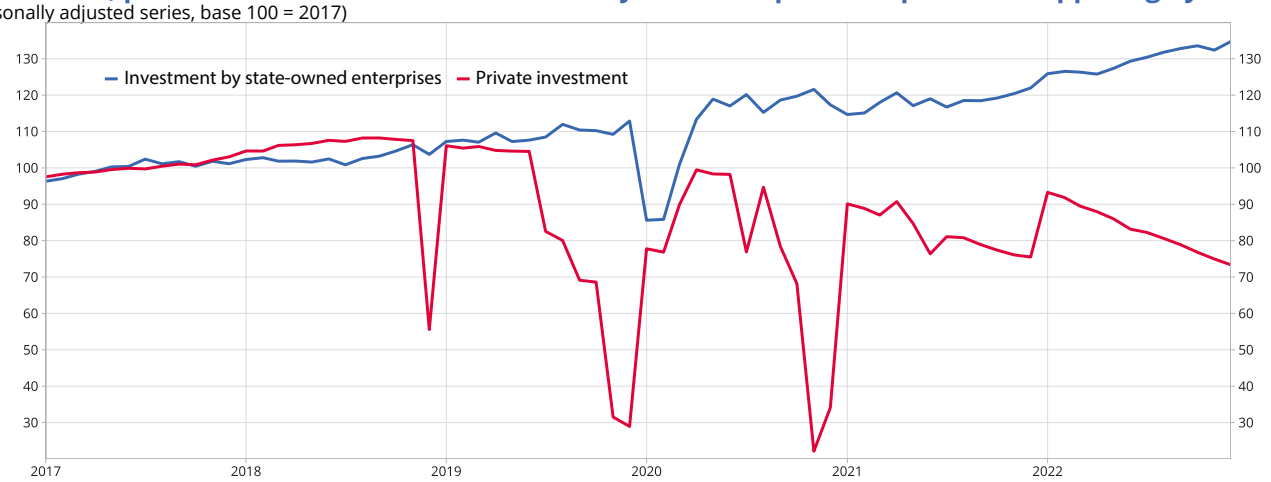
►1. At the end of 2022, retail sales fell sharply again
(seasonally adjusted series, base 100 = average 2019)



Last point: December 2022.
How to read it: in December 2022, industrial output was 17% above its 2019 average.
Source: NBSC, INSEE calculations.

►2. In 2022, private investment and investment by State companies experienced opposing dynamics

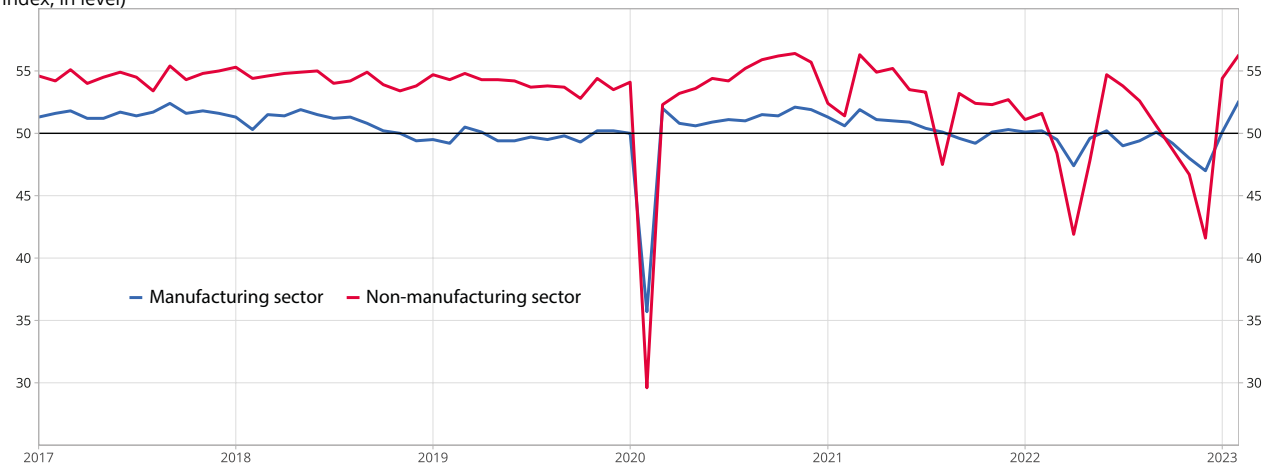
(seasonally adjusted series, base 100 = 2017)



Last point: December 2022.
Note: for investment by State companies, the year to date series, available up to 2017, was extended using the year-on-year series that is still published. As for the private investment series, we can construct a series of monthly differences, which is then seasonally adjusted using the X13-ARIMA-SEATS method, taking the Chinese New Year into account.
How to read it: in December 2022, private investment was 73% of its 2017 average.
Source: NBSC, INSEE calculations.

►3. The lifting of health restrictions is expected to lead to an upswing in activity at the beginning of 2023

(PMI index, in level)



Last point: February 2023.
Note: a PMI of 50 reflects an unchanged economic situation compared to the previous period. An index higher than 50 indicates an economic expansion compared to the last month, and an index below 50 indicates a contraction.
How to read it: in February 2023, the PMI for the non-manufacturing sector was at 56.3, above the expansion threshold of 50.
Source: NBSC.