



French households and inflation in 2022

Inflation expectations that are stable and close to 2% help the central bank to achieve its price stability objective. In light of the recent acceleration in price rises, the Banque de France and the polling institute CSA questioned French households in May-June 2022 on the main economic challenges they face, their inflation perceptions and the role of monetary policy. Purchasing power and inflation were the leading concerns for 60% of households, while 82% said that monetary policy affects their purchasing power. When questioned on perceived and expected inflation, households' responses varied markedly. The answers depended notably on the respondents' age, gender or educational attainment, but also on their daily experience as a consumer. This underscores the importance of communicating clearly and firmly on the global economic situation.

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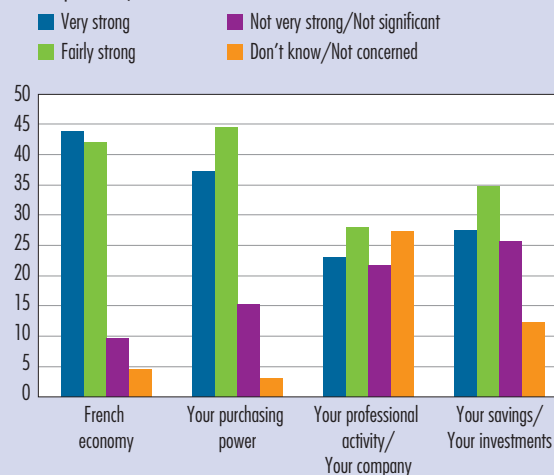
60%
share of French households citing purchasing power or inflation as one of the two main current economic challenges

40%
share of households who perceived inflation as being equal to or above 10% (at a time when actual inflation in France was just over 5%)

82%
share of French households who said monetary policy has a strong effect on their purchasing power

Households' opinion on the effect of monetary policy on the overall economy, their purchasing power, their professional activity, their savings

(% of responses)



Source: Banque de France/CSA survey, May-June 2022.



Consumer price inflation has been elevated since the end of 2021, reaching 6.2% in France in October 2022 according to the Consumer Price Index (CPI) compiled by INSEE.¹ This is the highest inflation rate seen since the 1980s, when inflation was running at above 7% in annual average terms. Over the first 20 years of the euro's existence, consumer price inflation was kept at an average rate of 1.4%. The current high rate poses a major challenge for French households in their daily lives. It is also a priority for the Banque de France and European Central Bank (ECB), whose mandate is to keep prices stable over the medium term.

One prerequisite for price stability is that prices and wages set today do not incorporate expectations of future strong price growth. If this were to occur, price rises could become self-sustaining, triggering an inflationary spiral. This would cause economic agents to alter their economic decisions, especially regarding wages, employment, investment and consumption (Weber et al. 2022). It is therefore crucial for the Banque de France and ECB to understand how economic agents form their inflation expectations.

This article is based on the results of a survey conducted by the polling institute CSA at the Banque de France's behest, and covering 5,054 French residents aged 18 and over. The households were questioned between 28 April and 11 June 2022,² in other words two months after the outbreak of the war in Ukraine and the subsequent jump in inflation. Inflation was running at 3.6% in February 2022, but then rose to 5.2% in May and 5.8% in June, which is close to the October 2022 level. Our main findings are as follows:

- 60% of French residents surveyed consider that inflation and purchasing power are currently the main economic challenges.

- 82% of households think that monetary policy has a strong or fairly strong impact on their purchasing power.
- Household inflation expectations are linked to their perception of the level of inflation over the past year.
- Perceived levels of inflation differ from one household to another. These differences can in part be explained by the characteristics of the person surveyed, such as gender, age or educational attainment. They also depend on the frequency of certain purchases and on the change in those prices to which respondents are most exposed.

1 Purchasing power and inflation are French households' leading concerns in 2022

60% of households cited purchasing power or inflation as one of the main economic challenges

In 2022's economic environment, the issue of purchasing power is closely linked to changes in consumer prices. In response to the question "In the current environment, which two economic challenges need to be tackled as a priority?", 60% of households cited at least one of either inflation or purchasing power, far more than the share who mentioned unemployment, inequality or the rise in debts (see Chart 1).³ A broad range of profiles cited inflation or purchasing power as a principal challenge. However, a statistical analysis shows that these issues were more often cited by men and the over-35s, and less often by those in the higher socioprofessional categories and those with a Bac+3 or Bac+5-level diploma. The region of residence or level of income did not appear to have any specific effect.

1 In the euro area, the change in prices is measured using the Harmonised Index of Consumer Prices (HICP). The scope and method of calculation of the HICP are identical in all euro area countries which makes price changes more comparable. Inflation as measured by the HICP is used to define Eurosystem monetary strategy. In October 2022, HICP inflation was 7.1% in France.

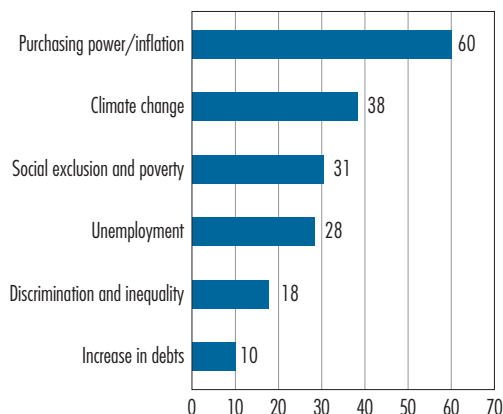
2 The survey participants were selected using the quota method (region, gender, profession and sociodemographic category, town size) to create a representative panel. Individuals were surveyed by telephone and asked some 15 quantitative and qualitative questions.

3 The Eurobarometer survey published at the end of August 2022 found the same proportion of French people (60%) who thought that "inflation, rising prices, cost of living" were "the main concerns facing their country at the moment" (European Commission, 2022).



C1 In your opinion, what are the two main economic challenges?

(% of responses per economic challenge in 2022)

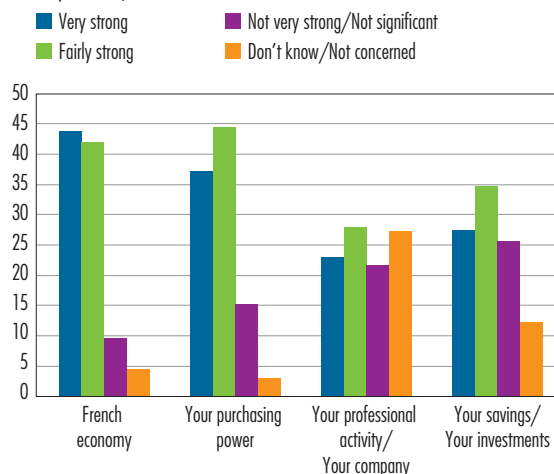


Source: Banque de France-CSA survey, May-June 2022.

Note: Percentages are calculated separately per topic and show the share of households who cited that topic in response to the question “Which two economic challenges need to be tackled as a priority?”.

C2 Households’ opinion of the impact of monetary policy on...

(% of responses)



Source: Banque de France-CSA survey, May-June 2022.

Note: The chart shows the share of households that chose each option (“Not very strong” and “Not significant” have been grouped together) for each variable.

For 82% of households, monetary policy has an impact on their purchasing power

French people clearly identified monetary policy as having an effect on the economy and on purchasing power. In response to the question “Does monetary policy have a strong, fairly strong, not very strong or not significant effect on the economy?”, 86% said it had a strong or fairly strong effect (see Chart 2). Moreover, 82% said it had a strong or fairly strong effect on their purchasing power. In contrast, fewer respondents said monetary policy had a direct effect on their professional activity or their company (51%), or on their investment or savings decisions (62%).

On average, households that cited inflation and purchasing power as the main challenges also perceived inflation as being 2 to 3 percentage points higher than those who did not mention inflation and purchasing power. In addition, households citing purchasing power as the number one challenge were also more likely to say monetary policy had a very strong effect on their purchasing power: 40%, compared with just under 35% of French people who did not cite purchasing power

as the leading economic challenge. This difference – all other things being equal – cannot be seen in responses regarding the impact of monetary policy on the economy, income, activity, savings or investment. This reinforces the observation that households see the maintenance of purchasing power and low inflation as being associated with central bank action.

2 Nearly all households perceive a general rise in prices

Perceived and expected levels of inflation vary widely across households

96% of households said they had perceived a rise in the general level of prices over the previous 12 months. In comparison, in the same survey conducted in 2021, two-thirds of households said they had felt such a rise, and nearly a quarter felt prices had stayed the same (see Chart 3). According to the European Commission, based on a survey by INSEE, 98% of French households said in May 2022 that prices had risen over the past 12 months, and this proportion has since remained stable.⁴ Whereas actual inflation, as measured by INSEE

⁴ According to another household survey conducted by the ECB (Consumer Expectation Survey – CES), this share is closer to 75%, but has increased over the past year.



using the CPI, was 5.2% in May 2022, the median perceived inflation rate was 7%. In other words, half of French people felt that consumer prices had risen by less than 7% while the other half felt that they had risen by more than 7%. The average perceived inflation rate was over 10%. This positive gap between perceived and actual inflation can be found in all studies based on survey data, regardless of the period or country in which the question is asked (Weber et al., 2022). For example, according to the European Commission survey, the median inflation rate perceived by euro area households was 12.5% in the second quarter of 2022

compared with an actual inflation rate of 8% for the euro area.⁵

In addition, in 2022, more households expected prices to rise over the coming year than in 2021: in 2022, 90% of respondents said they expected prices to increase over the next 12 months, compared with 75% in 2021. The European Commission's survey found similar results: in May and June 2022, 91% of households expected prices to rise over the next 12 months. In 2022, inflation expectations for the next 12 months were high, at an average rate of 8.6% and a median of 5%, but nonetheless below the average and median perceived inflation rates. Similarly, the median expected inflation rate in the euro area (according to the European Commission's survey) was also high, at 10.5%,⁶ but below the median perceived inflation rate.⁷

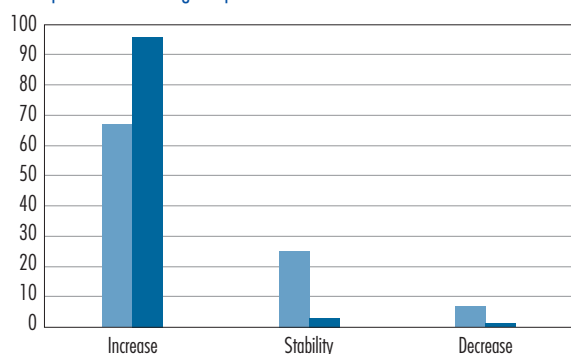
While nearly all households said they had felt the rise in prices, their estimates of current and future price rises were very different (see Chart 4), even though the survey

C3 Perceived and expected inflation: qualitative results

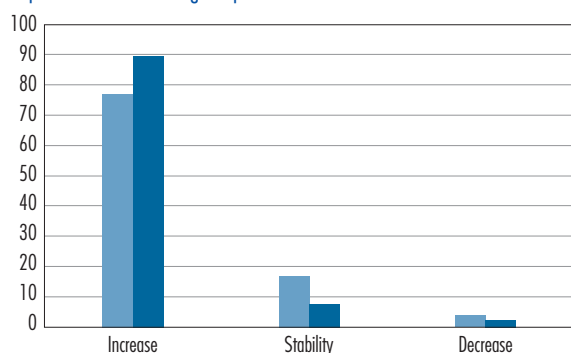
(% of responses)

■ 2021 ■ 2022

a) Perception of the change in prices



b) Expectation of the change in prices



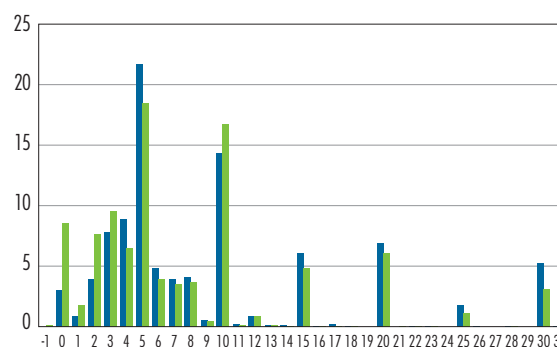
Source: Banque de France-CSA survey, May-June 2022.

Note: The chart shows the share of households who said prices had risen, remained stable or decreased over the past 12 months (perception) or would rise over the next 12 months (expectation).

C4 Distribution of French households' responses on perceived and expected inflation

(x-axis: inflation rate as a%; y-axis: % of responses)

■ Perception ■ Expectation



Source: Banque de France-CSA survey, May-June 2022.

Note: The chart shows the distribution of responses to the question "In your opinion, by how much, in percentage terms, have prices risen over the last 12 months? Will increase over next 12 months?" Actual inflation, as measured by INSEE, was 5.2% in May and 5.8% in June 2022.

⁵ The European Commission does not publish the figure for France. However, based on the responses to this survey for France, Gautier and Montornès (2022) show that the average inflation perception was 10% in December 2021, while actual inflation was 3.4%, which is similar to the gap found by the survey.

⁶ Using French data from this survey, Gautier and Montornès (2022) find that the average one-year ahead inflation expectation was 7.9% in December 2021, just before the upswing in inflation caused by the war in Ukraine.

⁷ According to the ECB survey, average expected inflation was lower at 4.4% for France and 6.5% for the euro area. However, in this survey more than one in four households expected prices to stay the same and thus zero inflation over the coming year, which explains part of the difference vis-à-vis our survey.



was conducted over several weeks. While the median rate was 7%, a quarter of French people thought that inflation was below 5%, and one person in six thought it was greater than or equal to 20%. The dispersion of responses was similar for expected inflation. Again, this high dispersion is observed in all household surveys. One explanation for this is the high share of respondents giving a multiple of 5% as an answer. In the 2022 survey, 60% of responses on perceived inflation and 54% of responses on expected inflation⁸ were a multiple of 5%. This rounding off is often interpreted as a sign of uncertainty on the part of households regarding the inflation level (Binder, 2017; Reiche and Meyler, 2022).

One-year ahead inflation expectations depend largely on the perceived level of inflation in 2022

Inflation is a core concern for households, and coverage of the issue has increased sharply in the media or on social networks (see, for example, Korenok et al., 2022). However, the observed differences in household one-year ahead inflation expectations suggest there is significant “disagreement” over future price rises. That said, there is a very strong correlation between households’ inflation

expectations for the next 12 months and their perception of inflation (see Chart 5). This suggests that households form their one-year ahead inflation expectations based largely on how they perceive price rises today. This finding was first documented for Swedish households (Jonung, 1981) and is confirmed by the majority of household surveys.

Inflation perceptions depend on the characteristics of the surveyed households

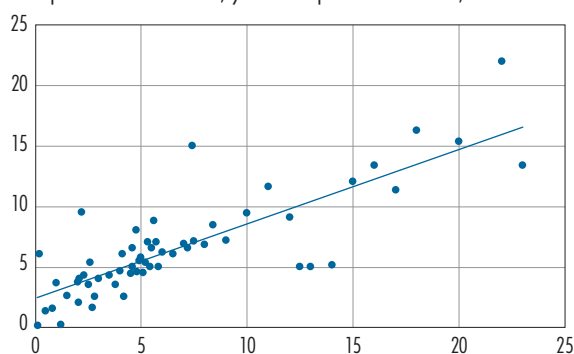
How can we explain the differences in household perceptions? The divergences may stem from factors linked to personal experience, which we capture here using survey data broken down by gender, educational attainment, income level, age and socioprofessional category. The table in Appendix 1 describes the methodology used to analyse the contributions of these different factors.

First, women have a higher perception of inflation: on average, their inflation perception is nearly 2 percentage points higher than that of men; the gap between inflation expectations is smaller at around 1 percentage point, but remains significant. This result has already been found in numerous countries and was first observed in Sweden by Jonung (1981). D’Acunto et al. (2020) document a similar result in the United States, and show that when the gender of the person responsible for grocery shopping is taken into account, the difference in perceptions becomes non-significant.

Age also plays a significant role in explaining differences in perceived inflation. Younger respondents have a higher perception of inflation than older people. The average gap between the responses of the under-25s and those of the over-50s is around 6 percentage points for perceptions and 2-3 percentage points for expectations. One possible interpretation of these findings is that inflation perceptions depend on how much experience one has of living in periods of high and low inflation (Malmendier and Nagel, 2016).

C5 Correlation between perceived and expected inflation

(x-axis: perceived inflation; y-axis: expected inflation; values as a %)



Source: Banque de France-CSA survey, May-June 2022.

Note: The chart shows the correlation between households’ responses on inflation over the past 12 months and inflation over the next 12 months. Negative responses have been excluded. Each point groups together similar responses on perceived and expected inflation.

⁸ If we exclude the answer “5%” which is close to the current rate of inflation, the share of answers that were multiples of 5% (i.e. the responses 10%, 15% 20% 25%, etc.) was 42% for perceived inflation and 36% for expected inflation. Responses that were multiples of 5% were more frequently given by women and the under-50s, and less frequently by those with both a Bac+3 or Bac+5-level diploma and a monthly income of over EUR 2,000.



Educational attainment also plays a significant role in explaining differences in perceived inflation. Respondents with a Bac+3 or Bac+5-level diploma perceive inflation to be around 5 percentage points lower than those with no diploma. On average, respondents with a middle school diploma or baccalaureate perceive inflation to be 2 percentage points lower than those with no diploma.

Respondents with higher levels of income also have lower inflation perceptions on average. Households with monthly income of over EUR 4,000 perceive inflation to be 2 percentage points lower than those with income of less than EUR 2,000. Socioprofessional category is less important in determining the gaps, although professional and higher categories, students and farmers have a lower perception of inflation on average than the rest of the population.

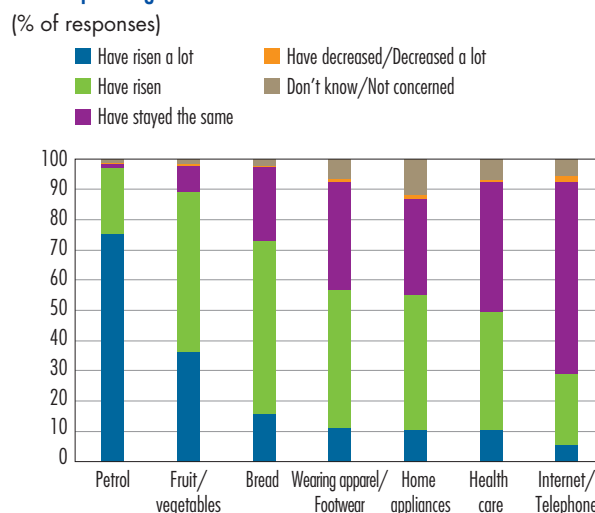
3 Everyday purchases influence inflation perceptions

Socioeconomic factors only explain part of the difference in perceptions. Another important factor is the day-to-day shopping experience. The survey sheds light on the role of three factors. First, households may have different perceptions of the change in the price of everyday goods. Second, their inflation perceptions may be affected by the perceived change in the price of certain everyday goods. Third, inflation perceptions may be affected by how often households purchase goods whose prices are rising.

Households perceive the differences in price changes across goods

When questioned in the survey on the perceived price rise for individual goods, households noted significant differences across items which were in line with the actual price changes measured by INSEE. Three-quarters of respondents said they thought petrol prices had risen sharply (see Chart 6). According to INSEE, petrol is the item that has risen most year-on-year (rise of around 40% in June 2022). Next, 90% of households said they thought fruit and vegetable prices had risen, and 72% thought the same for bread. According to INSEE, food inflation stood at 6.4% in June 2022. For wearing apparel, healthcare products and services, and the

C6 Opinion of French households on changes in the prices of specific goods



Source: Banque de France-CSA survey, May-June 2022.

Note: The chart shows, for each good, the share of households who thought that prices of that specific good had risen a lot, risen, stayed the same, decreased or decreased a lot, or said they did not know or were not concerned.

internet, a much smaller share of households thought prices had risen, which is in line with INSEE's actual inflation measure for these products of between -0.5% and 1%.

However, for certain goods, perceptions are skewed due to variations in attention levels. If, for example, a consumer does not purchase a good very often, they may find it difficult to estimate how its price has changed. Home appliances are an illustration of this: nearly 12% of households surveyed gave no reply on the past price change for this product category, while only 1-2% gave no response for petrol or food. Among those who did reply, perceptions for home appliances were similar to those for wearing apparel: half of households said prices for both categories had risen. Yet INSEE's measures of actual inflation for these products were very different at the time of the survey: 5% for home appliances and 0.5% for wearing apparel. Thus, households appeared to have a very similar perception of two very different inflation rates as measured by INSEE. Households probably find it more difficult to estimate price rises for home appliances as they do not purchase them very often. Conversely, they may overestimate price rises for goods that they purchase very often (Cavallo et al., 2017).



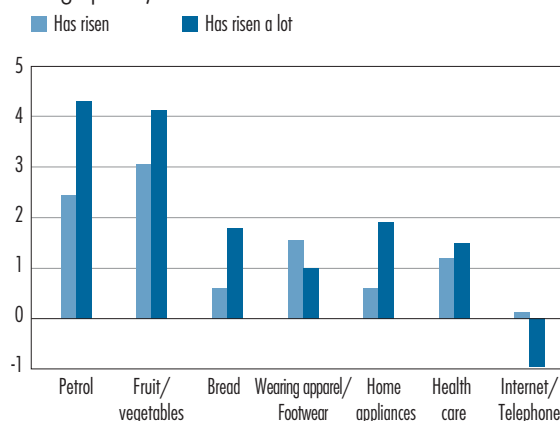
The perception of a higher rise in petrol prices is linked to a higher perception of inflation

Households have different perceptions of the price rise for certain products. Do these differences influence their opinion of the general level of inflation perceived in the economy? To test this hypothesis, we estimate a regression that links household inflation perceptions for the entire economy to their qualitative responses on the perceived price change for specific goods (taking into account sociodemographic factors, as in Appendix 1). Chart 7 presents the results.

For all products except internet/telephone services, the perceived level of headline inflation was higher when respondents had observed a high price rise for that particular product. When households said prices had risen a lot for a given product, their perception of headline inflation was, on average, between 1 and 4 percentage points higher than that of households who said individual prices had stagnated or decreased. The impact was stronger for petrol and fruit and vegetables than for wearing apparel/footwear, home appliances or health care.

C7 Impact of the perceived change in the price of individual goods on perceived inflation

(percentage points)



Source: Banque de France-CSA survey, May-June 2022.

Note: The chart shows, for each good, the results of a regression linking households' perception of aggregated inflation to their perception of the change in the price of a specific good (controlling for observed sociodemographic variables). The results shown are relative to the rate of inflation perceived by households who replied that "prices have stayed the same" or "have decreased" for each specific good.

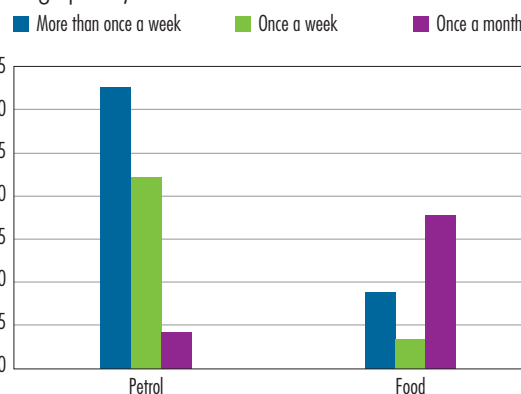
This suggests that households form their opinion of inflation in the economy by extrapolating the price changes they observe day to day. This mechanism was first proposed by Lucas (1972), then D'Acunto et al. (2021) showed that it plays a role in household inflation expectations in the United States. The extrapolation of local price signals to headline inflation is not specific to households; Andrade et al. (2020) show that business managers use shocks that are specific to their sector to form expectations for the entire economy.

The frequency of purchases plays a role in perceived inflation

The frequency with which individuals are exposed to price changes can also play a significant role in determining their inflation perceptions or expectations. The purchase experience allows shoppers to obtain information on how prices are changing in the economy: households that are exposed to frequent price rise signals tend to have higher inflation perceptions. To test this hypothesis, the survey asked households how often they purchased food or petrol. We then used this information in a statistical analysis, similar to that in the previous section. Chart 8 presents the results.

C8 Impact of purchase frequency on perceived inflation

(percentage points)



Source: Banque de France-CSA survey, May-June 2022.

Note: The chart shows the results of a regression linking households' perception of aggregated inflation to how frequently they purchase a particular good (controlling for sociodemographic variables). The results shown are relative to the rate of inflation perceived by households who said they never, or almost never, purchased that good.



The frequency with which respondents purchased petrol had a very strong impact on their inflation perceptions: the headline inflation perception of those who bought petrol more than once a week was 3 percentage points higher than that of respondents who never, or almost never, purchased petrol. This result suggests households that are more often exposed to rises in petrol prices (which are modified frequently to reflect oil prices – Gautier et al. 2021) have higher inflation perceptions. The frequency of food purchases has a more moderate effect.

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The central bank's mandate is to guarantee price stability over the medium term. Inflation expectations that are stable and close to the chosen inflation target (2% for the entire euro area) help to achieve this objective. It is therefore crucial that central banks understand how households form their inflation expectations. The survey shows that households identify the direct impact of monetary policy on their purchasing power, and that the latter is their No. 1 economic challenge for 2022.

The survey also provides several important findings on the formation of household expectations.

First, opinions on future inflation vary widely from one household to the next. Second, these differences in expected inflation primarily reflect differences in perceptions of current inflation. Last, this variation in inflation perceptions can be explained by differences in life or purchase experiences. By deduction, it therefore appears that when households disagree on expected levels of inflation, it is not so much because they envisage different macroeconomic scenarios for the future, but rather because they have different perceptions of the current state of the economy. This result justifies the pursuit by central banks of a clear and firm communication strategy on the economic situation, to supplement information linked to personal experience. In addition, better identifying the factors affecting price expectations and hence households' economic decisions would provide insight into how monetary policy is transmitted to the economy.



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Appendix

Analysis of the sociodemographic characteristics of inflation perceptions and expectations

In order to measure the influence of sociodemographic factors on households' inflation perceptions and expectations, we used an ordinary least squares regression linking inflation perceptions (column 1) and expectations (column 2) to their observed sociodemographic characteristics, such as gender, educational attainment or income, and age. We also included a socioprofessional category variable and a variable for the household's region of residence. The results

obtained for these latter variables are not shown in the table. Our estimations give a reading on the effect of each variable, all other things being equal. The variables are included in the form of qualitative variables; the results are given as differences relative to a reference value (Ref.). For example, all other things being equal, the level of inflation perceived by women is, on average, 1.8 percentage points higher than the average perceived by men.

Determinants of perceived and expected inflation

(percentage points)

		Perceived inflation	Expected inflation
Gender	Male	Ref.	Ref.
	Female	1.80*** (0.40)	1.04*** (0.33)
Age	Under 25	Ref.	Ref.
	25-34	-2.02* (1.07)	-0.06 (0.89)
	35-49	-2.91*** (1.08)	-0.87 (0.89)
	50-64	-5.69*** (1.05)	-2.32*** (0.86)
	65 and over	-6.72*** (1.21)	-3.71*** (0.97)
Diploma	No diploma	Ref.	Ref.
	Middle-school diploma (<i>brevet</i>), vocational/technical qualification (CEP, CAP, BEP, etc.)	-1.90* (1.07)	-0.74 (0.79)
	Baccalaureate (general, scientific or professional)	-2.17* (1.15)	-1.10 (0.82)
	Bac+2	-3.31*** (1.23)	-1.57* (0.85)
	Bac+3/Bac+5	-4.85*** (1.21)	-2.54*** (0.81)
Monthly income	Under EUR 2,000	Ref.	Ref.
	Between EUR 2,000 and EUR 4,000	-1.22*** (0.46)	-0.63* (0.38)
	Over EUR 4,000	-2.18*** (0.69)	-1.83*** (0.53)
Constant		17.41*** (1.71)	10.60*** (1.25)
Number of observations		4,381	4,349

Source: Authors, using data from the Banque de France-CSA survey, May-June 2022.

Note: The table shows the results of a weighted ordinary least squares (OLS) regression that also includes a variable for socioprofessional category and a variable for the household's region of residence; the results linked to these variables are not shown.

The figures in brackets are the standard deviations of the estimated parameters.

* The parameter is statistically significant at 10%; ** at 5%; *** at 1%.

No asterisk means the parameter is not statistically different from zero.



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