Staff memo

The role of inflation expectations in price settings:
the Norwegian experience

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Ingvild Hagen Lindalen
Kristin Mjølnerød

The role of inflation expectations in price setting: the Norwegian experience

Ingvild Hagen Lindalen[*]   and   Kristin Mjølnerød[†]

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Abstract

This memo examines the role of inflation expectations in Norwegian price setting, with particular focus on developments following the inflation surge from 2022 to 2023. Using quarterly survey data from Norges Bank's Expectations Survey, together with macroeconomic control variables, we estimate an expectation-augmented Phillips-curve model. As firms are price setters, the analysis places particular emphasis on inflation expectations reported by business leaders. The analysis shows that business leaders' inflation expectations have a positive and statistically significant relationship with domestic inflation, also when using different measures of inflation. We further assess the forecasting performance of expectations from different respondent groups and find that expectations from business leaders and professional economists improve short-term inflation forecasts, especially after 2020, when inflation and expectation volatility increased. The findings indicate that the informational value gained from expectations is regime-dependent and becomes particularly significant during periods of high inflation or heightened uncertainty. Overall, the findings highlight the relevance of survey-based expectations as a complement to traditional macroeconomic indicators in analysing and forecasting inflation in Norway.

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[*]Email: ingvild.hagen.lindalen@norges-bank.no
[†]Email: kristin.mjolnerod@norges-bank.no

1 Introduction

Over the past two decades, short term inflation expectations across different groups in the Norwegian economy have remained close to the inflation target. Historically, these expectations have shown limited co-movement with short-run fluctuations in actual CPI inflation, reinforcing the view that expectations have been well anchored (Erlandsen and Ulvedal, 2017). In contrast, however, during the inflation surge in 2022 and 2023, expectations increased significantly alongside the rise in CPI inflation, and have since remained elevated for several groups, as shown in Figure 1.

Theoretical and empirical work suggests that expected inflation plays a central role in firms' pricing decisions, as forward-looking behaviour is a key feature of standard models of price setting. Recent firm-level evidence shows that inflation expectations matter for firms' wage and price-setting decisions, but primarily short-term expectations (Gautier et al., 2025). This motivates an empirical examination of whether Norwegian firms' inflation expectations are reflected in observed domestic price dynamics, and whether expected inflation helps explain current inflation within a Phillips-curve framework.

A second motivation relates to the forecasting properties of inflation expectations. International studies show that survey-based expectations often outperform both macroeconomic indicators and financial variables in predicting inflation (Ang et al., 2007). We therefore assess whether survey-based expectations can improve inflation forecasts in the Norwegian context, particularly in light of the long period of stable expectations prior to the recent inflation surge.

The analysis therefore focuses on two questions: whether firms' short term inflation expectations are incorporated into price setting behaviour, and whether these expectations provide predictive information about future inflation beyond that captured by standard macroeconomic indicators.
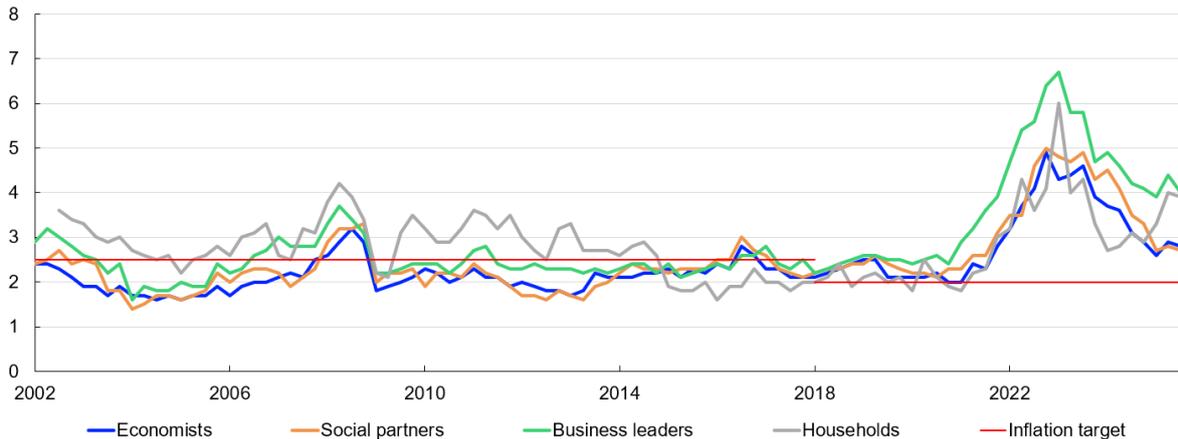

Figure 1: Inflation expecations 12 months ahead (CPI)

2 Data

Our analysis draws on survey-based measures of 12-month-ahead inflation expectations collected by Norges Bank's Expectations Survey, conducted quarterly since 2002. The

survey covers several groups: labour market organisations (including both employer and employee associations), economists in academia and the financial sector, business leaders, and households.[1] These categories provide a broad perspective on expectations formation across institutional participants and individual market participants in the Norwegian economy. The analysis uses survey data available through the third quarter of 2025. For business leaders, economists, and social partners, the survey question is:

For business leaders, economists, and social partners, the survey question is:

- What do you think the general rise in prices for goods and services will be in 12 months, as measured by the 12-month change in the consumer price index (CPI)?

The question is phrased slightly differently for households:

- Do you think that over the next 12 months, prices for goods and services, as measured by the consumer price index (CPI), will be higher, unchanged or lower than they are currently?

- About how much higher/lower, measured in per cent?

For each group, we employ trimmed means, whereby extreme observations are removed prior to aggregation.[2] These measures of inflation expectations serve as explanatory variables in our empirical framework.

The survey design ensures that respondents have not yet observed the actual CPI outcome for the month in which expectations are collected. By structuring the fieldwork to precede the publication of the official CPI release, the survey captures expectations formed independently of the realised inflation. This sequencing provides a contemporaneous measure of inflation expectations that is unaffected by knowledge of the monthly CPI outcome, allowing us to analyse price setting in the same month in which the expectations are collected.

Inflation expectations are observed quarterly but refer to 12-month-ahead CPI inflation. Since the survey is conducted in the middle month of each quarter and prior to the CPI release for that month, we match each observation with monthly inflation and control variables from the survey month. Table 1 provides an overview of the variables included in the analysis.[3]

Table 1: Variables

Variable	Sources
Domestic inflation	Statistics Norway
Unemployment gap	Statistics Norway and Norges Bank
Currency, I-44	Norges Bank
Energy prices in CPI	Statistics Norway
Global food prices	LSEG Datastream

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[1]Further details on the expectations of different respondent groups are provided in (Granziera et al., 2025)

[2]See details on the trimming in the reports from the expectations survey here: https://www.norges-bank.no/aktuelt/publikasjoner/?selectedFacets%5bType%5d=73574

[3]The unemployment gap used by Norges Bank is defined as the deviation in unemployment from the lowest level that is compatible with price stability over time (for further information see Hagelund et al. (2018)).

When assessing the role of expectations in price setting based on survey responses from different segments of the Norwegian economy, it is natural to focus on prices that are determined domestically. We therefore restrict attention to the inflation of domestically produced goods and services, which provides the most direct link between agents' expectations and domestic price formation. Results for alternative inflation measures, including CPI, CPI-ATE and domestic inflation excluding house rents, are reported in the Appendix.

3 Understanding price setting

3.1 Modelling framework

To analyse price setting behaviour, we adopt a Phillips curve framework. The Phillips curve captures the empirical relationship between inflation dynamics and economic activity and cost developments in the presence of nominal rigidities. Originally, Phillips (1958) studied the relationship between unemployment and wage growth in the United Kingdom and documented a negative correlation between the two. Samuelson and Solow (1960) later extended this analysis by reinterpreting the Phillips curve as describing the relationship between inflation and unemployment, presenting it as a policy tool that highlights the trade-off between the two variables. Since then, the Phillips curve has been adapted and extended to accommodate different economic environments, and Phillips curve frameworks have become a standard component of empirical and policy-oriented macroeconomic analysis, widely used in the literature (see, among others, Clarida et al. (1999), Stock and Watson (2006), Coibion and Gorodnichenko (2015) and Coibion and Gorodnichenko (2025)).

A Phillips curve framework is informative about firms' price-setting behaviour as inflation reflects the aggregate outcome of individual pricing decisions in the presence of nominal rigidities. When prices are sticky, firms set prices based on current cost conditions and demand pressures, as well as on expectations about future economic conditions. The Phillips curve relates inflation to measures of marginal costs that proxy these underlying determinants of pricing decisions. This framework provides a natural starting point for analysing the role of inflation expectations in price setting.

To isolate the contribution of inflation expectations, we first specify a standard Phillips curve without expectations as our benchmark model. We then extend this framework to incorporate inflation expectations and assess whether their inclusion improves the explanation of current price-setting behaviour.

Our benchmark model is specified as:

$$\pi_t^{\text{benchmark}} = \beta_\pi \, \pi_{t-m} + \beta_u \, (u_t - u_t^*) + \beta_s \, s_t + \varepsilon_t \tag{1}$$

where π_t denotes 12-month change in domestic inflation, π_{t-m} captures inflation persistence through an AR(4) structure and $(u_t - u_t^*)$ represents the unemployment gap, defined as the deviation between actual unemployment and the lowest unemployment level that is estimated to be consistent with stable inflation at any given time. The vector s_t captures supply-side shocks, including exchange rate movements as well as international food and energy prices, which directly affect firms' production costs and consumer prices. These

variables are included as controls to account for exogenous cost shocks that are not driven by domestic economic slack. During the recent inflation surge, exchange rate developments and international food and energy prices, in particular, were important drivers of inflation in Norway and had substantial pass-through to consumer prices (Norges Bank (2022) and Norges Bank (2024)). Finally, ε_t is an error term, which captures remaining shocks to inflation not explained by the model.

The lagged inflation term is measured as 12-month change. This ensures that the model conditions on realised inflation, up to the latest available CPI reading when expectations are elicited, which limits information overlap between the lag structure and the expectations measure.

To better understand aggregate price setting and the resulting inflation dynamics, we extend the benchmark Phillips curve to include the inflation expectations of business leaders. The recent increase in inflation expectations raises the question of whether these expectations can help explain the observed changes in inflation in recent years, as suggested by Coibion and Gorodnichenko (2025). At the macro level, when firms adjust prices infrequently, expected future inflation influences current pricing decisions and therefore affects overall inflation. This motivates augmenting the benchmark model with a forward-looking expectations term:

$$\pi_t = \beta_\pi \, \pi_{t-m} + \beta_u \, (u_t - u_t^*) + \beta_E \, E_t[\pi_{t+12}] + \beta_s \, s_t + \varepsilon_t \tag{2}$$

where $E_t[\pi_{t+12}]$ denotes survey-based inflation expectations 12 months ahead. In this section, we use expectations reported by business leaders as they directly reflect the pricing considerations of the firms.

Based on these two models, we estimate the relationship between the explanatory variables and domestic inflation over the period 2002 Q1–2025 Q3. The reduced-form models are estimated using ordinary least squares (OLS).

Table 2: Domestic inflation

Dep.variable: $\pi_{12 \ month \ growth}$

	Benchmark	Business leaders
$u_t - u^*$	-0.19**	-0.15**
π_{t-1}	0.59***	0.51***
$E_t[\pi_{t+12}]$		0.13***
Controls	Yes	Yes
Adj. R^2	0.919	0.923
N	94	94

Note: *, **, og *** denotes statistical significance at 10, 5, and 1 percent levels. Controls include currency, food and energy.

In both the benchmark and the expectations-augmented model, the results are consistent with the standard Phillips curve relationship. The unemployment gap has a negative and

statistically significant coefficient, while lagged inflation and the expectations term are positive and significant. Business leaders are price setters, and it is reasonable to assume that their current pricing decisions reflect their expectations of 12-month-ahead inflation. The positive and significant coefficient on $E_t[\pi_{t+12}]$ in Table 2 supports this interpretation, indicating that firms' inflation expectations contribute to explaining pricing decisions at time t. These findings indicate that including inflation expectations enhances the model's ability to account for price setting and short-term inflation developments.

3.2 Alternative price series

As noted in Section 2, the survey asks respondents to report their expectations for the twelve-month change in inflation one year ahead. In this specification, disentangling the effect of inflation expectations from lagged inflation can be challenging. Since both the dependent variable and the lagged inflation term are measured as a 12-month rate, they are mechanically highly correlated. This persistence in year-on-year inflation implies that the lagged term captures much of the variation that might otherwise be attributed to expectations, which makes it harder to identify the independent contribution of expected inflation.

To address this issue, we conduct a robustness check in which both the dependent variable and the lagged terms are replaced with annualised, seasonally adjusted monthly growth rates. Using this alternative specification substantially reduces the correlation between the dependent variable and the lagged terms. The estimation results for this specification are presented in Table 3, allowing for a clearer assessment of the independent role of inflation expectations.

Table 3: Annualized monthly domestic inflation

Dep.variable: $\pi_{Annualized\ monthly\ growth}$

	Benchmark	Business leaders
$u_t - u^*$	-0.98	-0.78
π_{t-1}	-0.22**	-0.36***
$E_t[\pi_{t+12}]$		1.06***
Controls	Yes	Yes
Adj. R^2	0.045	0.099
N	94	94

Note: *, **, og *** denotes statistical significance at 10, 5, and 1 percent levels. Controls include currency, food and energy.

Annualised monthly inflation is highly volatile, and a Phillips curve relationship is not necessarily expected to hold for either the benchmark model or the expectations-augmented model as inflation is less closely linked to economic activity at this frequency. The results in table 3 are therefore notable. Even when using annualised monthly inflation, business leaders' expectations remain positive, statistically significant and robust, and their inclusion yields a relatively large improvement in the model's explanatory power.

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This suggests that despite high-frequency volatility, firms' 12-month-ahead expectations contain meaningful information about current price-setting decisions. In other words, firms appear to set prices today partly based on anticipated inflation over the coming year, consistent with the forward-looking behaviour documented in the literature (e.g., Coibion and Gorodnichenko (2015, 2025)).

While the alternative specification reduces the mechanical correlation between year-on year inflation and its lagged value, it does not eliminate the possibility of simultaneity between inflation and inflation expectations. Firms' expectations may influence current price-setting decisions and thereby contribute to inflation. At the same time, expectations are likely formed and revised in light of observed and anticipated inflation developments. Inflation and expectations may therefore be jointly determined to some extent, with feedback effects potentially operating in both directions. The estimated coefficient on expected inflation should therefore be interpreted with some caution. It captures a robust conditional relationship between expectations and inflation, but does not, in isolation, establish the direction of causality between the two.

4   Forecasting using expectations

Evidence from a simple Phillips curve framework indicates that business leaders' expectations of 12-month-ahead inflation contain information relevant for current price-setting decisions. A natural extension is to examine whether these expectations also carry predictive information for future inflation outcomes. Since respondents report expectations for inflation one year ahead, one might anticipate a stronger correlation with inflation at horizon $t + 12$ than with inflation contemporaneous to the survey date. We therefore extend our analysis to examine whether inflation expectations also provide insights into inflation over the coming year.

When extending the analysis, it is natural to consider whether other respondents in the expectations surveys can help predict future inflation. In addition to business leaders, the survey collects expectations from three other groups: professional economists, social partners and households. Professional economists are generally expected to provide relatively accurate forecasts of future inflation.

At the same time, however, short-term expectations may not always closely track actual inflation as they have been well anchored for many years, potentially limiting their co-movement with realised outcomes. In Figure 2, we plot the expectation series for business leaders, as well as expectations from professional economists, alongside the respondents' expectations of CPI, the inflation measure in the survey. Despite considerable volatility in headline inflation, expectations from both economists and business leaders remained remarkably stable around the inflation target before 2020. Focusing on domestic inflation instead, a much tighter correlation between expectations and actual price developments is shown, Figure 3.

When focusing on the years leading up to the recent inflation surge, it appears that business leaders' expectations rose ahead of the actual rise in domestic inflation. Over the past year, however, both expectations and domestic inflation have stabilised at a high level. This motivates an examination of whether these expectations provide useful information about future inflation, beyond their contemporaneous relationship with price
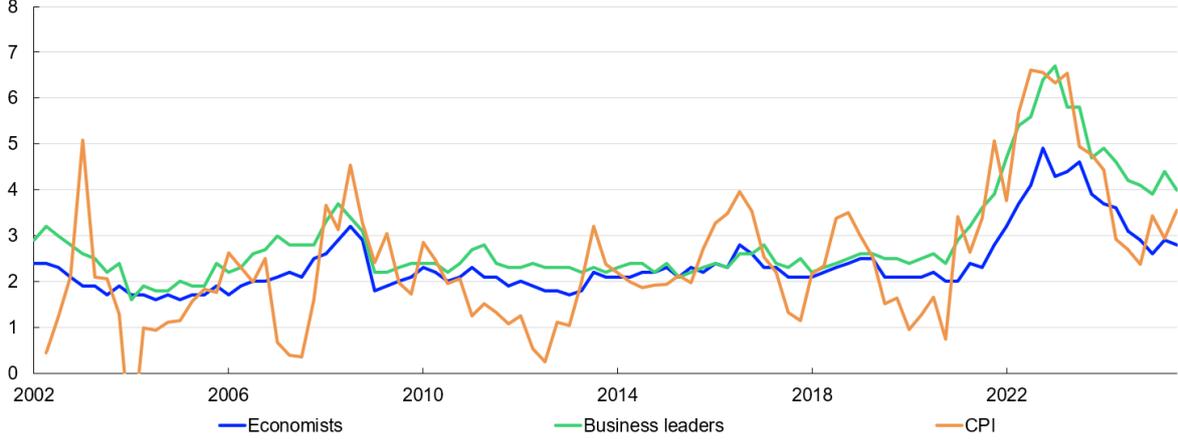
Figure 2: Inflation expecations 12 months ahead and realized CPI
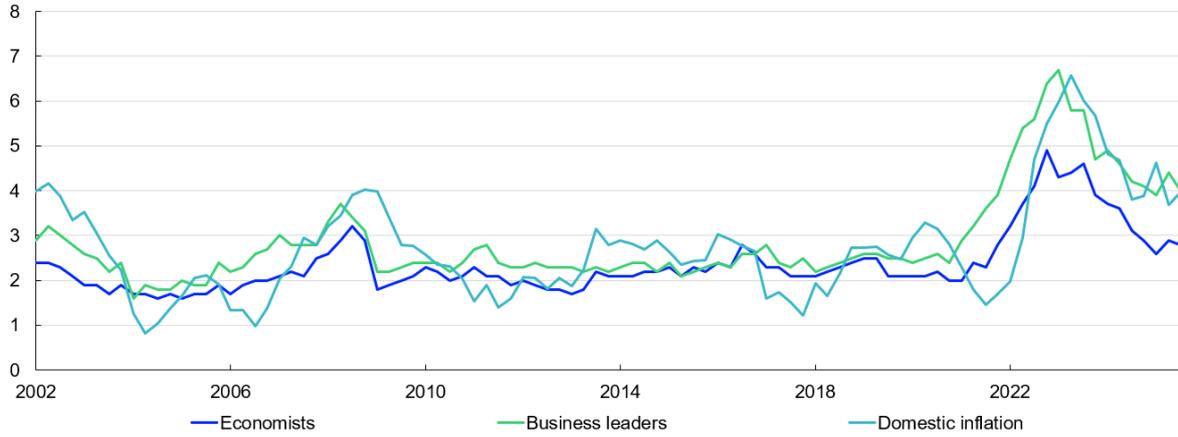
Figure 3: Inflation expectations 12 months ahead and realized domestic inflation

changes. The question is particularly relevant in a period when inflation expectations remain above target, raising the possibility that they may contain signals regarding the persistence of inflationary pressures. However, the strong co-movement between expectations and actual inflation does not allow us to determine whether inflation increased because expectations rose or whether expectations simply adjusted to observed developments in headline CPI.

That said, by extending the baseline model from Section 3.1, we can assess whether models that include expectations from different respondent groups forecast inflation better than models without expectations. The forward-looking model is given by:

$$\pi_{t+h} = \beta_\pi \, \pi_{t-m} + \beta_u \, (u_t - u_t^*) + \beta_E \, E_t[\pi_{t+12}] + \beta_s \, s_t + \varepsilon_t \tag{3}$$

Where π_{t+h} is 12-month growth in domestic inflation h quarters ahead. To evaluate the predictive performance of expectations from different respondent groups, we estimate the out-of-sample forecast accuracy of the forward-looking model using recursive estimation with an expanding window of a minimum 40 quarters. Table 4 reports the root mean squared error (RMSE) values for the different models. RMSE measures the square root

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of the average squared forecast errors and provides a summary of the overall forecast accuracy, with lower values indicating better forecast performance.

Table 4: RMSE for h quarters ahead

Model	h=1	h=2	h=3	h=4	h=5	h=6	h=7	h=8
Benchmark	0.68	0.93	1.16	1.35	1.53	1.68	1.74	1.84
Business leaders	0.61*	0.72*	0.89*	0.97*	1.19*	1.38	1.51	1.66
Economists	0.63*	0.80	0.96*	1.14*	1.31*	1.48	1.64	1.75
Social partners	0.64	0.80	0.96*	1.15*	1.36	1.54	1.65	1.74
Households	0.71	0.94	1.19	1.37	1.54	1.69	1.74	1.83

Note: *, **, *** denotes significant difference relative to the benchmark at the 10, 5, and 1 percent levels (Diebold–Mariano test). Recursive estimation with an initial sample of 40 quarters.

Table 4 reports the RMSE for forecasts up to eight quarters ahead across different groups of respondents. Overall, expectations from business leaders and professional economists are significantly better at forecasting near-term inflation, suggesting that these groups incorporate information beyond what is captured by a model with standard macroeconomic indicators. Expectations from social partners offer modest improvements compared to the benchmark, while household expectations do not improve the forecasts relative to a model without expectations.

The results indicate that business leaders and economists provide more accurate forecasts compared to the benchmark model, with business leaders' expectations proving particularly useful for forecasting future inflation. The findings suggest that incorporating their expectations can substantially improve short-term inflation predictions.

4.1 Sample analysis

Our findings are based on the entire sample period, including the recent surge in inflation, during which expectations also increased relative to historical levels. To assess the robustness of our findings, we evaluate forecast performance separately for the pre- and post-2020 periods. This allows us to examine whether the informational content of expectations is stable across different inflation regimes or whether it is particularly pronounced during periods of elevated and more variable inflation.

Table 5: RMSE before 2020

Model	h=1	h=2	h=3	h=4	h=5	h=6	h=7	h=8
Benchmark	0.52	0.57	0.58	0.45	0.43	0.44	0.55	0.57
Business leaders	0.53	0.58	0.58	0.46	0.46*	0.47**	0.57*	0.58
Economists	0.53	0.58	0.58	0.45	0.43	0.46	0.57	0.60
Social partners	0.54	0.58	0.59	0.46	0.44	0.45	0.56	0.59***
Households	0.54	0.58	0.58	0.45	0.42	0.44	0.56	0.57

Note: *, **, *** denotes significant difference relative to the benchmark at the 10, 5 and 1 percent levels (Diebold–Mariano test). Recursive estimation with an initial sample of 40 quarters.

Table 6: RMSE after 2020

Model	h=1	h=2	h=3	h=4	h=5	h=6	h=7	h=8
Benchmark	0.85	1.23	1.60	1.91	2.16	2.36	2.41	2.52
Business leaders	0.71*	0.87*	1.14*	1.33*	1.65**	1.92**	2.06*	2.25
Economists	0.73**	1.01	1.26**	1.59*	1.83**	2.07	2.25	2.38
Social partners	0.75*	1.00	1.26**	1.60*	1.91	2.16	2.27	2.36
Households	0.89	1.25	1.64	1.94	2.19	2.37	2.39	2.50

Note: *, **, *** denotes significant difference relative to the benchmark at the 10, 5, and 1 percent levels (Diebold–Mariano test). Recursive estimation with an initial sample of 40 quarters.

Tables 5 and 6 show that the forecast accuracy of expectations depends strongly on the inflation regime. After 2020, a period marked by a sharp increase in inflation and greater variability in expectations, forecasts based on the expectations of business leaders and economists achieve notably lower RMSEs than the benchmark variable, especially at short horizons. [4] Before 2020, when inflation was lower and expectations were more stable, none of the respondent groups, including business leaders and economists, deliver meaningful improvements relative to the benchmark variable. Overall, this contrast indicates that expectations are most informative for forecasting in periods of high inflation or increased volatility in expectations, although the data do not allow us to identify which of these factors is more important, since elevated inflation and increased variability in expectations tend to coincide in this period, making the two factors empirically inseparable.

Building on these findings, we examine how models that use only survey expectations perform, relative to Phillips curve specifications that include measures of economic slack and cost shocks, see Appendix D. In the full sample, expectations-only models achieve notably lower RMSEs and, in some cases, match or slightly exceed the accuracy of specifications that combine expectations with measures of slack and cost shocks. Splitting

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[4]The post-2020 subsample should be interpreted with caution, as it spans a relatively short period and contains fewer observations, which may limit the precision and robustness of the RMSE comparisons.

the sample reveals a more nuanced picture. Before 2020, when inflation was lower and expectations more stable, models that include slack and cost variables tend to perform better than expectations-only models, suggesting that these Phillips curve components provide useful information in stable periods. After 2020, expectations assume a more pronounced role, consistent with the stronger predictive performance observed in periods of elevated inflation and greater variability in expectations.

The results we find align with international evidence showing that the forecasting performance of inflation indicators depends strongly on the prevailing regime. Stock and Watson (2008) document that the predictive content of Phillips curve-type variables fluctuates considerably over time, with limited gains in stable environments and more pronounced improvements during periods of elevated inflation or heightened volatility. A possible interpretation is that in stable regimes characterised by well-anchored expectations and small, transitory shocks, inflation dynamics tend to exhibit a high degree of persistence. When expectations vary little and shocks are muted, much of the variation in inflation can be captured by its own past behavior, leaving limited additional information to be extracted from forward-looking indicators.

By contrast, when inflation is elevated or uncertainty increases, firms may reassess the outlook more actively and place greater weight on anticipated cost developments and aggregate conditions in their price-setting decisions. Expectations may then respond more strongly to new information and play a more prominent role in the transmission and propagation of shocks. Under such conditions, measures of expectations are more likely to contain independent information about future inflation dynamics. This provides an economic rationale for why monitoring expectations becomes particularly important in volatile periods, even if their marginal forecasting contribution appears limited during more stable episodes.

More generally, a broad empirical literature evaluates whether inflation expectations improve forecasting performance relative to purely statistical benchmarks. Studies for both the United States and the euro area find that augmenting autoregressive or other time series models with survey or market-based measures of expectations can enhance out of-sample accuracy, particularly at short to medium horizons, although the gains are typically modest and time-varying (see, e.g., Grothe and Meyler (2015); Coibion and Gorodnichenko (2015); Bañbura et al. (2021)).Our results complement this evidence by showing more specifically when these gains tend to materialise. Expectations appear most useful for forecasting during periods of elevated inflation and heightened uncertainty, which may help explain the time-varying performance documented in the broader literature.

5   Conclusion

We find that current inflation can be better understood by examining business leaders' expectations of inflation one year ahead. Expectations about future inflation are closely related to the price-setting behaviour of firms today, consistent with firms incorporating anticipated future inflation into current pricing decisions and thereby shaping current inflation outcomes. This supports the view that firms' price setting is forward-looking and that expectations constitute an important channel through which views about future economic conditions are reflected in present inflation.

Inflation expectations also contain predictive information, but their usefulness depends strongly on the inflation environment. Before 2020, when inflation was low and expectations were stable, expectations from all respondent groups contributed little to forecasting accuracy. After 2020, when inflation increased and expectations became more volatile, expectations reported by business leaders and economists substantially improved short-term forecasts relative to a benchmark model without expectations.

Taken together, these findings indicate that inflation expectations are most informative when inflation or expectations in themselves are elevated. This highlights the value of closely monitoring firms' and professional economists' expectations when inflationary pressures are high, even if such measures provide limited forecasting gains in more stable periods.

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Appendix

A CPI results

Table 7: CPI

	Benchmark	Business leaders	Economists	Social partners	Households
$u_t - u^*$	-0.12	-0.00	0.01	-0.04	-0.10
π_{t-1}	0.88***	0.76***	0.67***	0.66***	0.86***
π_t^E		0.37***	0.80***	0.70***	0.07
Controls	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.912	0.934	0.942	0.936	0.910
N	94	94	94	94	93

Note: *, **, og *** denotes statistical significance at 10, 5, and 1 percent levels. m is months of lags with an AR(4) structure. Controls include currency, food and energy.

Table 8: RMSE for h quarters ahead, CPI

Model	h=1	h=2	h=3	h=4	h=5	h=6	h=7	h=8
Benchmark	1.22	1.64	1.95	2.27	2.24	2.22	2.13	2.12
Business leaders	1.13	1.53	1.78	2.12	2.36	2.36	2.11	1.99
Economists	1.06**	1.46	1.59*	2.11	2.20	2.19	2.15	2.09
Social partners	1.11	1.46	1.65*	2.12	2.28	2.29	2.11	2.00
Households	1.23	1.63	1.96	2.25	2.21	2.24	2.12	2.14

Note: *, **, *** denotes significance difference relative to the benchmark at the 10, 5, and 1 percent levels (Diebold–Mariano test).

Table 9: RMSE before 2020, CPI

Model	h=1	h=2	h=3	h=4	h=5	h=6	h=7	h=8
Benchmark	1.00	0.95	0.89	0.91	0.91	1.01	1.04	1.24
Business leaders	1.01	0.95	0.90	0.91	0.92	1.05	1.05	1.24
Economists	0.94	0.92	0.79**	0.89	0.96**	1.06	1.10**	1.27**
Social partners	1.00	0.96	0.84	0.90	0.99**	1.12**	1.08	1.23
Households	1.00	0.94	0.72	0.74	0.81	0.95	1.03	1.26

Note: *, **, *** denotes significance difference relative to the benchmark at the 10, 5, and 1 percent levels (Diebold–Mariano test).

Table 10: RMSE after 2020, CPI

Model	h=1	h=2	h=3	h=4	h=5	h=6	h=7	h=8
Benchmark	1.47	2.29	2.88	3.46	3.46	3.43	3.32	3.23
Business leaders	1.28	2.10	2.60	3.20	3.66	3.67	3.28	2.98
Economists	1.20*	1.99	2.32*	3.19	3.37	3.36	3.31	3.15
Social partners	1.24	1.97	2.39*	3.22	3.51	3.52	3.26*	3.00
Households	1.49	2.27	2.98	3.48	3.46	3.50	3.30	3.26

Note: *, **, *** denotes significance difference relative to the benchmark at the 10, 5, and 1 percent levels (Diebold–Mariano test).

B   CPI-ATE results

Table 11: CPI-ATE twelve month growth

	Benchmark	Business leaders	Economists	Social partners	Households
$u_t - u^*$	-0.16**	-0.12*	-0.11*	-0.14**	-0.17**
π_{t-1}	0.71***	0.67***	0.64***	0.68***	0.71***
π_t^E		0.15***	0.34***	0.17	0.01
Controls	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.952	0.955	0.956	0.953	0.953
N	94	94	94	94	93

Note: *, **, og *** denotes statistical significance at 10, 5, and 1 percent levels. m is months of lags with an AR(4) structure. Controls include currency, food and energy.

Table 12: CPI-ATE annualized monthly growth

	Benchmark	Business leaders	Economists	Social partners	Households
$u_t - u^*$	-0.98**	-0.85*	-0.89*	-0.95**	-1.04**
π_{t-1}	-0.10	-0.20*	-0.22**	-0.19*	-0.07
π_t^E		0.82**	1.52***	0.88*	-0.23
Controls	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.174	0.204	0.207	0.186	0.179
N	94	94	94	94	93

Note: *, **, og *** denotes statistical significance at 10, 5, and 1 percent levels. m is months of lags with an AR(4) structure. Controls include currency, food and energy.

C Domestic inflation, excluding house rents results

Table 13: Domestic excl. house rents

	Benchmark	Business leaders	Economists	Social partners	Households
$u_t - u^*$	-0.25**	-0.20**	-0.21**	-0.23**	-0.23**
π_{t-1}	0.56***	0.49***	0.46***	0.50***	0.55***
π_t^E		0.20***	0.33***	0.21**	0.08
Controls	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.895	0.901	0.901	0.897	0.894
N	94	94	94	94	93

Note: *, **, og *** denotes statistical significance at 10, 5, and 1 percent levels. m is months of lags with an AR(4) structure. Controls include currency, food and energy.

Table 14: RMSE for h quarters ahead, domestic excl. house rents

Model	h=1	h=2	h=3	h=4	h=5	h=6	h=7	h=8
Benchmark	0.94	1.24	1.57	1.72	1.92	2.08	2.14	2.26
Business leaders	0.80**	0.93*	1.18*	1.29	1.61	1.84	2.00	2.19
Economists	0.85*	1.06	1.28*	1.46*	1.67*	1.87	2.04	2.18
Social partners	0.87	1.05	1.28*	1.47*	1.73	1.93	2.05	2.16
Households	0.97	1.27	1.61	1.76	1.94	2.10	2.15	2.30

Note: *, **, *** denotes significance difference relative to the benchmark at the 10, 5, and 1 percent levels (Diebold–Mariano test).

Table 15: RMSE before 2020, domestic excl. house rents

Model	h=1	h=2	h=3	h=4	h=5	h=6	h=7	h=8
Benchmark	0.72	0.81	0.84	0.79	0.86	0.91	0.90	0.83
Business leaders	0.72	0.81	0.84	0.80	0.88**	0.92**	0.91***	0.83
Economists	0.72	0.81	0.83	0.78	0.84	0.91	0.92	0.87
Social partners	0.73	0.80	0.82	0.78	0.86	0.91	0.91	0.84
Households	0.73	0.82	0.82	0.73	0.76	0.79	0.85	0.76

Note: *, **, *** denotes significance difference relative to the benchmark at the 10, 5, and 1 percent levels (Diebold–Mariano test).

Table 16: RMSE after 2020, domestic excl. house rents

Model	h=1	h=2	h=3	h=4	h=5	h=6	h=7	h=8
Benchmark	1.18	1.67	2.25	2.58	2.93	3.25	3.42	3.74
Business leaders	0.90**	1.07*	1.55*	1.82*	2.36**	2.81***	3.15	3.61
Economists	1.00**	1.33	1.75**	2.13*	2.49**	2.88**	3.22	3.57
Social partners	1.03*	1.33	1.75*	2.15*	2.60*	2.97	3.24	3.55
Households	1.22	1.71	2.33	2.68	3.02	3.33	3.46	3.84

Note: *, **, *** denotes significance difference relative to the benchmark at the 10, 5, and 1 percent levels (Diebold–Mariano test).

D RMSE for a model with expectations only

The results in this subsection are derived from the following model:

$$\pi_{t+h} = \beta_E \, E_t[\pi_{t+12}] + \varepsilon_t \tag{4}$$

Table 17: RMSE for h quarters ahead – expectations only

Model	h=1	h=2	h=3	h=4	h=5	h=6	h=7	h=8
Benchmark	0.68	0.93	1.16	1.35	1.53	1.68	1.74	1.84
Business leaders	0.69	0.66	0.70*	0.82*	0.96	1.08	1.22	1.32
Economists	0.68	0.72	0.80**	0.95*	1.07*	1.18	1.30	1.38
Social partners	0.71	0.76	0.84*	0.98	1.10	1.20	1.29	1.37
Households	1.11***	1.13*	1.20	1.31	1.39	1.48	1.55	1.58

Note: *, **, *** denotes significance difference relative to the benchmark at the 10, 5, and 1 percent levels (Diebold–Mariano test).

Table 18: RMSE before 2020 – expectations only

Model	h=1	h=2	h=3	h=4	h=5	h=6	h=7	h=8
Benchmark	0.52	0.59	0.60	0.50	0.51	0.56	0.58	0.54
Business leaders	0.57	0.63	0.67	0.67*	0.64	0.62	0.60	0.60
Economists	0.56	0.65	0.68	0.71	0.67	0.66	0.67	0.66
Social partners	0.60	0.69	0.74	0.78	0.76	0.74	0.73	0.70
Households	0.84***	0.87***	0.91***	0.94***	0.91***	0.88***	0.81	0.77

Note: *, **, *** denotes significance difference relative to the benchmark at the 10, 5, and 1 percent levels (Diebold–Mariano test).

Table 19: RMSE after 2020 – expectations only

Model	h=1	h=2	h=3	h=4	h=5	h=6	h=7	h=8
Benchmark	0.86	1.26	1.69	2.07	2.41	2.70	2.85	3.10
Business leaders	0.84	0.71*	0.75**	1.02**	1.32**	1.60*	1.90	2.12
Economists	0.82	0.80**	0.95***	1.23***	1.51***	1.75***	2.02	2.20
Social partners	0.84	0.86*	0.97***	1.23***	1.50***	1.73**	1.95	2.15
Households	1.40**	1.42	1.53	1.73*	1.94**	2.17	2.38	2.52

Note: *, **, *** denotes significance difference relative to the benchmark at the 10, 5, and 1 percent levels (Diebold–Mariano test).