Appendix

Model Selection

We consider multiple models of memory with single reference points (for example, a three-month change). We also consider scenarios in which consumers have a general idea of past prices. To accomplish this, we compute a backward-looking average price as the reference point (for example, the average price at six and 12 months in the past). Let x_t be the the value of the CPI-U sub-index at time t. We then define price changes as follows:

$$\delta_h = \ln(x_t) - \frac{1}{h}\left(\sum_{t=-(h+7)}^{-7} \ln(x_t)\right). \tag{1}$$

We further construct a memory model in which consumers ignore price decreases and pay attention only to price increases:

$$\delta_h^{\text{MAX}} = \max\left[\delta_h, 0\right]. \tag{2}$$

We apply the aformentioned formulas to various seasonally adjusted CPI-U indices: headline, core, food, and gas. We then regress combinations of these indices on one-year-ahead household inflation expectations.

$$\hat{Y}_t = \alpha + X_t\hat{\beta} \tag{3}$$

Y_t is average one-year-ahead inflation expectations at time t. X_t is a combination of CPI-U indices and inflation definitions. The in-sample period is 1990 through 2019, which we selected because it is a relatively stable period for inflation expectations. We refer to this in the brief's main text as "normal times." The results of this exercise are presented in Table A1.

Table A1. *Adjusted R-Squared from Memory Models*

	Log Change									
Independent Variable(s)	1-month	3-month	6-month	12-month	δ_6	δ_6^{MAX}	δ_{12}	δ_{12}^{MAX}	δ_{24}	δ_{24}^{MAX}
Headline	0.130	0.279	0.369	0.388	0.406	0.443	0.422	0.430	0.371	0.371
Core	0.086	0.152	0.173	0.152	0.166	0.166	0.142	0.142	0.119	0.119
Food	0.119	0.203	0.203	0.189	0.204	0.204	0.209	0.209	0.202	0.202
Gas	0.038	0.104	0.140	0.182	0.170	0.094	0.220	0.146	0.256	0.203
Food and Gas	0.153	0.294	0.330	0.333	0.346	0.286	0.375	0.286	0.374	0.310
Core, Food, and Gas	0.222	0.378	0.412	0.402	0.422	0.361	**0.434**	0.377	0.411	0.385

Source: Authors' calculations.

In addition to the models shown in Table A1, we modeled longer- and shorter-term non-fixed reference points (that is, less than six months and beyond two years) and found these points to be less accurate representations of memory. Additionally, we modeled rent, relative food prices, relative gas prices, and oil prices but found them no more useful than the headline, core, food or gas CPIs. We select the memory

model δ_{12}, which includes core food and gas CPIs. We then decompose the results as follows:

$$\hat{Y}_t = \alpha + \underbrace{\hat{\beta}^{\mathrm{C}} core_t}_{\text{core contribution}} + \underbrace{\hat{\beta}^{\mathrm{F}} food_t}_{\text{food contribution}} + \underbrace{\hat{\beta}^{\mathrm{G}} gas_t}_{\text{gas contribution}} . \tag{4}$$