

Greater Than the Sum of Its Parts: Aggregate vs. Aggregated Inflation Expectations

Based on BFI Working Paper No. 2023-143 “[Greater Than the Sum of Its Parts: Aggregate vs. Aggregated Inflation Expectations](#),” by Alexander Dietrich, Danish National Bank; Edward S. Knotek II, Federal Reserve Bank of Cleveland; Kristian O. Myrseth, University of York; Robert W. Rich, Federal Reserve Bank of Cleveland; Raphael Schoenle, Brandeis University; and Michael Weber, University of Chicago

A novel measure of consumer inflation expectations that is constructed by combining forecasts from across different categories of consumption is consistently lower than conventional measures. It is also less volatile and a stronger predictor of consumers’ spending plans.

Inflation expectations—the rate at which people expect prices to rise in the future—are a decisive factor for charting the course of monetary policy. If workers and businesses expect inflation to rise, they will act in ways that contribute to actual inflation. For example, workers demand higher wages in anticipation of higher prices, and businesses raise prices in anticipation of higher costs, including labor. As a result, policymakers pay special attention to consumers’ inflation expectations, which are notoriously difficult to capture accurately.

Standard approaches to measuring inflation expectations have typically relied upon surveys that elicit peoples’ expectations for aggregate inflation, for example by asking what they expect the inflation rate will be over the next year. Prior research casts doubt on these approaches, however, as respondents likely exhibit biases such as relying too heavily on the price changes of certain goods in daily life such as milk or gasoline or favoring information that confirms their preconceptions (confirmation bias).

Motivated by this, the authors design a new survey aimed at capturing peoples’ inflation expectations more accurately. They decompose aggregate inflation into its more tangible components, and instead of asking

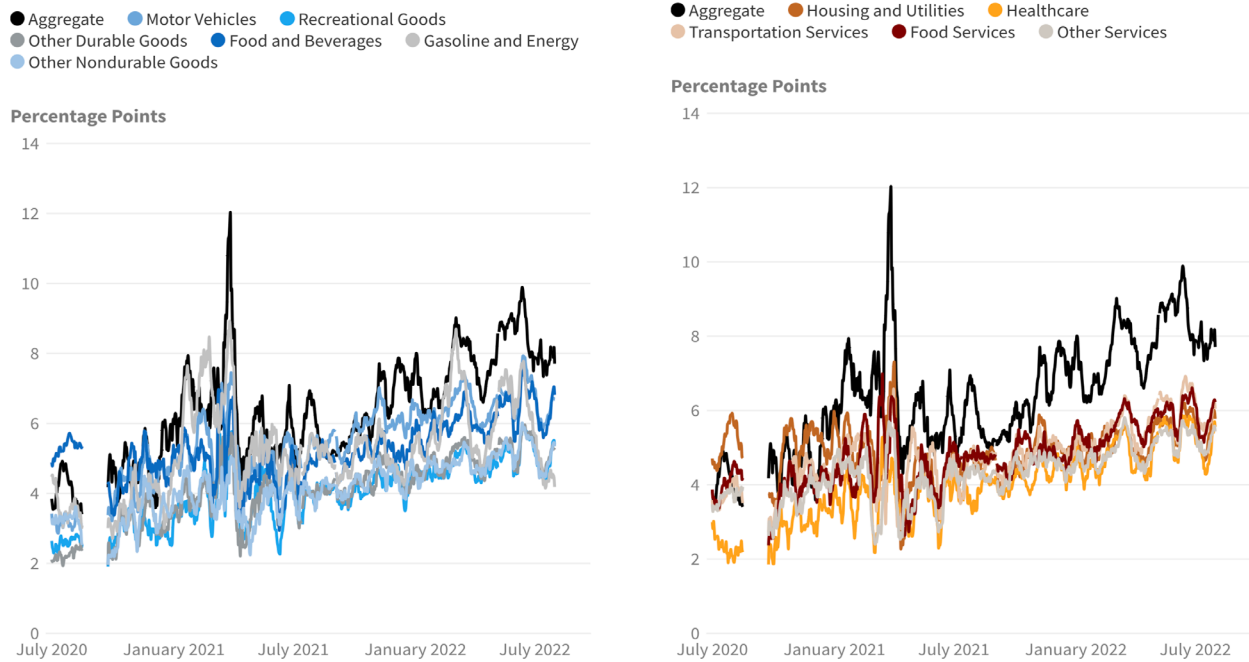
respondents about overall inflation, they query them concerning price changes for separate categories of goods and services.¹ They then employ several different weighting schemes to combine the category-specific forecasts into a new measure of aggregated consumer inflation expectations.

The authors collect these expectations from almost 60,000 US consumers in a nationally representative survey. They administer the survey as a module within the Federal Reserve Bank of Cleveland’s daily survey of consumer expectations between July 2020 and August 2022. Finally, they compare their measures with conventional aggregate inflation expectations, and find the following:

- The authors’ aggregated measures of inflation expectations are consistently lower and less dispersed than conventional aggregate inflation expectations. They are also less volatile over time.

¹ Their categories, which cover the full range of US consumption expenditures, consist of: motor vehicles, recreational goods, other durable goods, food and beverages, gasoline, other nondurable goods, housing and utilities, health care, transportation services, food services, and other services. Together, these expenditures encompass the Federal Reserve’s preferred measure of aggregate inflation, PCE, or personal consumption expenditures.

Figure 1 · Aggregate vs Category-Inflation Expectations, Average Time Series



Note: These graphs show mean aggregate inflation (black line) and category-inflation rates. The left panel shows durable and nondurable goods inflation by category and the right panel shows services inflation by category. The time series is an 11-day centered moving average.

- There are significant aggregation gaps between aggregate and aggregated inflation expectations among individual respondents. More highly educated respondents tend to exhibit smaller gaps, while those who exhibit greater uncertainty about inflation exhibit larger gaps.
- The authors' aggregated inflation expectations measures are stronger predictors of planned consumer spending than conventional aggregate inflation expectations. Moreover, at higher levels of the respondent-specific gap between aggregated and aggregate inflation expectations, the information about consumer spending plans provided by aggregated expectations is higher in both absolute and relative terms than that provided by aggregate expectations. In other words, when the two measures differ substantially, the aggregated measure becomes more informative.

The upshot is that effective inflation expectations—the expectations on which consumers act—appear not best represented by explicit, conventionally reported aggregate inflation expectations, but by aggregations of category-specific inflation expectations. This result is especially important considering the record-high inflation that has followed post-pandemic. As policymakers continue to try and hem inflation, these results are crucial for casting accurate predictions about the role of peoples' expectations.

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