SBU

Survey of Business Uncertainty

Federal Reserve Bank *of* Atlanta

CHICAGO BOOTH
The University of Chicago Booth School of Business

Stanford University

Monthly Report: June 2023

Based on survey responses from 12-23 June

David Altig, Jose Maria Barrero, Nicholas Bloom, Steven J. Davis,
Kevin Foster, Brent H. Meyer, and Emil Mihaylov

Headline Results

June 2023 Survey of Business Uncertainty

1. U.S. firms remain more uncertain about future sales growth than they were before the pandemic. (Slide 4)
2. Realized wage growth in the SBU is similar to realized wage growth in other sources. (Slide 7)
3. Firms expect nominal wage growth to ease over the year ahead. (Slide 8)

SBU Survey of Business Uncertainty

FEDERAL RESERVE BANK of ATLANTA | CHICAGO BOOTH The University of Chicago Booth School of Business | Stanford University

About the Survey

The Survey of Business Uncertainty (SBU) is fielded by the Federal Reserve Bank of Atlanta. It was designed, tested, and refined in cooperation with Nick Bloom of Stanford University and Steven Davis of the Hoover Institution and the University of Chicago Booth School of Business. Bloom and Davis received research support from the Sloan Foundation and the U.S. National Science Foundation. Davis also received research support from Chicago Booth.

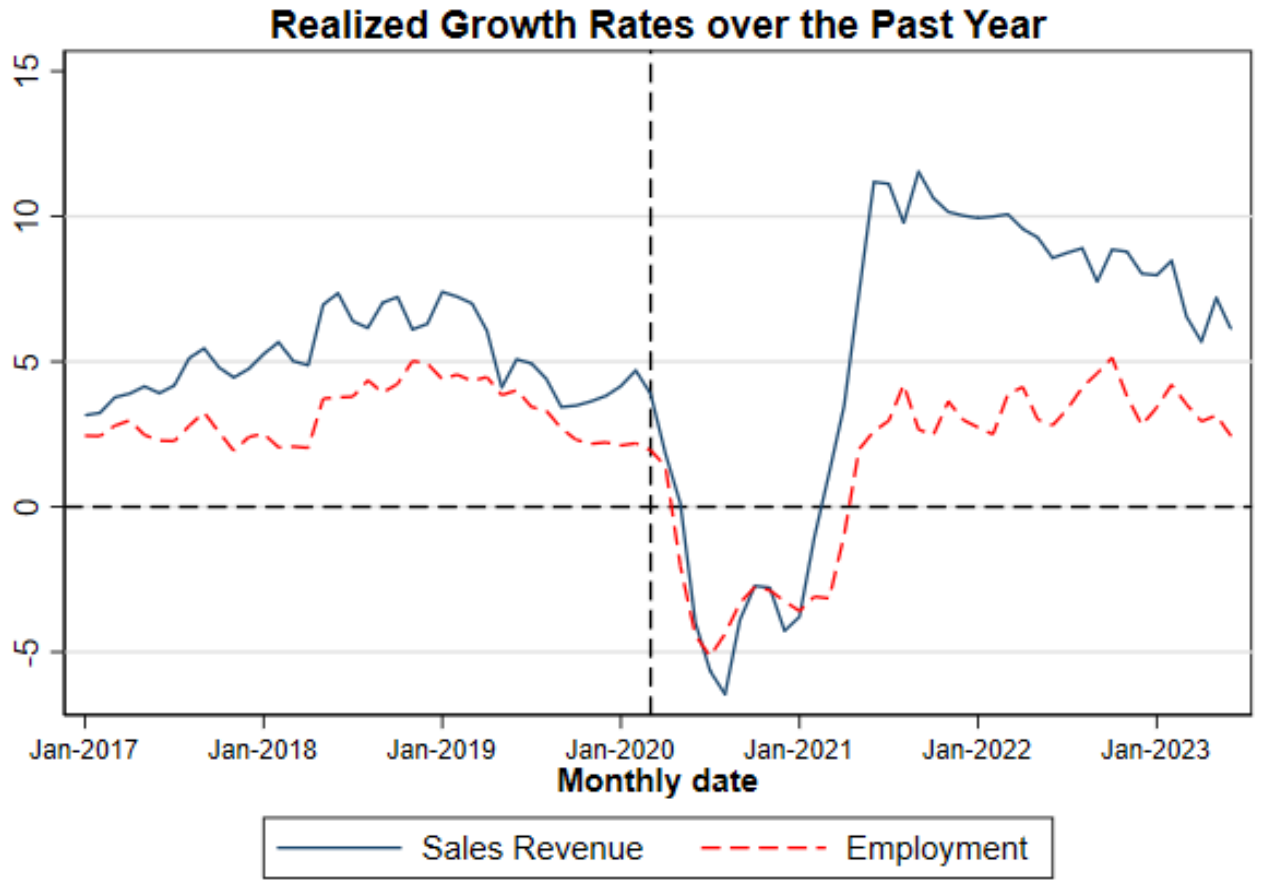
Our monthly Survey of Business Uncertainty (SBU) goes to about 1500 panel members (as of August 2022), who occupy senior finance and managerial positions at U.S. firms. We contact panel members each month by email, and they respond via a web-based instrument.

Survey questions pertain to current, past, and future outcomes at the respondent's firm. Our primary objective is to elicit the respondent's subjective forecast distributions over own-firm future sales growth rates and employment levels. We also ask special questions on timely topics.

For more information on survey design and methodology, please refer to the resources on the SBU page and "Surveying Business Uncertainty," published in the *Journal of Econometrics* and also available as NBER Working Paper 25956.

Nominal sales growth remains higher than before the pandemic but has fallen over the past year. Recent employment growth is in line with pre-pandemic growth.

January 2017–June 2023



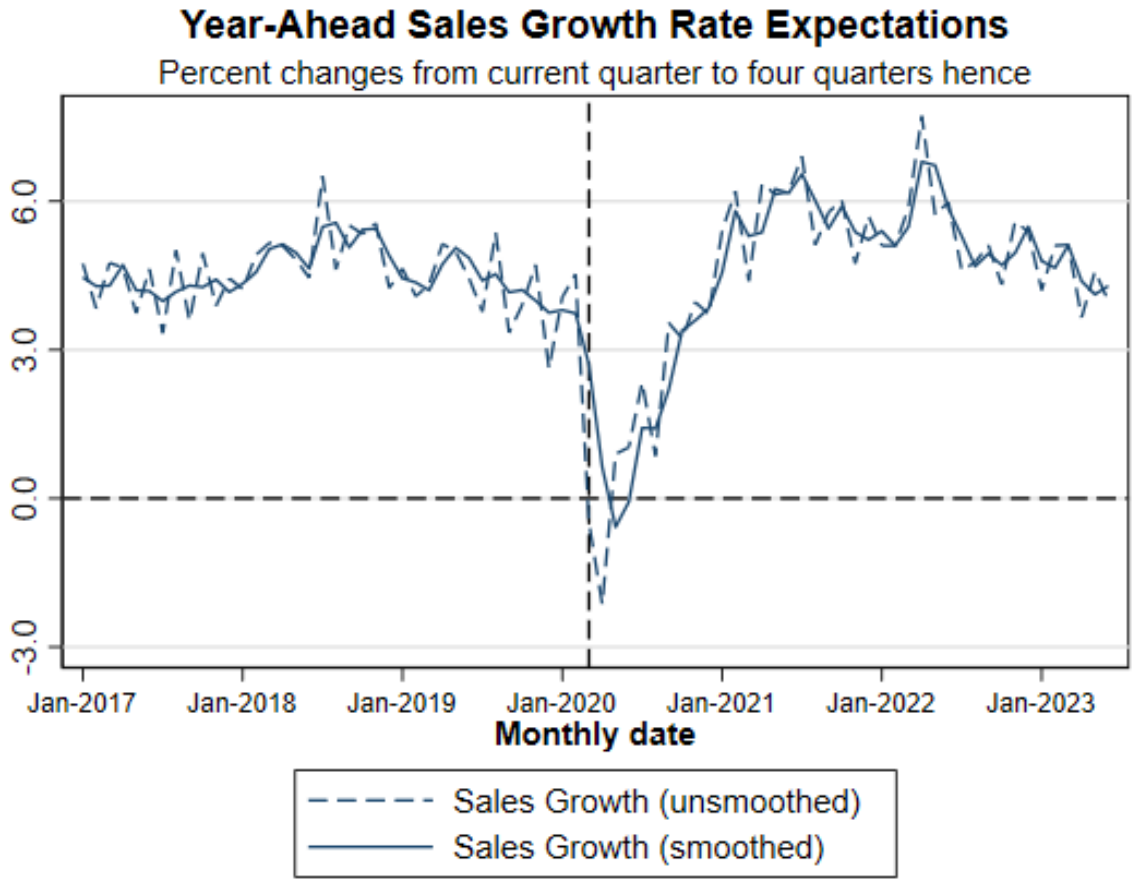
NOTE: Calculated using monthly data through June 2023. Realized growth rate series for sales revenue and employment are activity-weighted averages of firms' reported (look-back) growth rates over the past year (specifically, the previous four quarters for sales revenue and previous 12 months for employment).

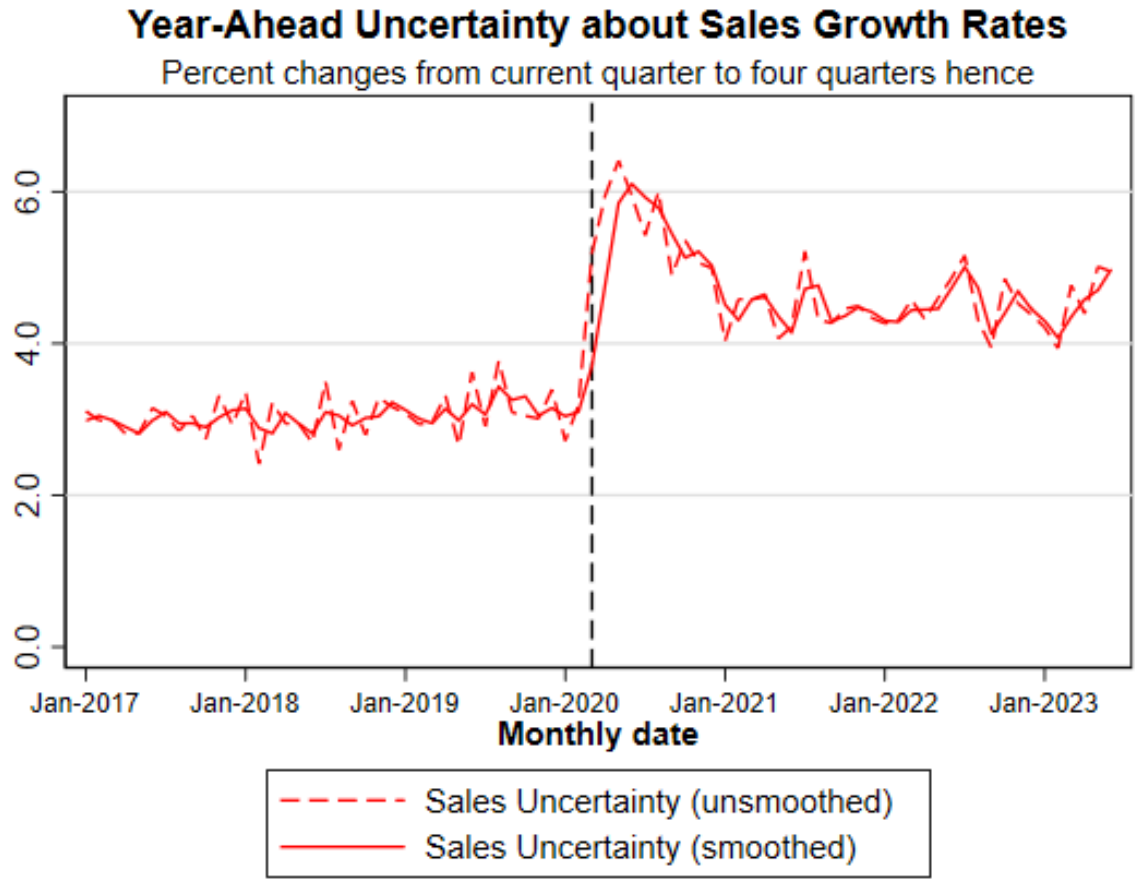
NOTE: The chart shows smoothed series.

Source: Survey of Business Uncertainty conducted by the Federal Reserve Bank of Atlanta, Stanford University, and the University of Chicago Booth School of Business. For more information, see "Surveying Business Uncertainty" by David Altig, Jose Maria Barrero, Nick Bloom, Steven J. Davis, Brent Meyer, and Nick Parker, NBER Working Paper No. 25956, February 2020.

Sales revenue growth expectations have slowed in recent months. Firms remain more uncertain about future revenue growth than they were before the pandemic.

January 2017–June 2023



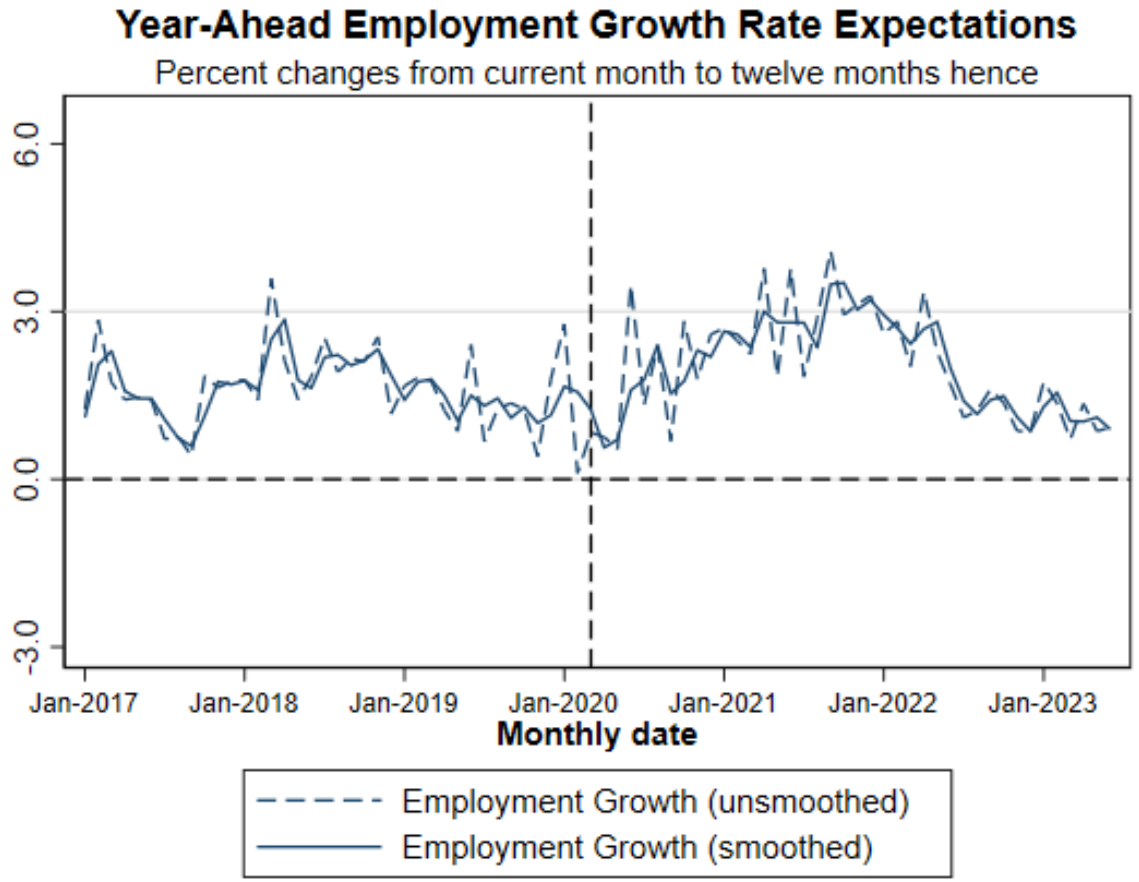


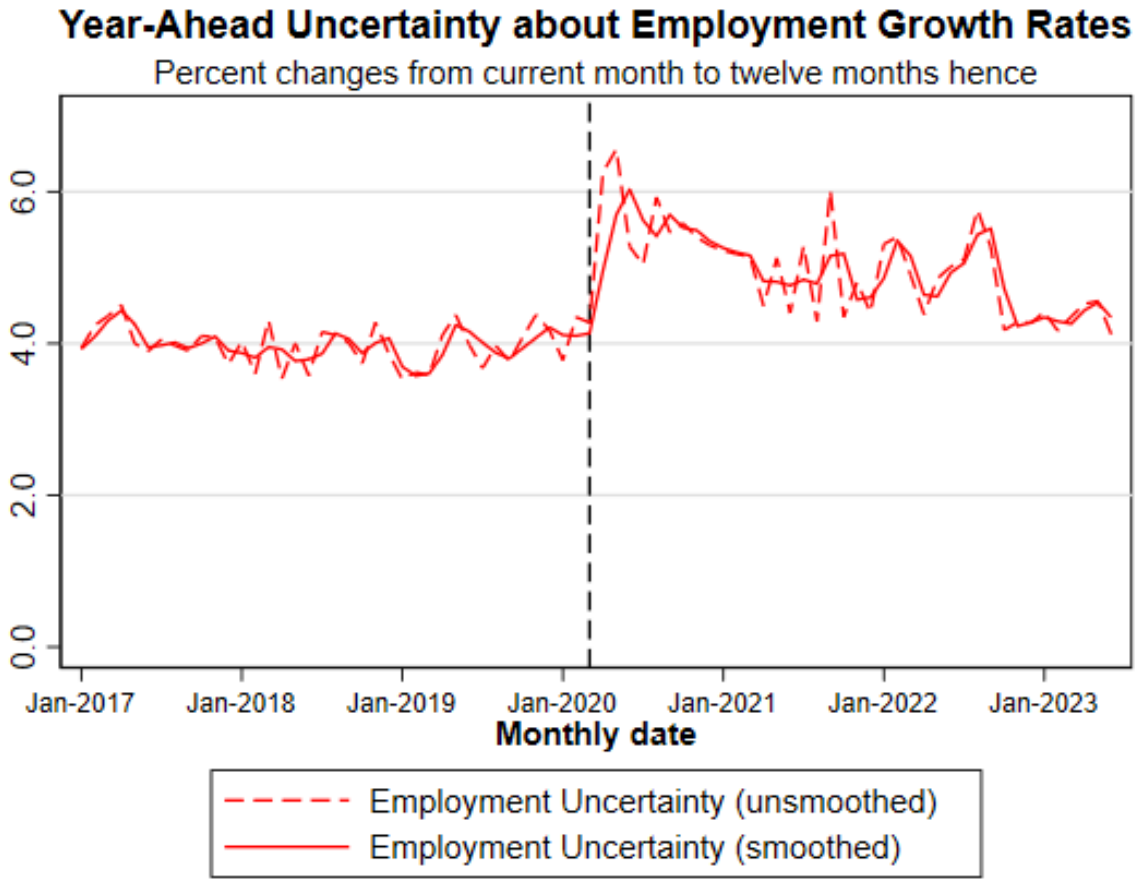
NOTE: The charts show smoothed series.

Source: Survey of Business Uncertainty conducted by the Federal Reserve Bank of Atlanta, Stanford University, and the University of Chicago Booth School of Business. For more information, see "Surveying Business Uncertainty" by David Altig, Jose Maria Barrero, Nick Bloom, Steven J. Davis, Brent Meyer, and Nick Parker, NBER Working Paper No. 25956, February 2020.

Expected employment growth has dropped in recent months. Uncertainty about employment growth has returned to pre-pandemic levels.

January 2017–June 2023



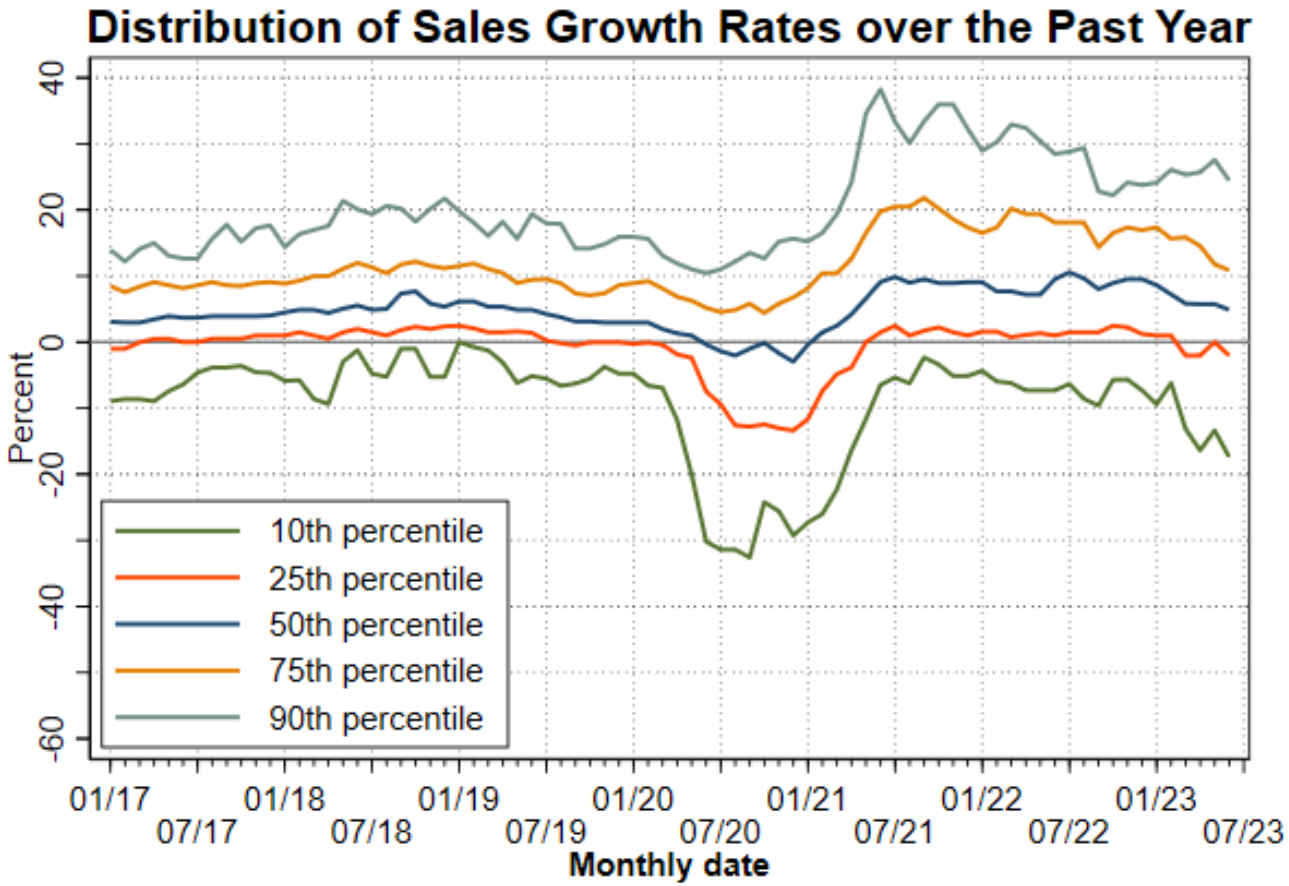


NOTE: The charts show smoothed series.

Source: Survey of Business Uncertainty conducted by the Federal Reserve Bank of Atlanta, Stanford University, and the University of Chicago Booth School of Business. For more information, see "Surveying Business Uncertainty" by David Altig, Jose Maria Barrero, Nick Bloom, Steven J. Davis, Brent Meyer, and Nick Parker, NBER Working Paper No. 25956, February 2020.

The distribution of realized sales growth remains wider than it was in the pre-pandemic period.

January 2017–June 2023



NOTES: Calculated using monthly data through June 2023. The chart shows smoothed series. Lines show percentiles of the activity-weighted distribution of firm-level sales growth rates over the past year.

Source: Survey of Business Uncertainty conducted by the Federal Reserve Bank of Atlanta, Stanford University, and the University of Chicago Booth School of Business.

Realized wage growth in the SBU is similar to realized wage growth in other sources.

Nominal Wage Growth Rate Measures				
	May '22		May '23	
	12-month percent change	Period ending in	12-month percent change	Period ending in
Survey of Business Uncertainty	5.4	May '22	5.2	May '23
Average Hourly Earnings (total private)	5.5	May '22	4.3	May '23
Average Hourly Earnings (private, production and nonsupervisory workers)	6.7	May '22	5.0	May '23
Atlanta Wage Growth Tracker (smoothed)	6.1	May '22	6.0	May '23
Employment Cost Index (private industry workers)	5.1	Q1 '22	5.1	Q1 '23

Note: The table shows results from the April ’22, May ’22, and May ‘23 survey waves of the SBU. The results are weighted by firm size.
Sources: U.S. Bureau of Labor Statistics; Federal Reserve Bank of Atlanta; *Survey of Business Uncertainty* (Federal Reserve Bank of Atlanta, Chicago Booth, Stanford);

Looking ahead, firms expect nominal wage growth to slow.

Nominal Wage Growth Expectations				
	May '22		May '23	
	12-month percent change	Period ending in	12-month percent change	Period ending in
Survey of Business Uncertainty, Federal Reserve Bank of Atlanta	4.9	May '23	3.6	May '24
Survey of Consumer Expectations (median household earnings), Federal Reserve Bank of New York	3.0	May '23	3.3	May '24
Manufacturing Survey (wages + benefits), Federal Reserve Bank of Philadelphia	5.0	Q1 '23	4.0	Q1 '24

Note: The table shows results from the April '22, May '22 and May '23 survey waves of the SBU. The results are weighted by firm size.
Sources: *Survey of Business Uncertainty* (Federal Reserve Bank of Atlanta, Chicago Booth, Stanford); Federal Reserve Bank of New York *Survey of Consumer Expectations*; Federal Reserve Bank of Philadelphia *Manufacturing Survey (special question).*

Appendix: Technical Information

Computing Moments of the Firm-Level Subjective Forecast Distributions

We calculate first and second moments of the subjective growth rate distributions of employment and sales revenue over the next 12 months or four quarters, as appropriate. Following standard practice in the literature on business-level dynamics, we calculate the growth rate of x from $t-1$ to t as $g_t = 2(x_t - x_{t-1})/(x_t + x_{t-1})$.*

Employment

$CEmp$ = firm's current employment level, as reported by the respondent

$FEmp_i$ = employment 12 months hence in scenario i, for $i = 1,2,3,4,5$

p_i = *the associated probabilities*, $i = 1,2,3,4,5$

Scenario-Specific Growth Rates

$$EGr_i = 2(FEmp_i - CEmp)/(FEmp_i + CEmp),\ i = 1,2,3,4,5$$

First and Second Moments of the Subjective Growth Rate Forecast Distribution

$$Mean(EGr) = \sum_{i=1}^{5} p_i EGr_i$$

$$Var(EGr) = \sum_{i=1}^{5} p_i (EmpGr_i - Mean(EGr))^2$$

$$SD(EGr) = \sqrt{Var(EGr)}$$

Sales Revenue

$CSale$ = firm's sales revenue in the current quarter, as reported by the respondent

$FSaleGr_i$ = respondent's scenario–specific sales growth rate from now to four quarters hence, $i = 1,2,3,4,5$

p_i = *the associated probabilities*, $i = 1,2,3,4,5$

Implied Future Sales Level

$$FSale_i = \left(1 + \frac{FSaleGr_i}{100}\right) CSale,\ i = 1,2,3,4,5$$

Scenario–Specific Growth Rates (re–expressing respondent growth rates to our growth rate measure)

$$SaleGr_i = 2(FSale_i - CSales)/(FSale_i + CSale) = 2FSaleGr_i/(FSaleGr_i + 2),\ i = 1,2,3,4,5$$

First and Second Moments of the Subjective Growth Rate Forecast Distribution

$$Mean(SaleGr) = \sum_{i=1}^{5} p_i SaleGr_i$$

$$Var(SaleGr) = \sum_{i=1}^{5} p_i (SaleGr_i - Mean(SaleGr)_i)^2$$

$$SD(SaleGr) = \sqrt{Var(SaleGr)}$$

Subjective Expectations and Uncertainty Indices

We construct a monthly activity-weighted expectations (first-moment) index for employment growth and sales growth looking one year ahead. We also construct a monthly activity-weighted uncertainty (second-moment) index for the employment growth and sales growth looking one year ahead.

- In month *t*, the index for employment (sales) takes a value equal to the activity-weighted average of subjective mean employment (sales) growth rates looking one year hence ($Mean(Gr)$), averaging across all firms responding that month. We compute these subjective mean growth rates as described on slide 3, and winsorize them at the first and 99th percentiles before using them to construct the index.
- The month-*t* index of year-ahead subjective uncertainty for employment (sales) growth is the activity-weighted mean of ($SD(Gr)$) values across firms responding in month *t*. We compute these subjective standard deviations over growth rates as described on slide 3, and winsorize them at the first and 99th percentiles before inputting them into the index construction formula.
- When constructing first- and second-moment employment growth indexes, we weight firm *i*'s subjective mean growth rate expectation and uncertainty by the average of its month-*t* employment ($CEmp_{it}$) and its expected employment level ($EEmp_{it}$). We top-code these weights at 500 to diminish the influence of outliers among very large firms.
- When constructing first- and second-moment sales revenue growth indexes, we weight firms *i*'s subjective mean growth rate expectation and uncertainty by the average of its month-*t* sales revenue ($CSale_{it}$) and its expected sales level ($ESale_{it}$). We winsorize these activity-weights at the 1st and 80th percentile.
- Finally, we smooth our topic-specific indices by taking a moving average. We set the window for the moving average to 2 or 3 months, to match the panel structure of our survey.

Topic-specific Expected Excess Reallocation Indices

We construct forward-looking indices of excess job and sales revenue reallocation. These series measure the volume of cross-firm reallocation in economic activity above the reallocation required to support aggregate growth. For ease of exposition, we often refer to these as simply "reallocation rates":

- First, in each month *t*, we compute the activity-weighted average of own-firm expected gross job creation and destruction rates, which boils down to the activity-weighted average of the absolute value of subjective mean growth rates $|Mean(EGr)|$.
- Then, in each month *t*, we compute the absolute value of the activity weighted average of own-firm expected employment growth $Mean(EGr)$. This is effectively the absolute value of the employment growth expectations index in month *t*.
- We then obtain the expected job reallocation rate index value for month *t* by subtracting the outcome of the second bullet from the first. Letting w_{it} be firm *i*'s activity weight in month *t*,

$$Expected\ Job\ Reallocation\ Rate_t = \sum_i w_t \cdot |Mean(EGr)| - \left|\sum_i w_t \cdot Mean(EGr)\right|$$

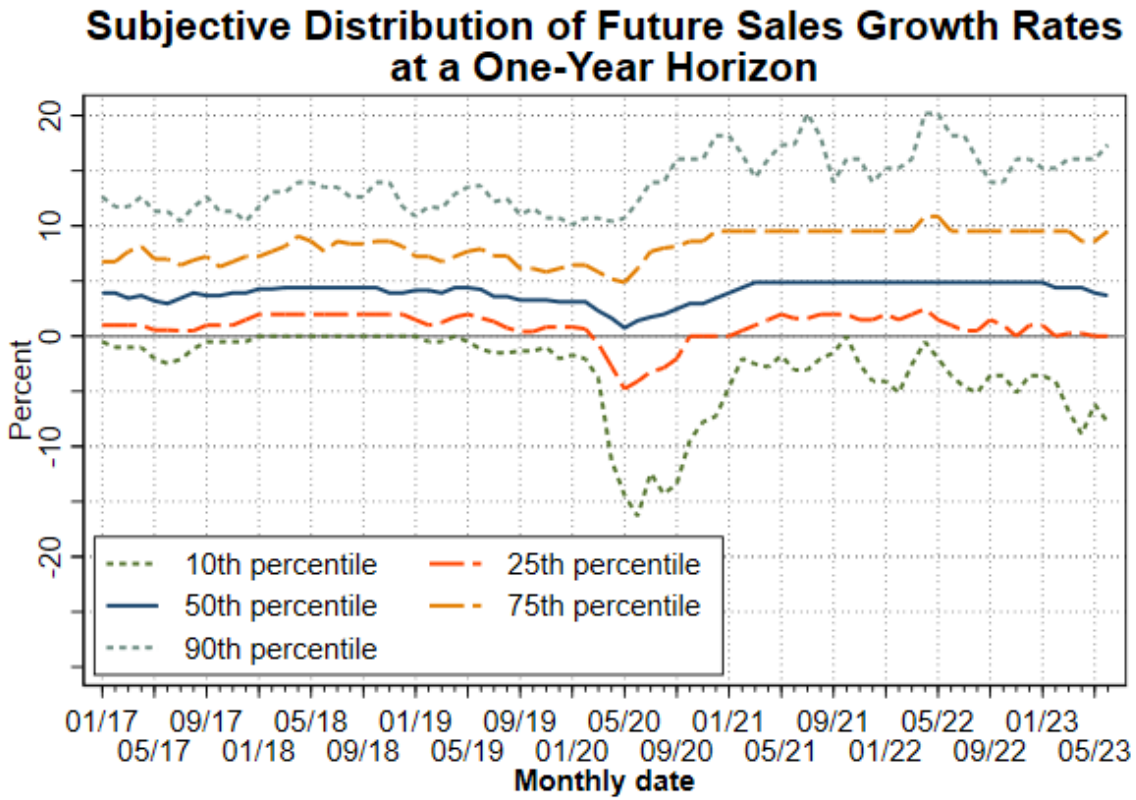
- Analogously, the expected sales revenue reallocation rate index in month *t* is the difference between the activity-weighted average of absolute expected sales growth rates, minus the absolute value of the average activity-weighted growth rate:

$$Expected\ Reallocation\ Rate\ For\ Sales\ Revenue_t = \sum_i w_t \cdot |Mean(SaleGr)| - \left|\sum_i w_t \cdot Mean(SaleGr)\right|$$

- We compute the subjective mean growth rates $Mean(EGr)$ and $Mean(SaleGr)$ as described on slides 18-21, and winsorize them at the 1st and 99th percentiles before using them to construct the index.
- Firm *i*'s activity weight w_{it} is the average of its month–*t* employment or sales level ($Cemp_{it}$ or $CSale_{it}$) and its expected employment or sales level twelve months hence ($FEmp_{it}$ or $FSale_{it}$). We top–code these weights at 500 for employment and at the 80th percentile for sales to diminish the influence of outliers among very large firms.

Appendix: Subjective Forecast Distribution of Future Sales Growth Rates at a One-Year Horizon

January 2017–June 2023

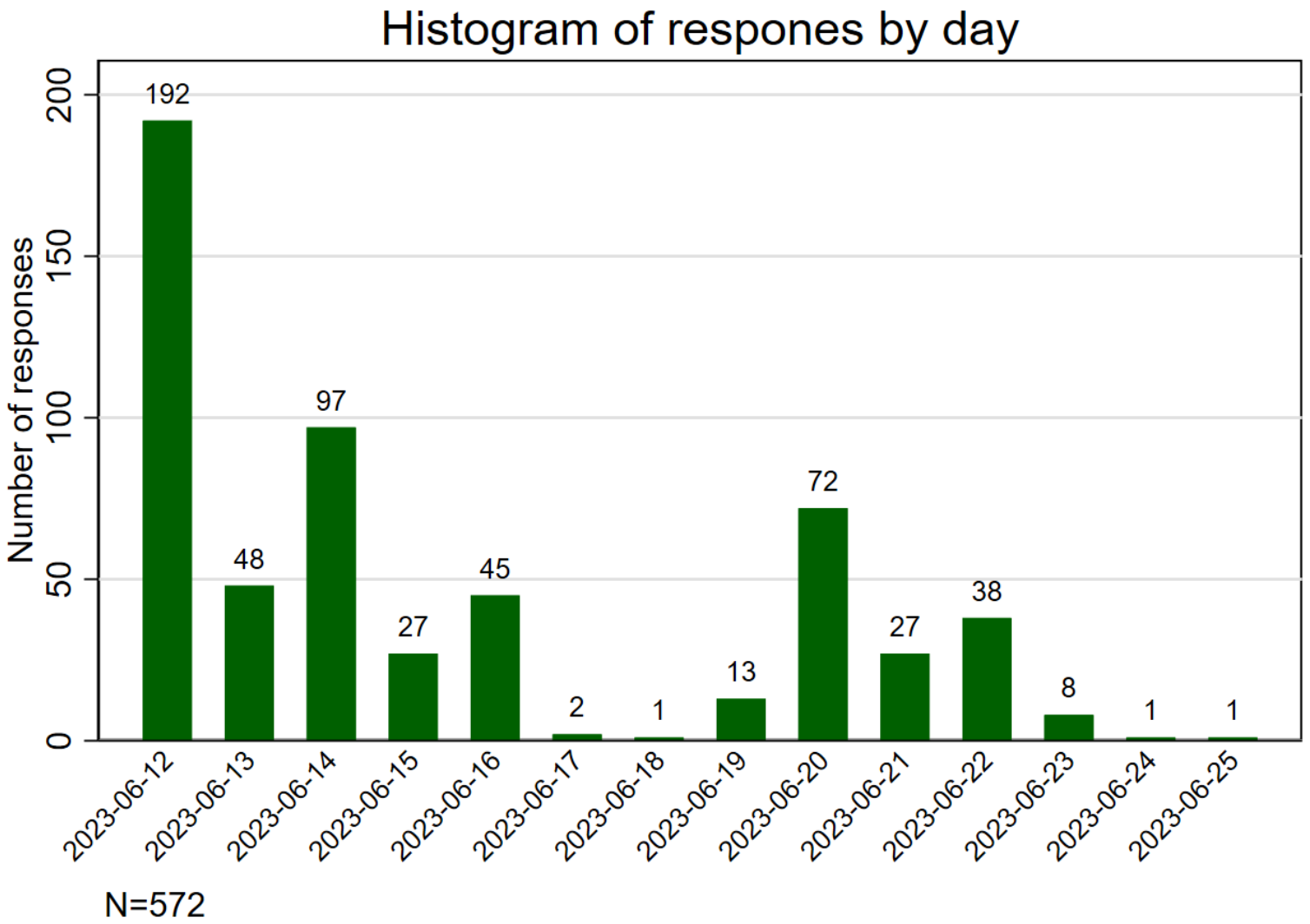


NOTES: Calculated using monthly data through June 2023. The charts show smoothed series. This is a plot of the subjective distribution for the representative firm's future sales growth rates over a 4-quarter look-ahead horizon. To calculate this distribution, we pool over all firm-level subjective forecast distributions in the indicated month and weight each firm by its activity level. Then we use the probabilities assigned to each possible future sales growth rate to obtain activity-weighted quantiles of the future sales growth rate distribution.

Source: Survey of Business Uncertainty conducted by the Federal Reserve Bank of Atlanta, Stanford University, and the University of Chicago Booth School of Business.

Appendix: Histogram of survey response frequency for the June 2023 survey wave

June 2023



Source: Survey of Business Uncertainty conducted by the Federal Reserve Bank of Atlanta, Stanford University, and the University of Chicago Booth School of Business.