Headline Results
May 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. A third of firms on the SBU panel have submitted an application for new credit within the past 12 months, while about a quarter of them plan to apply for credit in the next 12 months. (Slide 7)

3. Firms say that having enough cash on hand is the main reason why they have not applied and are not planning to apply for credit. (Slide 10)

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–May 2023

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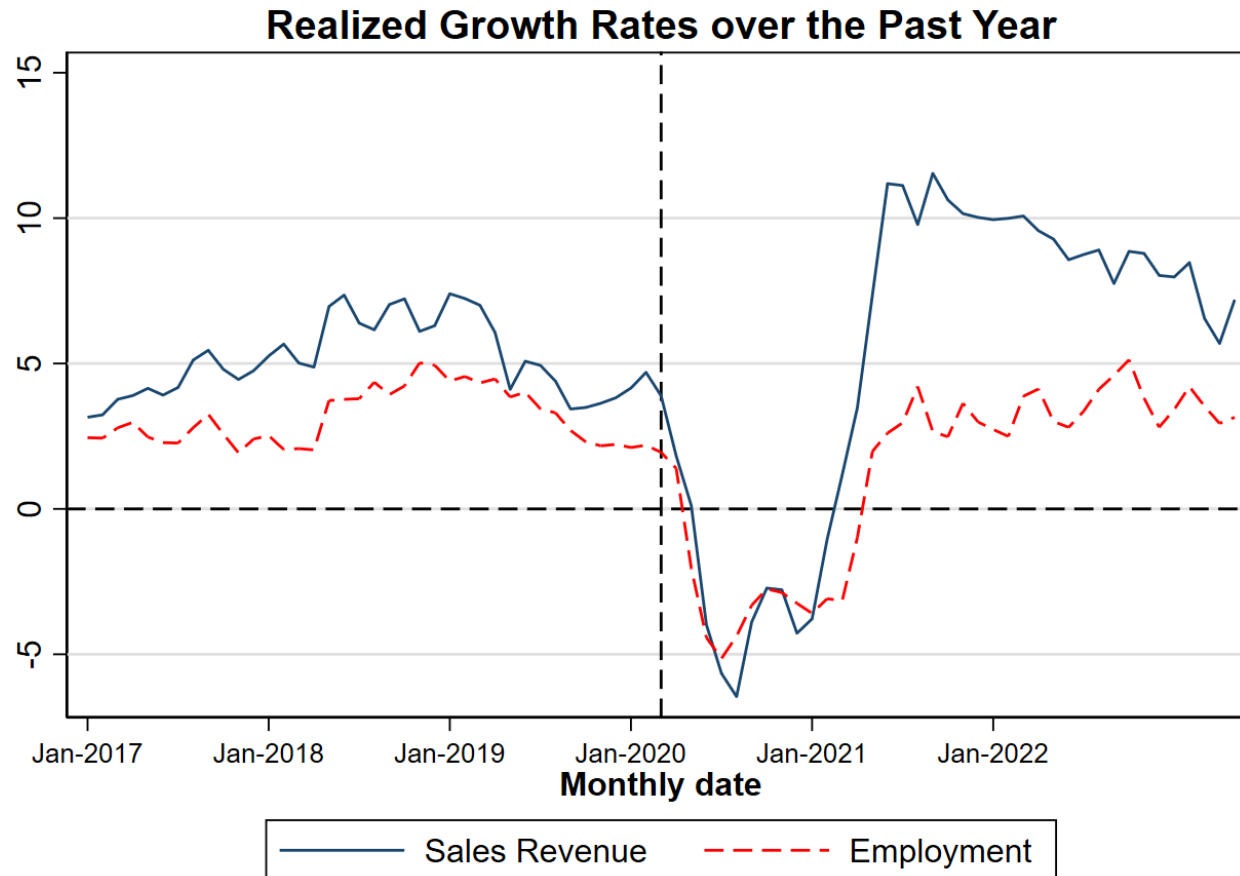
NOTE: Calculated using monthly data through May 2023. Realized growth rate series for sales revenue and employment are activity-weighted averages of firms' reported (look-back) growth rates over the past year (specifically, the previous four quarters for sales revenue and previous 12 months for employment).

NOTE: The chart shows smoothed series.

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–May 2023

Year-Ahead Sales Growth Rate Expectations
Percent changes from current quarter to four quarters hence

- – – – Sales Growth (unsmoothed)
- ——— Sales Growth (smoothed)

Year-Ahead Uncertainty about Sales Growth Rates
Percent changes from current quarter to four quarters hence

- – – – Sales Uncertainty (unsmoothed)
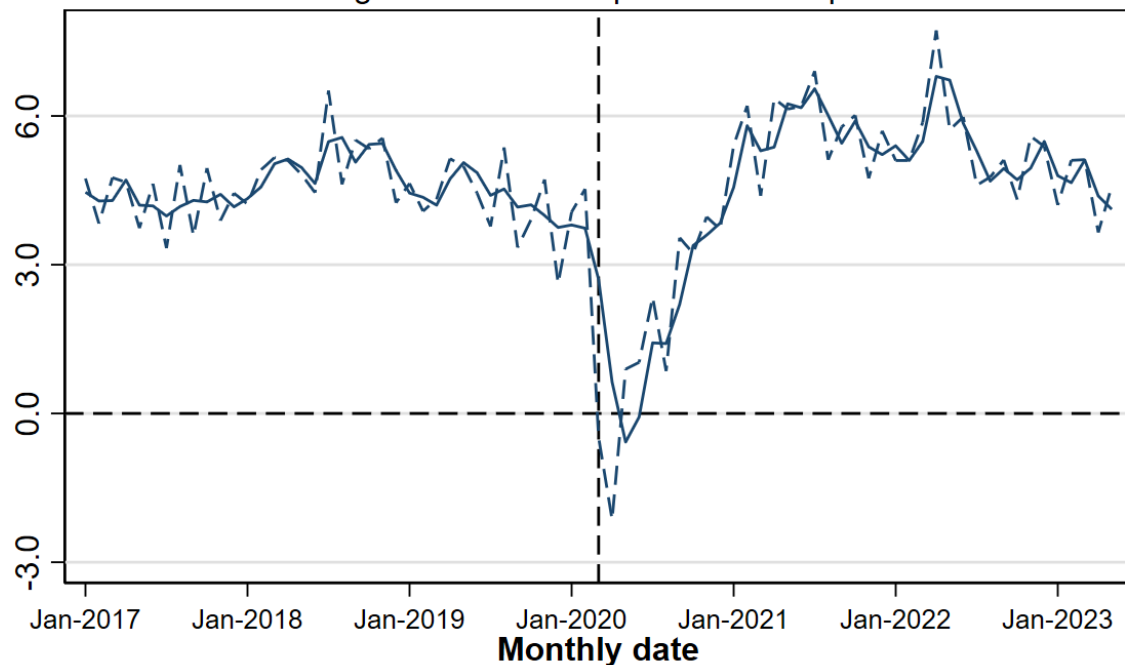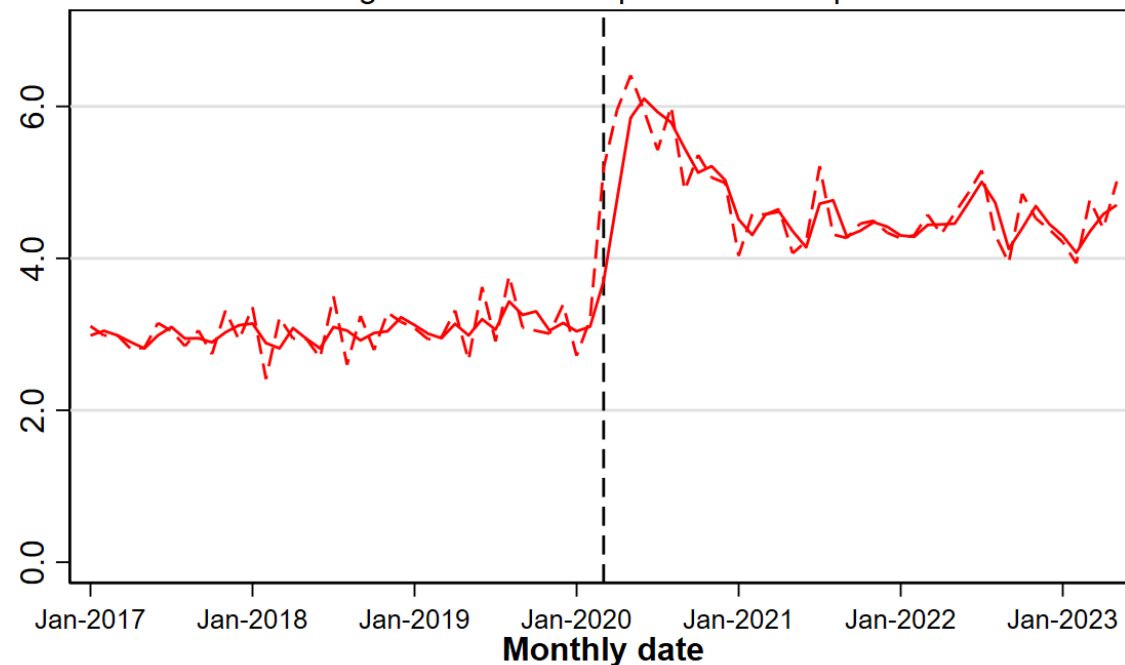- ——— Sales Uncertainty (smoothed)

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–May 2023

Year-Ahead Employment Growth Rate Expectations
Percent changes from current month to twelve months hence

- – – – Employment Growth (unsmoothed)
- ——— Employment Growth (smoothed)

Year-Ahead Uncertainty about Employment Growth Rates
Percent changes from current month to twelve months hence

- – – – Employment Uncertainty (unsmoothed)
- ——— Employment Uncertainty (smoothed)
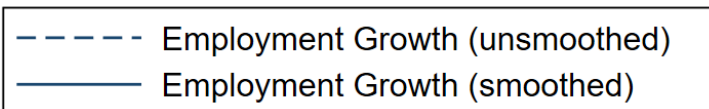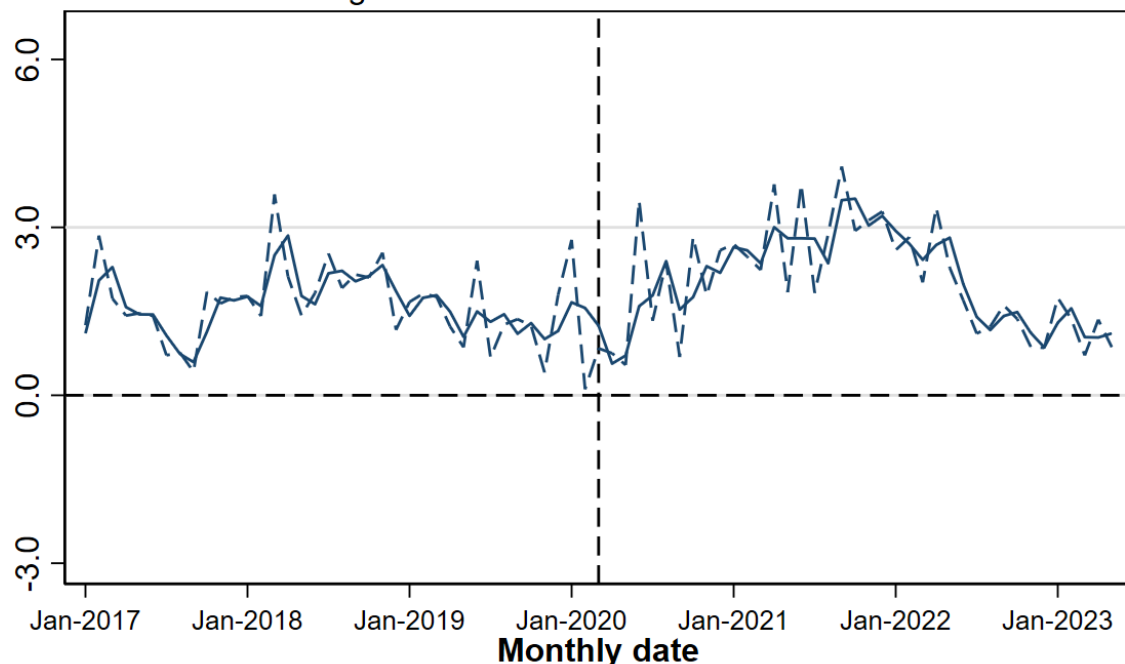
NOTE: The charts show smoothed series.

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.

Distribution of Sales Growth Rates over the Past Year

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

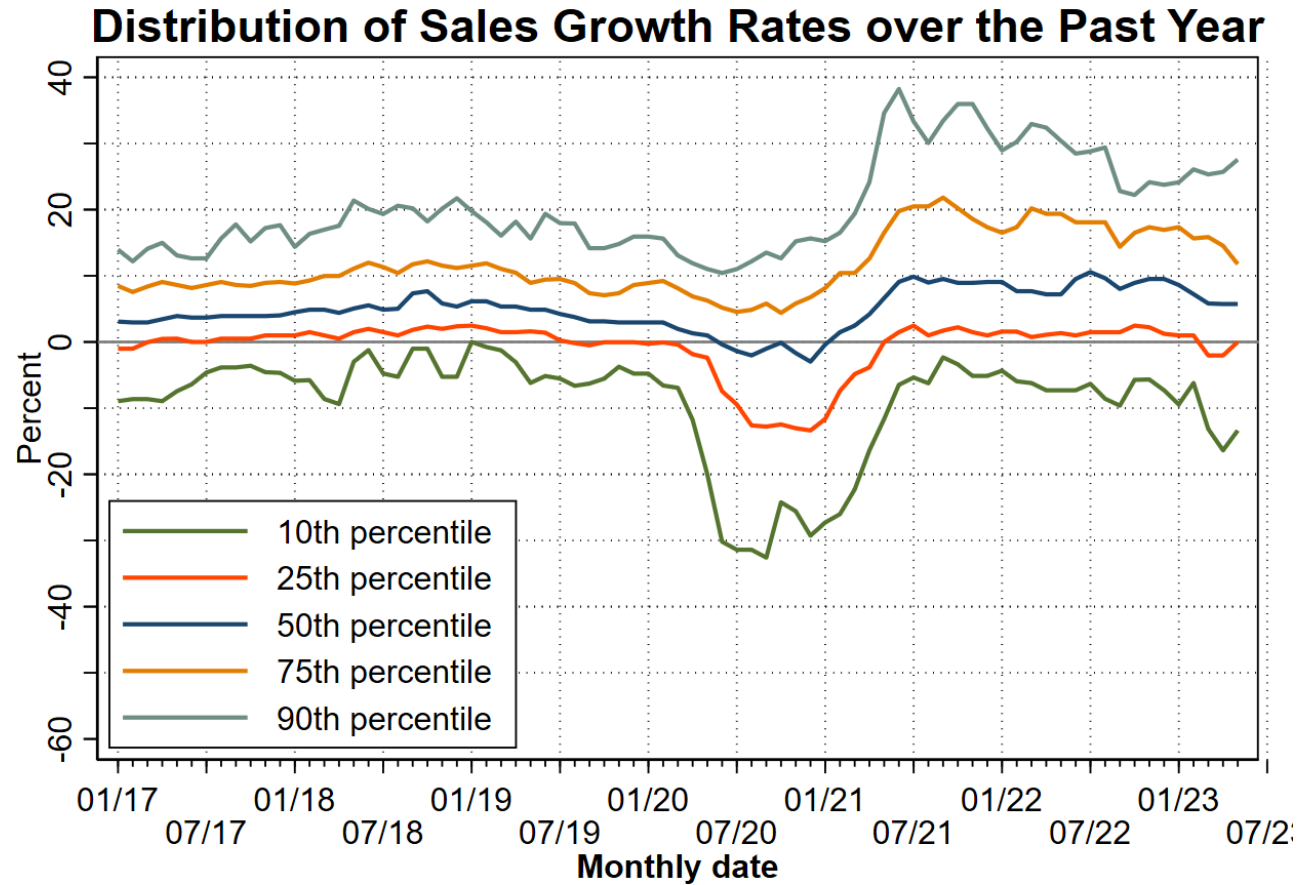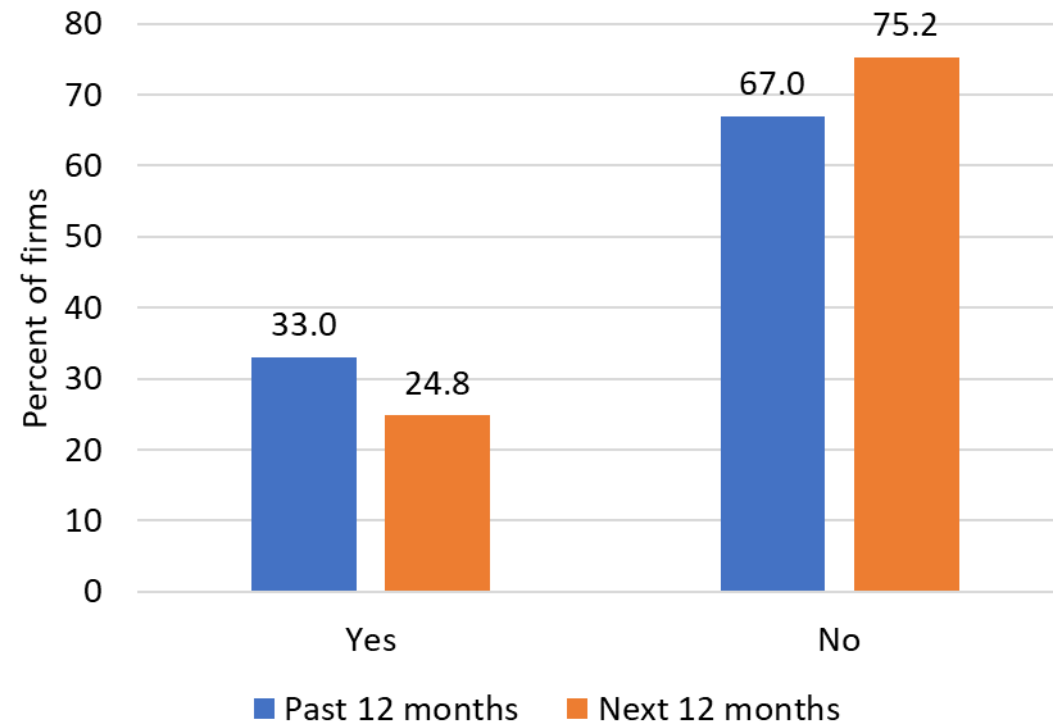Source: Survey of Business Uncertainty conducted by the Federal Reserve Bank of Atlanta, Stanford University, and the University of Chicago Booth School of Business.

A third of firms on the SBU panel have submitted an application for new credit within the past 12 months, while about a quarter of the panel plans to apply for credit in the next 12 months.

Question 1: In the past 12 months, has your firm submitted an application for new credit? Examples of credit include a credit card, loan, new line of credit, rolling over an existing line of credit, trade financing, nonresidential mortgage, refinancing an existing nonresidential mortgage, etc.

Question 2: Looking forward over the next 12 months, does your firm plan to submit an application for new credit? Examples of credit include a credit card, loan, new line of credit, rolling over an existing line of credit, trade financing, nonresidential mortgage, refinancing an existing nonresidential mortgage, etc.

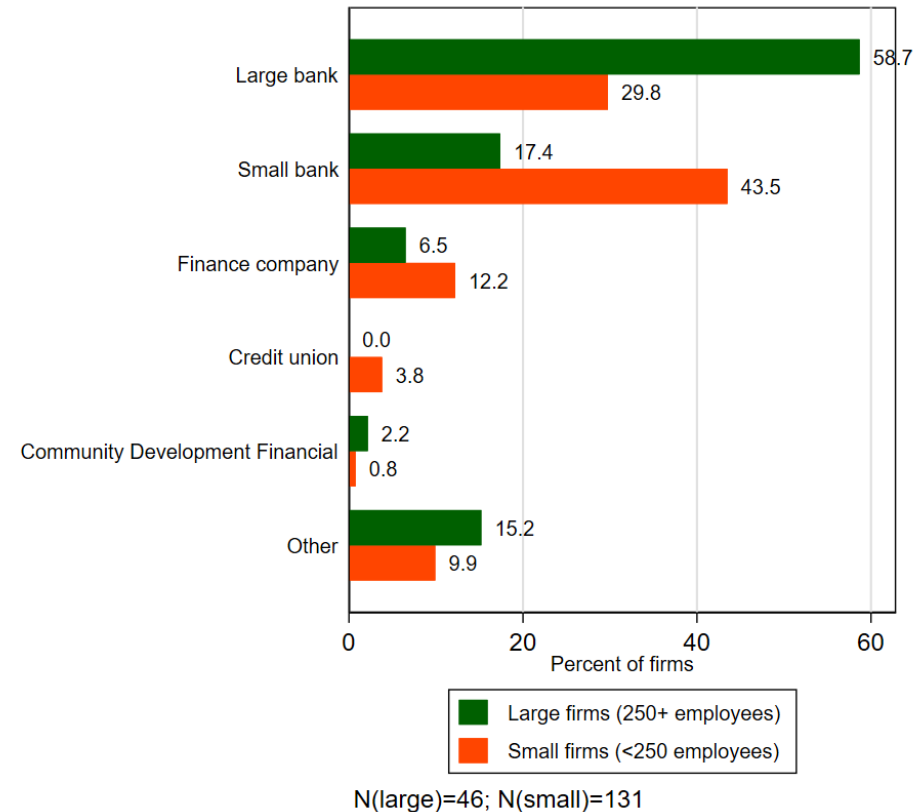$N_{(past\ 12m)}=540;\ N_{(next\ 12m)}=540$

Note: Results are not weighted. The graph shows combined results from the April 2023 survey wave.
Source: Atlanta Fed Survey of Business Uncertainty

Three-quarters of firms say that their most recent credit application was with a commercial bank.

Question: Thinking about your firm's most recent application, from what category of lender did your firm apply for new credit?

Types of lenders that firms applied with for new credit

Lender	Percent of firms
Large bank	37.3
Small bank	36.7
Finance company	10.7
Credit union	2.8
Community Development Financial	1.1
Other	11.3

N=177

Lender	Large firms (250+ employees)	Small firms (<250 employees)
Large bank	58.7	29.8
Small bank	17.4	43.5
Finance company	6.5	12.2
Credit union	0.0	3.8
Community Development Financial	2.2	0.8
Other	15.2	9.9

N(large)=46; N(small)=131

Note: This question was given to firms that have submitted an application for new credit within the past 12 months. Results are not weighted. The graphs show results from the April 2023 survey wave.
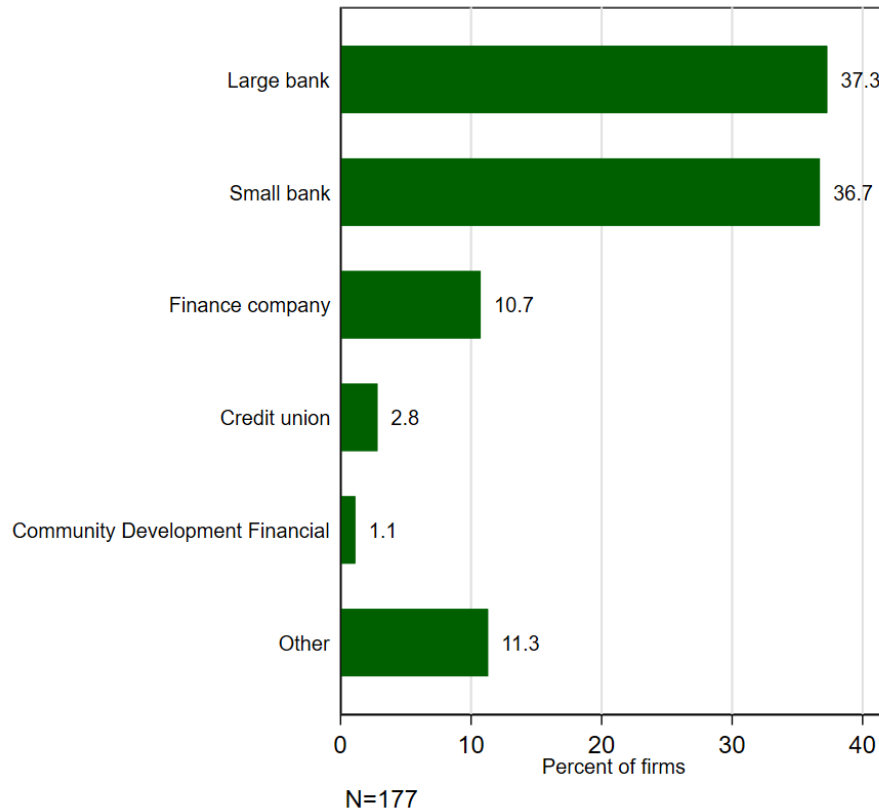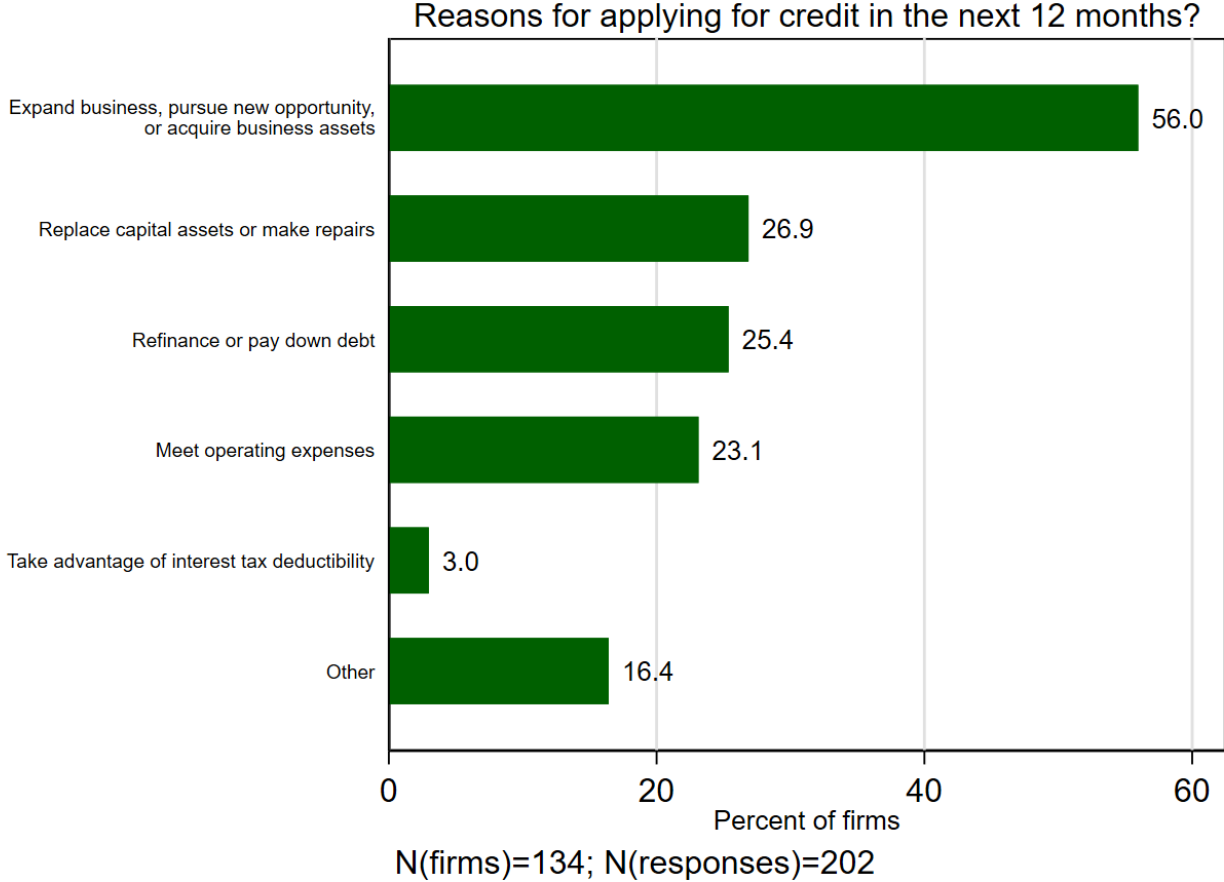Source: Atlanta Fed Survey of Business Uncertainty

Of the 25% of firms that plan to seek credit financing, over half plan to expand business or pursue new opportunities.

Question: Looking ahead to the next 12 months, for what purpose does your firm plan to seek credit financing? Select all that apply

Reasons for applying for credit in the next 12 months?

Reason	Percent
Expand business, pursue new opportunity, or acquire business assets	56.0
Replace capital assets or make repairs	26.9
Refinance or pay down debt	25.4
Meet operating expenses	23.1
Take advantage of interest tax deductibility	3.0
Other	16.4

Percent of firms

N(firms)=134; N(responses)=202

Note: This question was given to respondents firms that are planning to submit an application for new credit within the next 12 months. Results are not weighted. The graph shows results from the April 2023 survey wave.

Firms say that having enough cash on hand is the main reason why they have not applied and are not planning to apply for credit.

Question 1: For what reasons has your firm not submitted an application for new credit in the past 12 months? Select all that apply
Question 2: For what reasons is your firm not planning to apply for new credit in the next 12 months? Select all that apply
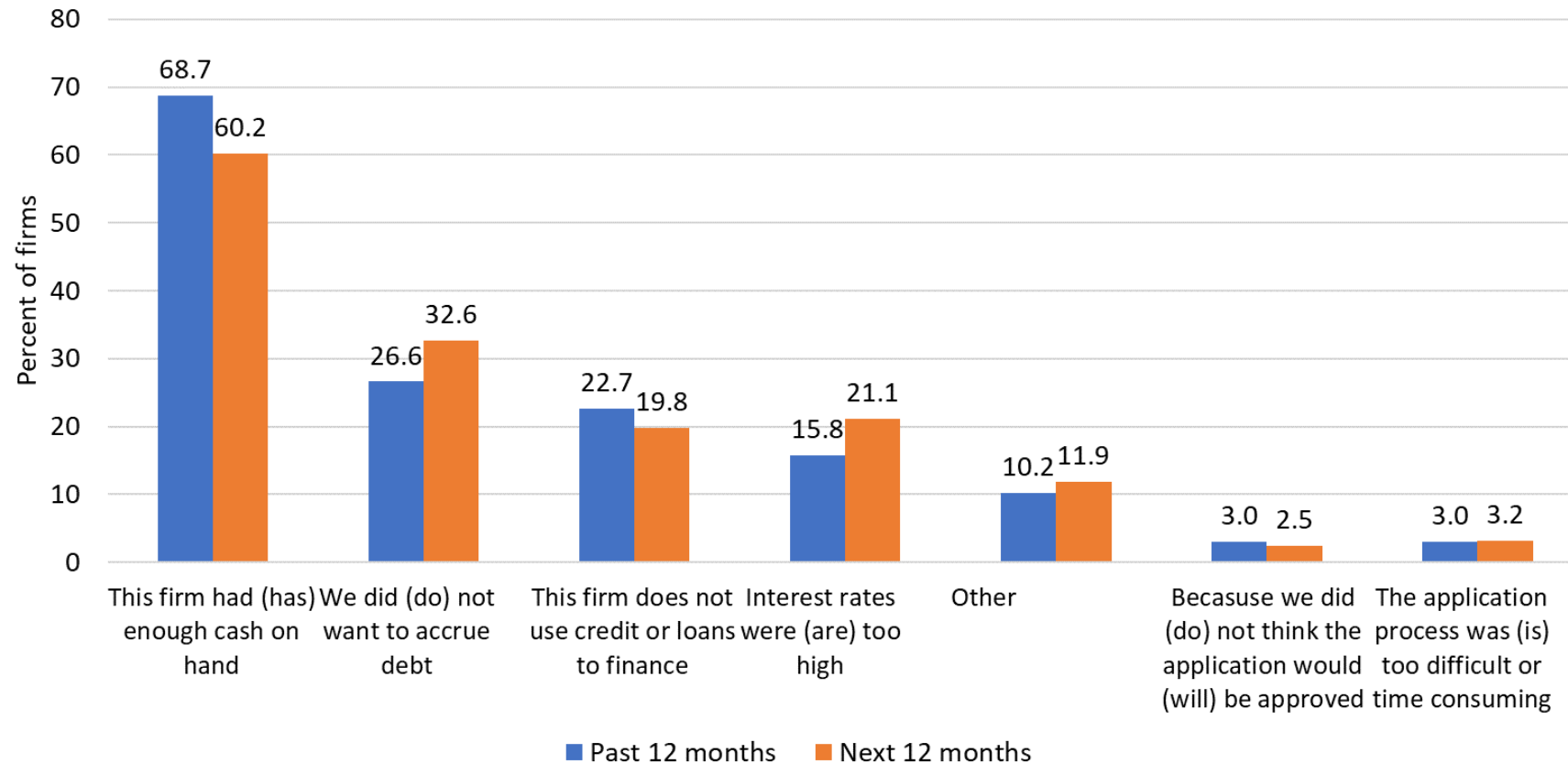
$N_{(past\ 12m,\ firms)}$=361; $N_{(past\ 12m,\ responses)}$=542; $N_{(next\ 12m,\ firms)}$ =405; $N_{(next\ 12m,\ responses)}$ =613

Note: These questions were given to firms that have (will) not submitted (submit) an application for new credit within the past (next) 12 months. Results are not weighted. The graph shows combined results from the April 2023 survey wave.
Source: Atlanta Fed Survey of Business Uncertainty

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.
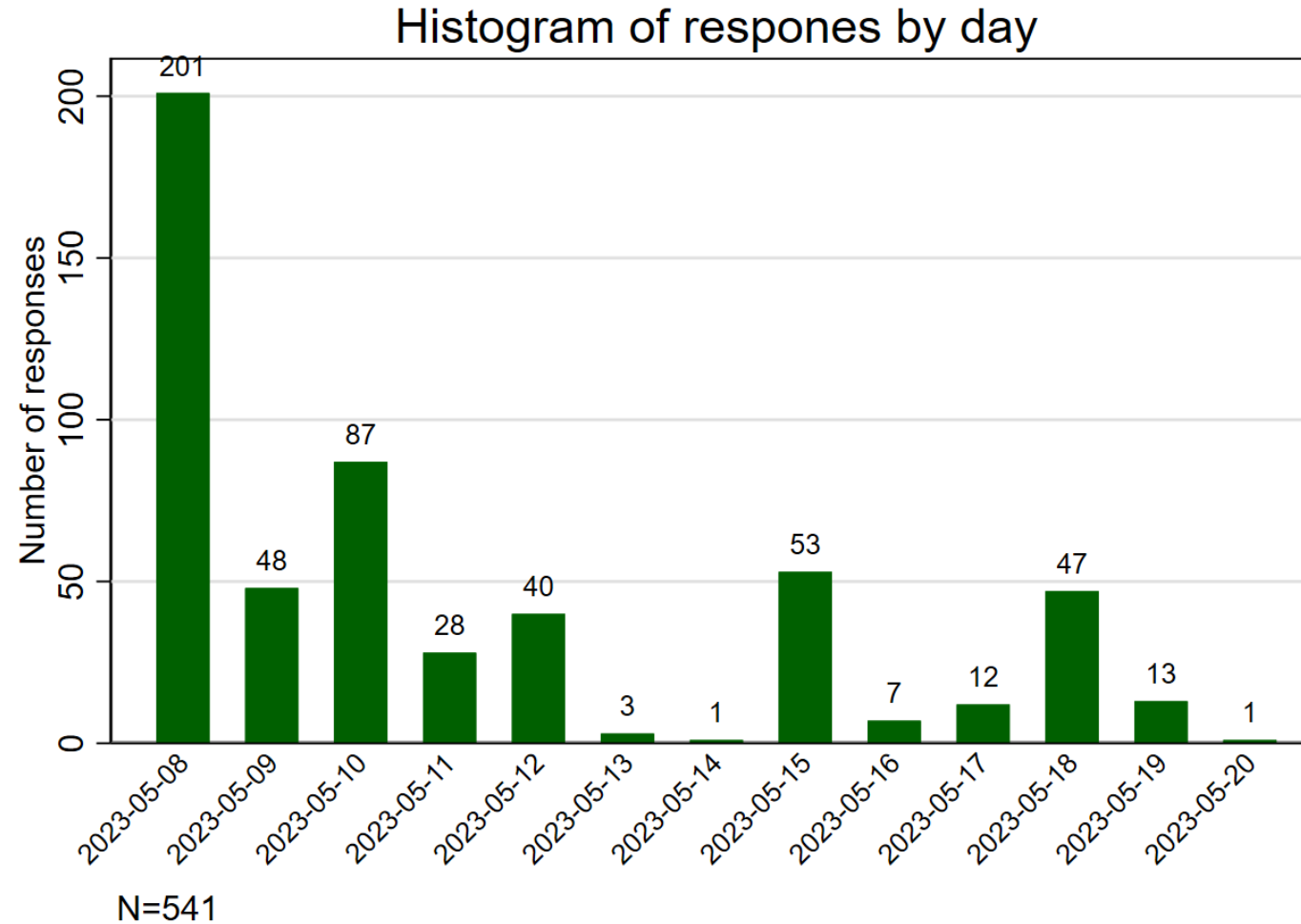
January 2017–May 2023

Subjective Distribution of Future Sales Growth Rates at a One-Year Horizon
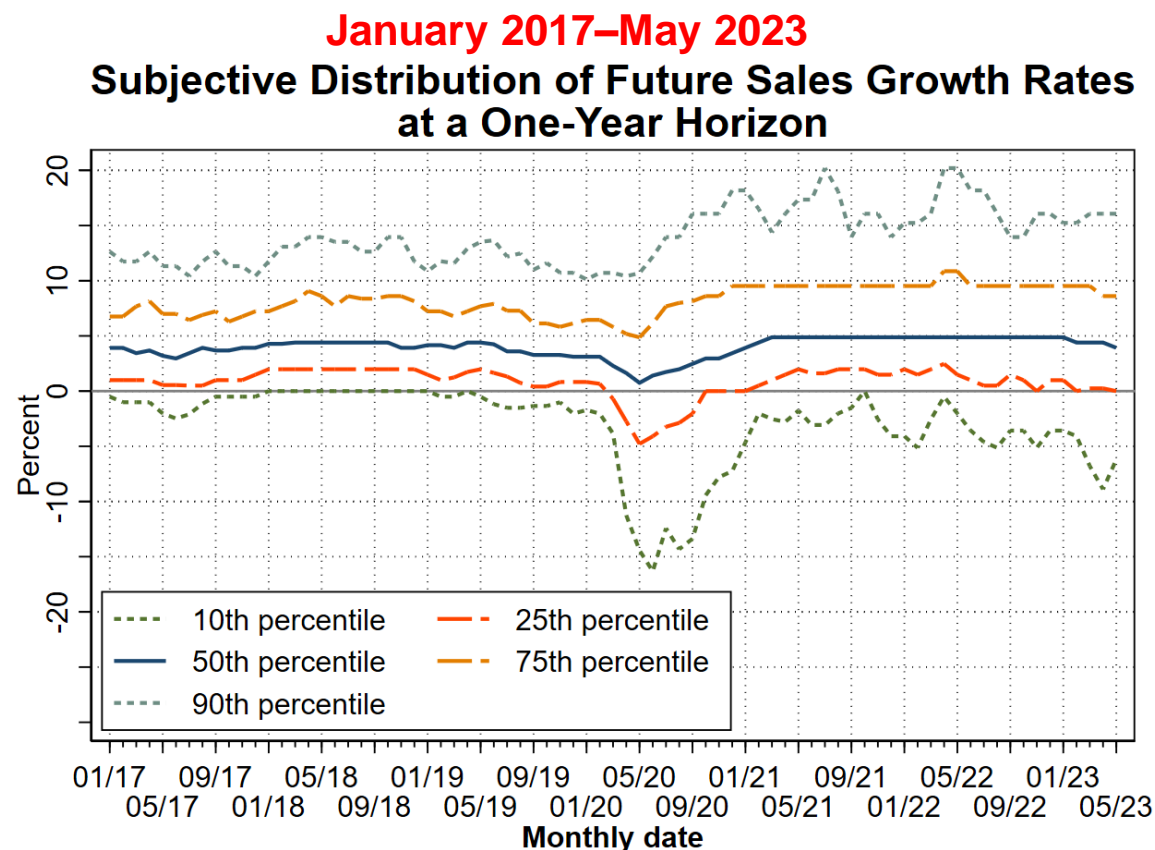
NOTES: Calculated using monthly data through May 2023. The charts show smoothed series. This is a plot of the subjective distribution for the representative firm's future sales growth rates over a 4-quarter look-ahead horizon. To calculate this distribution, we pool over all firm-level subjective forecast 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.

May 2023

Histogram of respones by day