US Daily: Is JOLTS Overstating Job Openings? (Walker)

- The response rate to the Job Openings and Labor Turnover Survey (JOLTS) has plummeted almost 30pp since the start of the pandemic to just over 30%, raising questions about the survey's reliability at a time when the focus on its monthly prints has never been greater.
- We see two main channels through which a lower response rate can impact the JOLTS job openings statistics. First, a lower response rate reduces the sample size and the accuracy of the resulting statistics. Indeed, the Bureau of Labor Statistics (BLS) reports that the median monthly standard error—a measure of the expected discrepancy between a sample estimate and the true value of a population—had already begun increasing before the pandemic. We estimate that the monthly standard error is now at least 90% higher than in 2002-2013. This implies a 90% confidence interval of roughly 700k for the latest readings.
- More importantly, a declining response rate can systematically bias the job vacancy estimates in one direction or the other if the probability of nonresponse is correlated with changes in job openings. And indeed, the BLS cites the increase in remote work as one of the key drivers of nonresponse. Combining company-level data on job openings and remote work status, we find that job openings have declined by 7pp more at companies with flexible working arrangements over the last year—consistent with an upward bias in today's JOLTS job openings figures. Put another way, companies with flexible working arrangements and lower job openings tend to be underrepresented in the JOLTS sample. We believe this helps explain a modest share—roughly 200-300k—of the divergence between JOLTS and online job postings—which do not have monthly survey response issues—over the last year. These findings argue for currently treating JOLTS less like the "true" level of job openings and more like another series to be viewed in conjunction with a suite of job openings metrics.

Jan Hatzius
+1(212)902-0394 | jan.hatzius@gs.com
Goldman Sachs & Co. LLC

Alec Phillips
+1(202)637-3746 | alec.phillips@gs.com
Goldman Sachs & Co. LLC

David Mericle
+1(212)357-2619 |
david.mericle@gs.com
Goldman Sachs & Co. LLC

Spencer Hill, CFA
+1(212)357-7621 | spencer.hill@gs.com
Goldman Sachs & Co. LLC

Joseph Briggs
+1(212)902-2163 |
joseph.briggs@gs.com
Goldman Sachs & Co. LLC

Ronnie Walker
+1(917)343-4543 |
ronnie.walker@gs.com
Goldman Sachs & Co. LLC

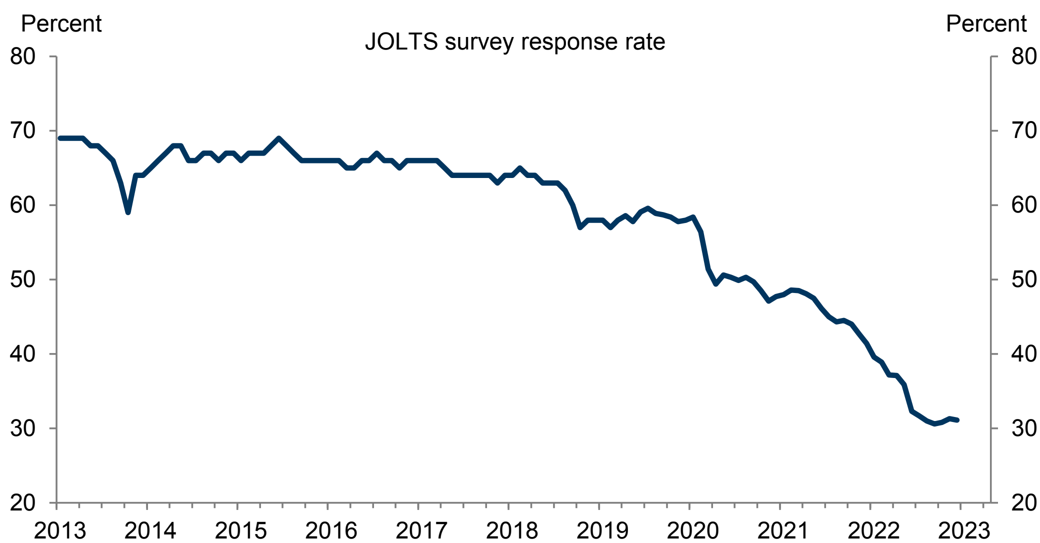
Tim Krupa
+1(202)637-3771 | tim.krupa@gs.com
Goldman Sachs & Co. LLC

Manuel Abecasis
+1(212)902-8357 |
manuel.abecasis@gs.com
Goldman Sachs & Co. LLC

Is JOLTS Overstating Job Openings?

Response rates to government statistical surveys have fallen sharply during the pandemic, accelerating a downward trend seen over the past decade. Exhibit 1 shows that the decline in the response rate to the Job Openings and Labor Turnover Survey (JOLTS) has been particularly acute, falling from roughly 70% a decade ago to just under 60% in 2019 and just over 30% at the end of last year. The decline in the response rate—which has raised questions about the survey's reliability—unfortunately comes at a time when job openings have become an integral part of assessing labor market tightness and when the focus on monthly prints has never been greater.

Exhibit 1: The JOLTS Response Rate Has Been Cut in Half Since the Start of the Pandemic

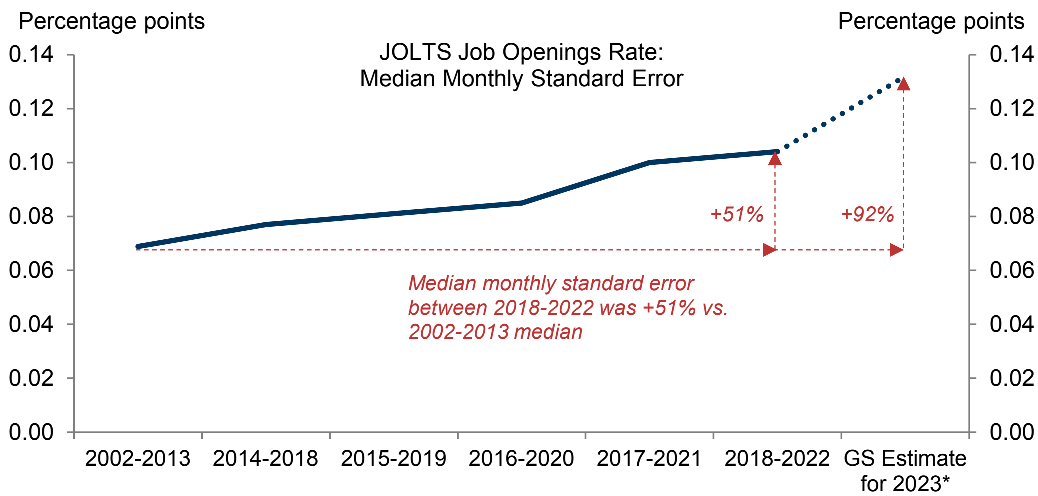


Source: Department of Labor, Goldman Sachs Global Investment Research

We see two main channels through which a lower response rate can impact the JOLTS report. First, a lower response rate reduces the sample size, which can increase month-to-month volatility and widen the confidence interval around point estimates. The JOLTS sample is already relatively small at 21,000 establishments, which is 3% the size of the nonfarm payrolls survey and an even tinier share of the estimated number of establishments across the US. The Bureau of Labor Statistics reports that the median monthly standard error—a measure of the expected discrepancy between a sample estimate and the true value of a population–of the JOLTS job openings rate increased by over 50% in 2018-2022 relative to 2002-2013. This reported increase translates to a 90% confidence interval of roughly 550k around the latest job openings reading. However, this likely understates the standard errors for recent readings because the response rate declined sharply between 2018 and 2022. If we assume that the cross-sectional standard deviation implied by combining the reported median standard error with the median response rate over 2018-2022 is unchanged—which is almost certainly a conservative assumption—we estimate that the monthly standard error has increased 92% relative to 2002-2013. An increase of this magnitude translates to a 90% confidence interval of roughly 700k around the latest job openings reading.

However, we would note that even a somewhat larger confidence interval would be moderate in comparison to the magnitude of the swings in job openings over the last couple years, which increased by 5.3mn between the end of 2019 and last year's peak and have fallen by 2.4mn since last year's peak.

Exhibit 2: The Median Monthly Standard Error for the Job Openings Rate Increased Over 50% in 2018-2022 Relative to 2002-2013

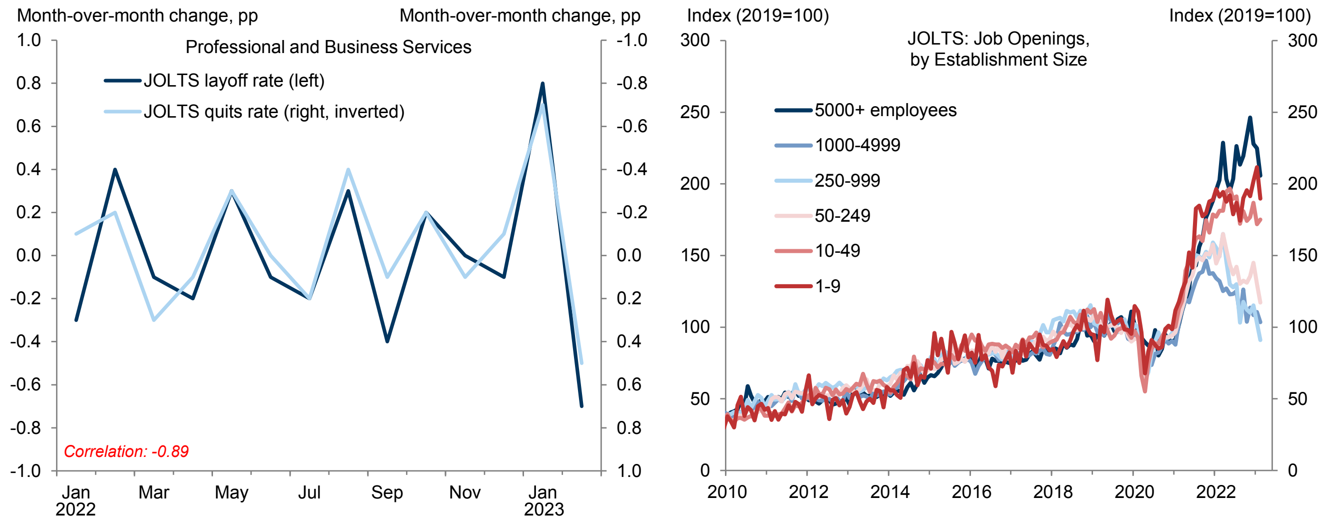


* Assumes that the cross-sectional standard deviation implied by combining the median response rate and reported median standard error for 2018-2022 is unchanged.

Source: Department of Labor, Goldman Sachs Global Investment Research

We also suspect that the decline in the response rate may be contributing to some odd patterns that have emerged in the subcomponents of the JOLTS report. For example, the left panel of Exhibit 3 shows that the layoff and quits rates for the professional and business services industry have mirrored one another recently, a pattern not apparent before the pandemic. The right panel of Exhibit 3 shows that there has been a substantial increase in dispersion in the number of job openings across different size establishments.

Exhibit 3: The Decline in the Response Rate Might Explain Some of the Odd Patterns That Have Emerged in JOLTS Subcomponents



Source: Department of Labor, Goldman Sachs Global Investment Research

Second, a declining response rate can bias medium-term trends if the probability of nonresponse is correlated with changes in job openings (i.e., a lower response rate can introduce nonresponse bias). The BLS has indicated that the increase in remote work has contributed to declines in response rates (i.e. companies with work-from-home are less likely to respond to government surveys).[1] If job openings trends at companies with flexible working arrangements have been different (after controlling for a company's industry and other variables that the BLS utilizes when imputing missing responses) from those at companies that are fully back in the office, that could distort JOLTS because companies with flexible working arrangements are likely underrepresented.

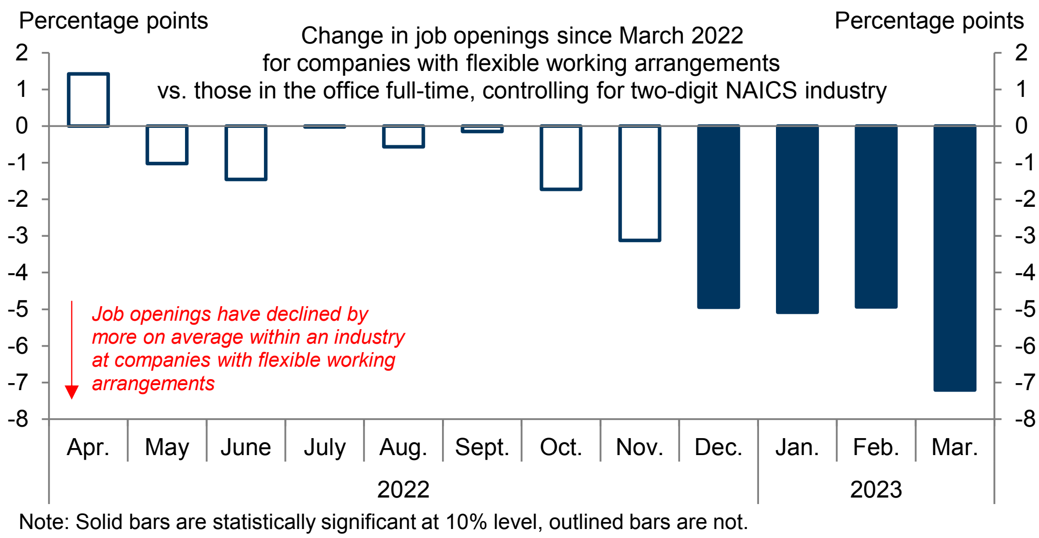
To test for a difference, we combine data on company-level job openings from LinkUp with company-level remote work statuses from Flex. Exhibit 4 shows that, after controlling for a company's industry, job openings have declined by 7pp more over the last year at companies with flexible working arrangements.[2] Taken together with the fact that companies with more flexible working arrangements are likely underrepresented in the JOLTS, this suggests that nonresponse could be biasing JOLTS higher. It is difficult to accurately estimate the magnitude of the bias without knowing the difference in response rates between companies that are back in the office and those with flexible working arrangements, but our best guess is that JOLTS would have declined an additional 200-300k over the last year absent the bias.[3]

[1] Douglas Williams, "Survey Nonresponse: Trends, Challenges, and Strategies," 2022.

[2] We would note that we do not think that there has necessarily been a causal relationship between remote work status and changes in job openings over the last year. Rather, we suspect that two-digit NAICS codes (the industry-level at which the BLS imputes for nonresponse) are not granular enough to capture a confounding factor. E.g., tech-focused companies within the same two-digit NAICS code as less tech-focused companies are more likely to have flexible working arrangements and have seen larger declines in job openings.

[3] One method for teasing out the difference in the changes in response rates relies on assuming that the increase in remote work explains the underperformance in the response rate relative to the pre-pandemic trend of JOLTS vs. other establishment surveys where initiation into the sample does not require human contact.

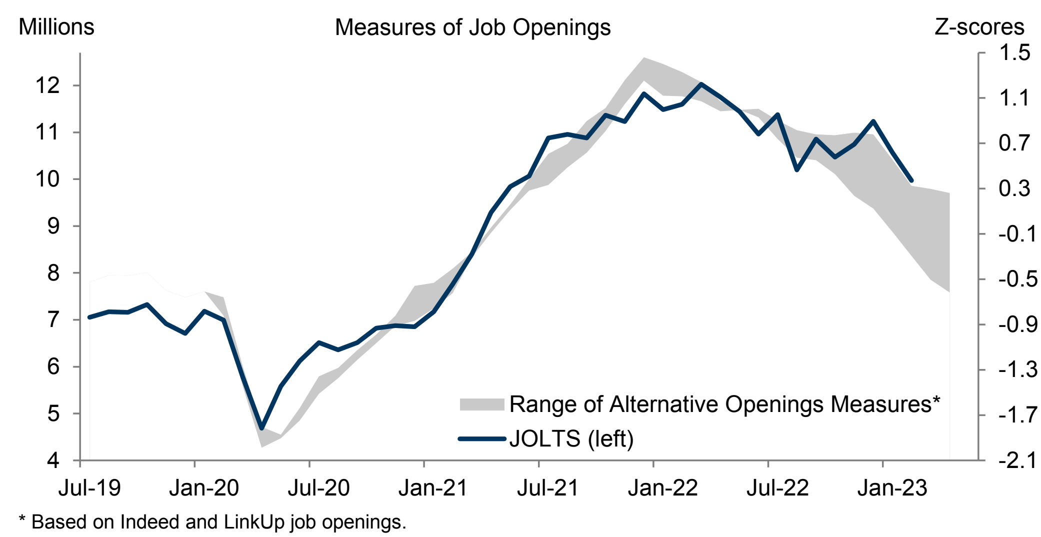
Exhibit 4: Job Openings Have Declined More Over the Last Year at Companies with Flexible Working Arrangements, Which Are Likely Underrepresented in JOLTS



Source: LinkUp, Flex Index, Goldman Sachs Global Investment Research

An upward bias from nonresponse could also explain part of the divergence between JOLTS and some alternative measures of job openings, including measures from LinkUp and ZipRecruiter, that have fallen more sharply over the last year. At the same time, some alternative measures of job openings could be downwardly biased, as their sample could be skewed toward public companies which are presumably more likely to have an online presence and have cut job openings more sharply. As a result, we suspect that the "true" level of job openings lies somewhere in the middle of the range implied by JOLTS and alternative measures of job openings.

Exhibit 5: JOLTS Job Openings Is at the Top End of the Range Implied by Alternative Measures of Job Openings



Source: Department of Labor, Indeed, LinkUp, Goldman Sachs Global Investment Research

Ronnie Walker

Disclosure Appendix

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