

Special Commentary — August 14, 2024

2024 Benchmark Payroll Revision: Your Questions Answered

Summary

Despite having slowed in recent months, the strength of nonfarm payroll growth over the past year has been a notable outlier among other indicators showing a significant cool down in the labor market. Could upcoming benchmark revisions be the key to resolving the mystery over payrolls' seeming exceptionalism this past year? In this report, we address questions about the Bureau of Labor Statistics (BLS) annual benchmark process, including what to expect for the upcoming preliminary benchmark estimate and what it could mean for the current perception of the jobs market.

- **Why is an annual benchmark needed and what period does it cover?** Each year the BLS aligns the level of employment as reported by the Current Establishment Survey (CES) to more comprehensive data from administrative sources (such as unemployment insurance systems) to address response and sampling errors in the survey. The CES estimated count of nonfarm payrolls in March of each year is revised to correspond with the actual employment count in that month, leaving the benchmark period to cover the 12 months through March of each year.
- **Does it usually alter the current labor market landscape?** The benchmark revision has typically not left a meaningful mark on the present view of the jobs market. It is somewhat dated upon its release; the preliminary estimate is not available until August of each year, while the final benchmark revision is not issued until February the following year (with the release of the January jobs report). Further, the benchmark revision has had a historically small effect on the level of payrolls each March. Over the past 10 years, revisions averaged an absolute change to the level of employment of 0.1%, with a maximum impact of 0.3%.
- **Could 2024's benchmark be more meaningful?** Data through Q4-2023 from the Quarterly Census of Employment and Wages (QCEW), the key administrative data used in the annual benchmarking process, imply a negative revision ahead. Year-over-year job growth in the CES is currently reported at 2.0% in December—0.5 percentage points higher than the 1.5% annual growth in the QCEW data. If that percentage point gap persisted through March 2024, the average monthly pace of payroll growth in the CES for the year through March would be revised down from 246K to 189K—a less remarkable albeit still strong pace of job growth. Nevertheless, that would equate to the largest downward revision since March 2009.
- **Why has the Establishment Survey likely overstated payroll growth?** The birth-death model may not yet be capturing a more difficult business climate and slowdown in business formation. Declining response rates to the CES and differing characteristics between the firms that do and do not respond may be another factor.
- **Could the preliminary benchmark estimate affect the FOMC's near-term rate path?** We doubt the preliminary benchmark estimate will be a complete game-changer for FOMC members' current perceptions of the labor market. The months covered by the benchmark period—April 2023 to March 2024—will make even the preliminary estimate somewhat dated and will not say anything explicit about job growth in the subsequent months. In addition, FOMC members, including Chair Powell, already seem dialed-in to the potential for a downward revision. That said, a large negative revision would indicate that the strength of hiring was already fading before this past April, making risks to the full employment side of the Fed's dual mandate more salient amid widespread softening in other labor market data.

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Are Payrolls on the Outside Looking In?

Despite having slowed in recent months, the strength of nonfarm payroll growth over the past year has been a notable outlier among other indicators showing a significant cool down in the labor market. Payroll growth in the first half of the year averaged 218K, with the initial print surpassing consensus expectations each month other than April. Only the latest payroll print, which showed the economy adding 114K jobs in July, has seemed to corroborate the other measures of sputtering labor demand. Recent [JOLTS](#) and [NFIB](#) reports show turnover and hiring intentions that are closer to the lukewarm jobs market of the mid-2010s than its solid pre-pandemic state. Temporary help employment is sitting at its lowest level since 2014 (excluding its 2020 swoon). Continuing claims for unemployment insurance are marching higher in a sign that it is taking longer for the unemployed to find work. The unemployment rate has climbed to 4.3% from 3.7% at the beginning of this year and has formally [triggered the Sahm Rule](#).

Could the 2024 benchmark revision be the key to resolving the mystery over payrolls' seeming exceptionalism over this past year? In this report, we address questions about the BLS's annual benchmark process, including how the benchmark process works, what we expect for the upcoming preliminary benchmark estimate due on August 21 and what the preliminary estimate may imply about the jobs market.

Why Does the Nonfarm Payroll Estimate Need a Benchmark Revision?

Nonfarm payroll estimates are derived from the Current Establishment Survey (CES). The CES is a survey of businesses and government agencies that provide detail on the number of employees at their establishment, the hours worked by employees and the wages and salaries paid to workers. The survey's sample size is quite large, covering about 630K worksites and approximately 30% of nonfarm employment. Nevertheless, the CES is vulnerable to non-response, sampling and non-sampling errors like any survey. To improve the reliability of nonfarm payroll estimates, the BLS periodically benchmarks the level of nonfarm payrolls to reflect the official employment count based on comprehensive administrative data, largely from tax records. This annual alignment of the non-seasonally adjusted (NSA) level of payrolls is different from the annual update to seasonal adjustment factors as well as the monthly revisions between the first, second and third nonfarm payroll releases.

Like any survey, the CES is vulnerable to non-response, sampling and non-sampling errors.

What Forms the Source Data of Benchmark Revisions?

The key administrative data used in the annual benchmarking process come from the Quarterly Census of Employment and Wages (QCEW), a BLS aggregation of business data that covers more than 95% of U.S. employment. The QCEW provides an extensive tally of the number of firms and jobs covered by state and federal unemployment insurance (UI) laws. Each year, the BLS uses the tally from the March QCEW along with a few other administrative sources (e.g., the Railroad Retirement Board) to re-anchor nonfarm payroll estimates.

What Is the Timeline for the Benchmark Revisions?

Each year, the benchmark revision is applied to the CES March level of non-seasonally adjusted payroll employment to align it with the March employment level from administrative data. That is, the 2024 annual benchmark will revise the level of payrolls in March 2024. A preliminary estimate for the 2024 annual revision will be released on August 21. The preliminary benchmark announcement, which coincides with the availability of the Q1 QCEW data, offers a "first look" at what the BLS estimates the final benchmark revision may be. Notably, the preliminary estimate is not actually implemented and does not appear in the data.¹

The benchmark revision is applied to the CES March level of non-seasonally adjusted payroll employment to align it with the March employment level from administrative data.

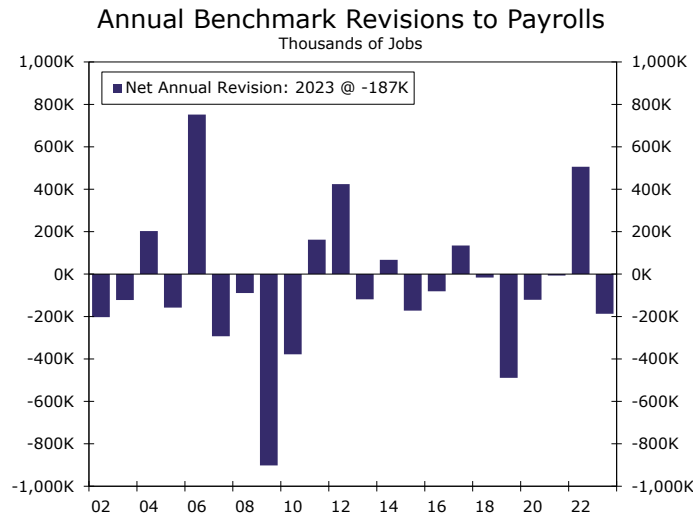
It is not until the final benchmark revision will be published with the January 2025 Employment Situation on February 7, 2025 that revisions will be incorporated into published employment data. With the January 2025 Employment Situation release, data for April 2023 to March 2024 will be revised to reflect the change in employment between March 2023 (when the data were last benchmarked) and March 2024. Seasonal adjustment factors are updated in the same release and can lead to revisions in seasonally adjusted data for the prior five years.

How Large Have Revisions Been Historically?

Historically, benchmark revisions have been small. Over the past 10 years, the absolute change from the benchmark revision averaged 0.1% of total employment, ranging from a 489K *reduction* to employment in March 2019 to a 506K *increase* to employment in March 2022, or 0.3% of payrolls

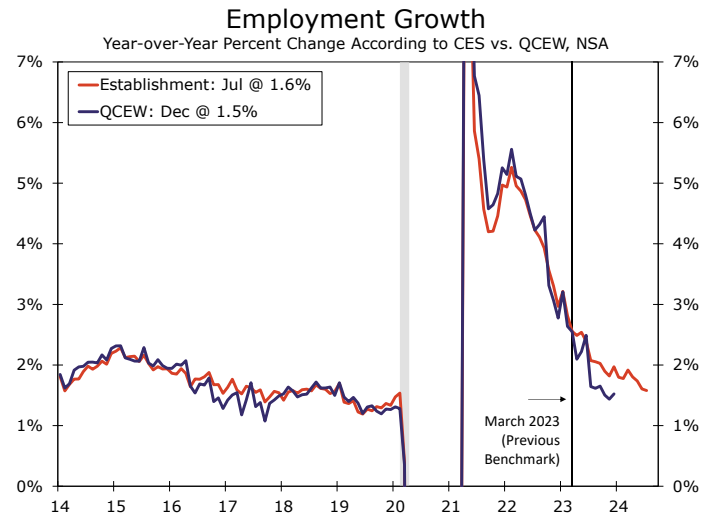
at the time (Figure 1). Last year, the annual benchmarking process resulted in a downward revision of 187K to payrolls, meaning that the economy added roughly 16K fewer jobs each month in the 12 months ending March 2023 than had been previously reported.

Figure 1



Source: U.S. Department of Labor and Wells Fargo Economics

Figure 2



Source: U.S. Department of Labor and Wells Fargo Economics

Which Direction Is This Year's Revision Headed?

We expect the upcoming preliminary estimate of the benchmark revision to be negative, pointing to a lower level of employment as of March 2024 and thus a slower pace of nonfarm payroll growth in the 12 months through March 2024.

The strongest evidence suggesting that actual job growth has been weaker than currently reported in the Establishment Survey comes from the more lackluster pace of job growth reported by the QCEW from April to December 2023. Through the first three quarters of the annual benchmark period, the QCEW reports 712K fewer jobs added than CES, equating to nearly 80K fewer gains per month (the currently published monthly average of payroll gains for that period on a non-seasonally adjusted basis is 446K). Put in percentage terms, year-over-year job growth in the CES is currently reported at 2.0% in December—0.5 percentage points higher than the 1.5% annual growth in the administrative data (Figure 2).

To inform a back-of-the-envelope approximation of how overstated nonfarm employment gains might be from March 2023 to March 2024, we assume the 0.5 percentage point gap between CES and QCEW employment growth persists through Q1-2024. If that percentage point gap were to be maintained through March, the average monthly pace of payroll growth in the CES for the year through March 2024 would be revised down from 246K to 189K—a less remarkable albeit still strong pace of job growth. Still, that would equate to a negative benchmark adjustment of well over 600K, which would be the largest downward revision since March 2009 when the level of payrolls was reduced by 902K (refer back to Figure 1).

A back-of-the-envelope calculation based on QCEW data suggests the average monthly pace of payroll growth for the year through March 2024 would be revised down from 246K to 189K.

The Philadelphia Fed’s use of QCEW data at the state level also hints that the national benchmark revision is likely to be negative. The Early Benchmark state estimates are not intended to offer a preliminary estimate of the size of national revision, but the breadth of changes across states are thought to inform the direction.² According to researchers at the Philly Fed, “Relatively large overall revisions over three or more quarters suggest that the national estimate may be revised slightly in the same direction as the overall state revisions” (emphasis ours). In Q2–2024, a little less than half (24) of states had lower implied employment growth than the pre-benchmarked CES. However, employment growth was implied to be weaker in 39 states in Q3–2023 and weaker in 36 states in Q4–2023.

Could the Birth-Death Factor Be a Reason for Revisions This Year?

The size of the benchmark revision can be thought of as the total error in the nonfarm payroll estimate from the CES. One possible source for error is from the modeling of business births and deaths. The

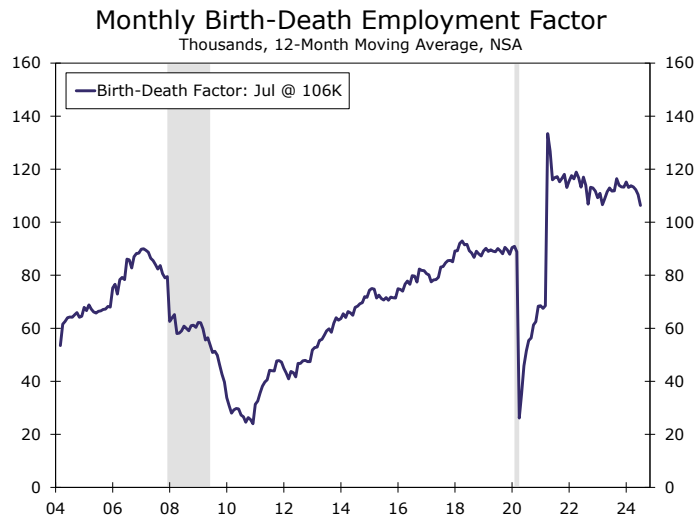
BLS's birth-death model is used to scale payrolls up or down in accordance with the estimated net change in businesses, since newly formed businesses are not immediately able to be included in the CES sample. As a result, the BLS estimates the change in total private employment from business births and deaths econometrically and incorporates the estimate into the monthly nonfarm payroll numbers. This process works well in periods of stable economic growth, but when there is a marked change in economic conditions, the steady relationship between firm births and deaths can break.

Since the post-pandemic boom in business formation, the birth-death factor has provided a historically large lift to monthly payroll gains. Over the past year, the birth-death model has boosted nonfarm employment by an average of 106K per month, roughly 18K more than in 2019 (Figure 3). With the annual benchmark, the error between the BLS forecasts for the birth-death factor and the actual impact can be quantified. For example, the previous benchmark to March 2023 revealed that in the 12 months from April 2022 to March 2023, the birth-death factor overestimated the increase to employment by 330K cumulatively, or an average of 28K each month.³

There is a risk that current factor adjustments are not capturing the increasingly tough business climate caused by decades' high interest rates and still-elevated inflation. Data from the Business Employment Dynamics (BED) program of the QCEW suggest that the post-pandemic surge in entrepreneurship has ended (Figure 4). With the net openings of establishments back in the range of the 2010s the past few quarters, the current birth-death factors could be too high. While having started to slip in recent months, we wouldn't be surprised if the birth-death factor was still overstating employment gains from business births, leading to a subsequent downward revision in payrolls come the annual benchmark.

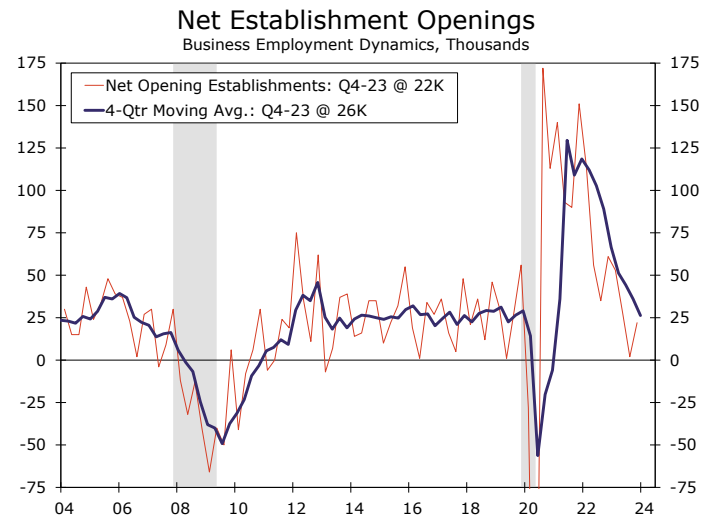
With the net openings of establishments back in the range of the 2010s the past few quarters, the current birth-death factors could be too high.

Figure 3



Source: U.S. Department of Labor and Wells Fargo Economics

Figure 4



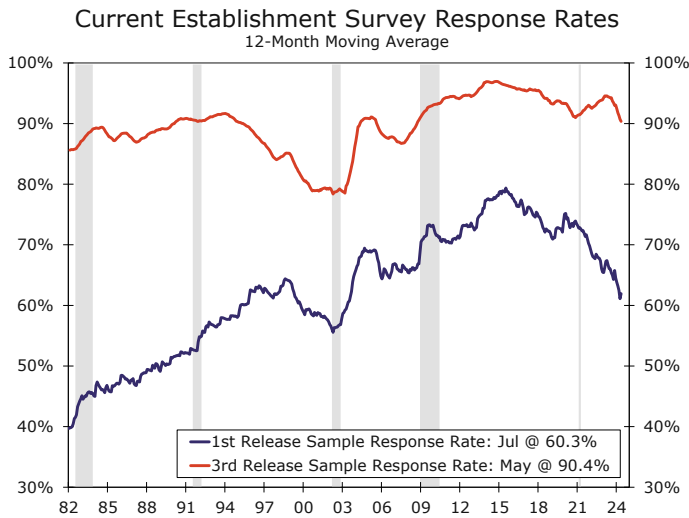
Source: U.S. Department of Labor and Wells Fargo Economics

Do Monthly Revisions Imply Anything About the Benchmark Revision?

Another source of the error between the CES estimate of nonfarm payrolls and the administrative data is declining response rates and the potential for bias in the firms that do respond. The BLS accepts responses for two months after the initial survey window, so revisions between the first and third release are based on additional responses. The ubiquity of downward revisions to nonfarm payrolls between the first and third release over the past year suggests potential for heightened response bias in the CES. As shown in Figure 5, response rates have fallen for both the first and third release over the past year, but much more sharply for the first release.

With more responses coming in after the initial survey window, revisions between the first and third release have indeed been unusually large, averaging a downward adjustment of 30K in the 12 months ending in March 2024 (Figure 6). Firms that are doing relatively well may be the ones that not only are still open and adding more workers, but also that have more time to respond to the CES—biasing upward the estimate of jobs in the economy.

Figure 5



Source: U.S. Department of Labor and Wells Fargo Economics

Might it be the case that the negative monthly revisions to pre-benchmark data (i.e., the difference between the third and the first release) are already accounting for a slowdown, meaning less reason for a large downward benchmark revision come the 2024 process? Historically, the relationship between monthly revisions to pre-benchmark data and the eventual direction and magnitude of the benchmark revision has not been airtight. To that end, the trend of negative monthly revisions over the past year do not guarantee a negative annual benchmark.

Still, of the five times in the past 20 years or so that the monthly revisions have been negative, only once was the benchmark revision positive (see 2017 in Figure 6). And more often if the revisions point in different directions, the monthly "third less first" revision is positive and the benchmark ends up being negative. While the relationship is not rock solid, it is statistically significant. A simple regression of data since 2005 implies the -30K average monthly revisions through March 2024 predicts an annual benchmark revision of roughly -250K, or -21K per month.

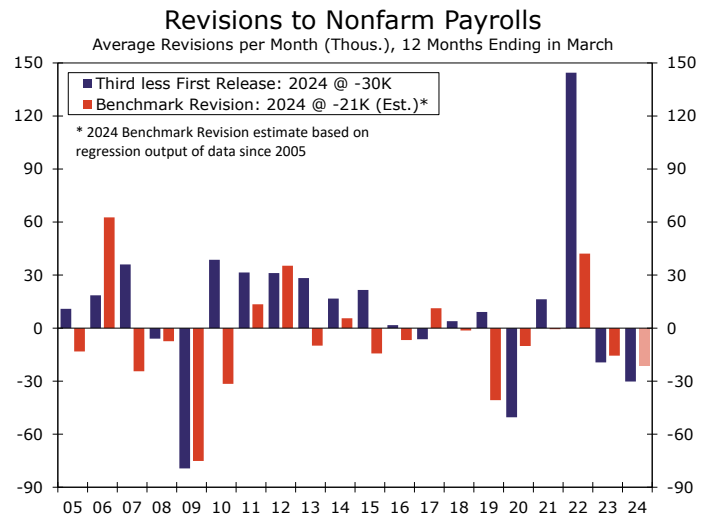
What Would a Downward Revision Mean for the Labor Market Outlook?

Overall, we expect both the preliminary and final benchmark revisions for nonfarm payrolls to be negative for 2024, with the data available thus far for the benchmarking period highlighting the risk for a large downward revision. Yet the preliminary benchmark estimate is unlikely to be a complete game-changer for the current picture of the jobs market or the FOMC's interpretation of it. The months covered by the benchmark period—April 2023 to March 2024—will make even the preliminary estimate somewhat dated and will not say anything explicit about job growth in the subsequent months. In addition, FOMC members already seem dialed-in to the potential for downward revisions to the CES payroll data through the benchmarking process.

The [minutes](#) to the June 12 FOMC reveal that “several participants also suggested that the establishment survey may have overstated actual job gains,” a view Chair Powell clearly heard, as he mentioned the issue in his [post-meeting press conference](#). Since then, doves and hawks alike have flagged the potential for the past year's strength in payrolls to be exaggerated. Governor Lisa Cook [noted in late June](#) that the QCEW data “suggest that payroll job gains were overstated last year and may continue to be so this year.” Governor Bowman also [recently highlighted](#) that the jobs market has not been as strong as payroll data have indicated, and noted the QCEW data point to payroll gains in the nine months through December 2023 being 110K lower per month than currently reported by the CES.

That said, the preliminary estimate will provide insight into how much more scope hiring has to slow before becoming worryingly weak. Notably, a large negative revision would indicate that the strength of hiring was already fading before this past April and that nonfarm payroll growth has not been the black sheep of the labor market after all. While Chair Powell and other FOMC members appear to expect a downward revision, its realization, especially if large compared to recent years, could make

Figure 6



Source: U.S. Department of Labor and Wells Fargo Economics

The preliminary benchmark estimate is unlikely to be a complete game-changer for the current picture of the jobs market or the FOMC's interpretation of it.

risks to the maximum employment side of the Fed's dual mandate more salient. With payrolls still viewed as the gold-standard for employment growth, a large downward revision would mean that the abundance of other indicators flashing warning signs have had the right of it and that the runway left to pull off a soft landing could be shorter than previously suggested.

Endnotes

1 – This is largely because while the Q1 QCEW contains key information necessary for the BLS to approximate the size of the benchmark, it is not the only data needed, and it is also subject to corrections as late filings and business deaths are incorporated. While the Q1 QCEW provides detail which allows the BLS to create a preliminary benchmark revision estimate, this estimate is not finalized until the January Employment Situation release of the next year. ([Return](#))

2 – There are an abundance of caveats when interpreting the Philly Fed's early state benchmarks, and researchers at the Philly Fed often reiterate the “need to track this work over more years to learn whether [the] early benchmarks regularly predict the direction of data revisions to the CES estimates of national data.” For more information on interpreting the early benchmarks, please see “[About the Early Benchmarks](#)” on the Federal Reserve Bank of Philadelphia's website. ([Return](#)).

3 – See the “Net birth-death revisions” section of the most recent [CES National Benchmark Article](#). ([Return](#))

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