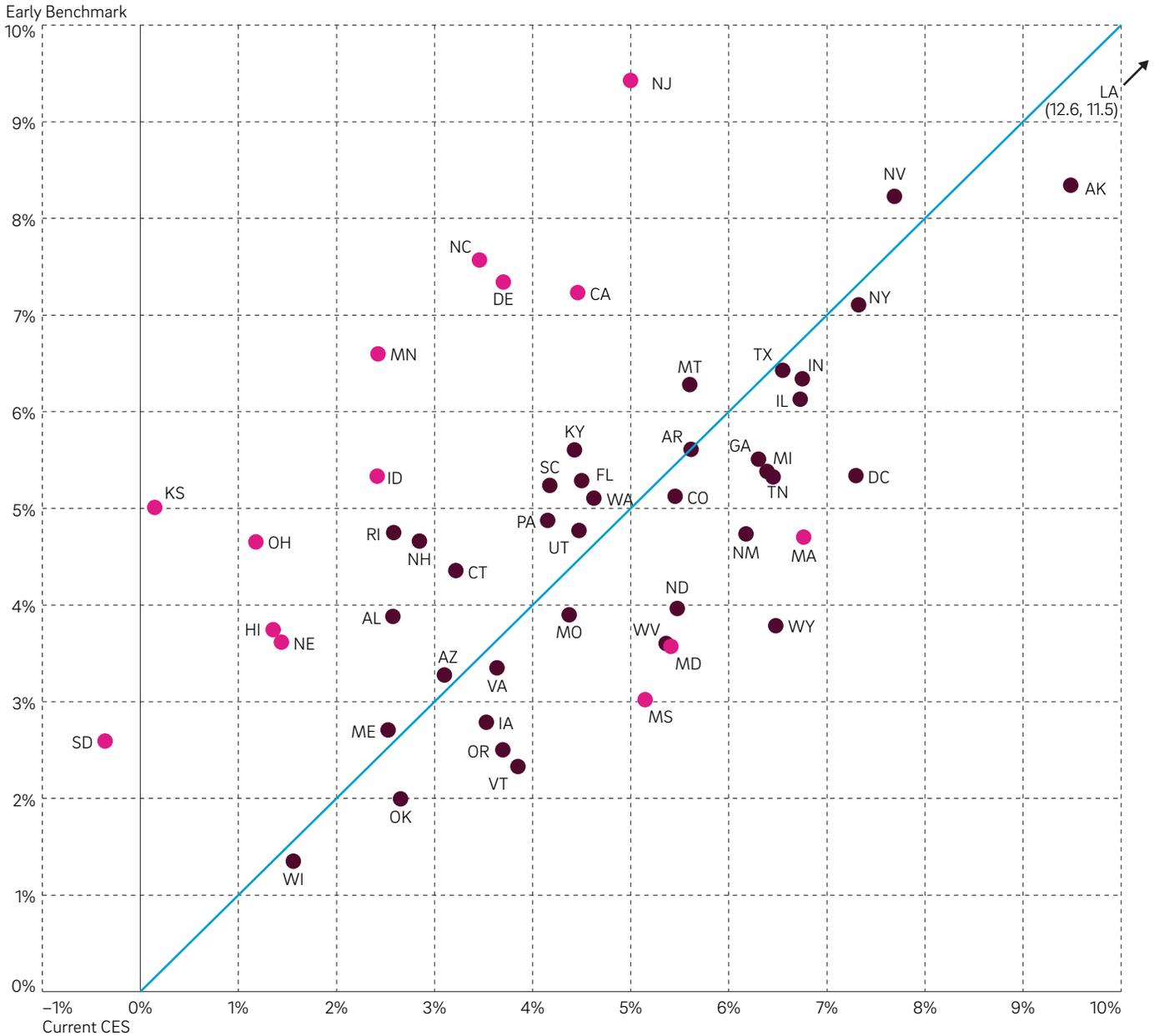


**Job Growth Estimates for all 50 States and D.C.**  
(Percent annualized), fourth quarter 2021



**Regional Spotlight**

**Measuring State Employment**

We introduce our new quarterly Early Benchmarks of monthly state employment estimates.

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*The views expressed in this article are not necessarily those of the Federal Reserve.*

Economists can augment their understanding of national economic trends by examining state employment data. Preliminary (not-yet-benchmarked) state employment estimates from the Bureau of Labor Statistics (BLS) continue to be subject to significant revisions around turning points in the economy. Significantly large downward revisions for a majority of states—especially states with large economies—often confirm a downward inflection of the nation’s job growth. Likewise, large, widespread upward revisions of state employment often accompany periods in which national job growth is accelerating. If such revisions persist in the same direction over two or three quarters, that may confirm that the national economy has reached a turning point. This is a valuable observation for government policymakers.

The large revisions occur primarily because the preliminary state estimates are based on a small sample of firms, while subsequent benchmark revisions incorporate other BLS data based on a full count from nearly all firms. Moreover, the BLS issues its benchmark revisions for state employment estimates just once a year. However, the full count of data is issued quarterly, which offers an opportunity for researchers to create their own early benchmarks on a timelier basis.

This article describes our process of applying new benchmarks to payroll job estimates for all 50 states and the District of Columbia on a quarterly basis. By making timelier revisions, we produce more accurate estimates of states’ job growth, and we gain additional insights into recent national economic trends.

Our new benchmarks may also benefit state economic forecasts, which rely heavily on recent trends—and payroll jobs are almost always a key recent trend.

More accurate payroll jobs data can correct the impression that a state economy was slowing when it was actually stable, or that the economy had begun to slow when it had not. Improving that accuracy reduces some of the uncertainty surrounding state forecasts, too.<sup>1</sup>

See *The BLS’s Methodology, and Ours.* →

## Using QCEW Data to Revise Estimates

In March of each year, the BLS releases revised estimates of monthly nonfarm payroll employment for states and metropolitan statistical areas (MSAs) as part of its Current Employment Statistics (CES) program.<sup>2</sup> For its annual revisions of CES state estimates, the BLS incorporates more comprehensive data from the Quarterly Census of Employment and Wages (QCEW) program, which is also released by the BLS. The BLS also introduces new seasonal adjustment factors and other corrections to make the data revisions more accurate. For our purposes, the most significant monthly revisions affect the prior seven quarters of data.<sup>3</sup>

The QCEW data make a significant contribution to the annual revisions. Whereas the QCEW data cover more than 95 percent of all employers, the CES sample represents just 6 percent of the QCEW total. Therefore, the CES state estimates that result from the annual revision process reflect the broad universe of firms (as well as new seasonal factors) and thus more accurately depict a state’s job growth trend than does the original CES sample alone.

## The BLS’s Methodology, and Ours

Our quarterly revisions of state payroll job growth are possible because the Bureau of Labor Statistics (BLS) issues its Quarterly Census of Employment and Wages (QCEW) data for all 50 states on a quarterly basis—even though it waits an entire year before reconciling this full job count with its Current Employment Statistics (CES) sample estimates.

The CES estimates are widely reported monthly payroll jobs numbers generated by a federal–state cooperative program. These monthly estimates are provided for the nation,<sup>15</sup> the states, and designated metropolitan statistical areas (MSAs).<sup>16</sup> The CES program relies on a monthly nationwide survey of about 131,000 businesses and government agencies representing about 670,000 establishments (Table 1). These samples are used to estimate total employment not only of states and MSAs but also of industrial sectors within states and MSAs.

In contrast to the CES sample of 670,000 establishments, the QCEW program reported employment counts for nearly 11 million establishments covered by state and federal unemployment insurance (UI) laws in the first quarter of 2021.<sup>17</sup> The QCEW data for October, November, and December 2021 were released on June 8, 2022.

Thus, our process accurately assesses the growth path for the fourth quarter of 2021 in June 2022, rather than our having to wait until the BLS reconciles its QCEW data and CES sample estimates in March 2023. Similarly, our process assesses the first quarter of 2022 in September 2022 and the second quarter in December 2022.

Our methodology was adapted from an approach pioneered by the Dallas Fed and modified to work with all 50 states. The Dallas Fed publishes early benchmarks for Texas with additional details for Texas MSAs and specific industrial sectors. The New York Fed also publishes early benchmarks for its states and selected MSAs. Meanwhile, some states, including Colorado, Oregon, and Washington, produce their own employment estimates using the QCEW data for their states.<sup>18</sup> The BLS recently explored quarterly benchmarking options, but it felt the problems outweighed the benefits and decided to redirect resources to other initiatives.<sup>19</sup>

TABLE 1

### Sample Sizes for the Third District

Current CES Sample Size	Sample of UI Accounts	Establishments
United States	131,000	670,000
Delaware	960	2,110
New Jersey	3,410	17,280
Pennsylvania	4,070	24,590

However, because new QCEW data are released within five months after the end of each quarter, we can update four quarters of data—our Early Benchmarks—before the BLS releases its annual benchmark revisions. Our fourth and final Early Benchmark is completed in early March using third quarter data from the QCEW just as the BLS releases its annual revisions of state CES data by incorporating comparable third-quarter QCEW data.

There is obvious value in conducting timely revisions using QCEW’s comprehensive count of jobs. During periods of steady economic growth, our revisions do not tend to change much from the CES’s sample-drawn estimates. At other times, however, the revisions driven by benchmarking to the QCEW data can be substantial. Our quarterly Early Benchmark estimates have accurately predicted the BLS’s subsequent annual state benchmark revisions—for both quarterly and annual rates of change. Throughout the year, our Early Benchmarks tend to be better estimates than the preliminary CES sample estimates. However, once the BLS completes its more comprehensive annual revisions—with a more sophisticated methodology and better data access than we can deploy—we accept their benchmarked data as more accurate than our fourth and final Early Benchmark. We produce the fourth to validate our process.

QCEW data provide additional value because the direction and depth of the revisions of CES state data using QCEW data can signal turning points in the business cycle. The BLS has acknowledged this phenomenon. Prior to 2008, the BLS, in its annual release of state benchmark revisions, routinely noted that “historically, State estimates have underestimated March employment levels during periods of economic growth and overestimated these levels during periods of economic decline.”<sup>4</sup> Although the BLS no longer includes this statement, the phenomenon persists, because the underlying cause persists—at least for the state CES. For the U.S. CES methodology, the BLS introduced quarterly updates to the net birth-death model beginning in 2011. This change may have significantly reduced the subsequent revisions to U.S. CES employment growth trends. However, state updates remain less frequent, so the signal remains intact.<sup>5</sup>

That underlying cause is how the BLS models business births’ and deaths’ net contribution to the monthly sample estimates.<sup>6</sup> Because the CES cannot capture the employment attributable to new business formations in a timely fashion, the BLS models growth from new firms as a stable ratio of firm births to firm deaths.

This works well in periods of steady economic growth. However, when there is a turning point in the economy—shifting from job growth to job loss, for example—the stable relationship between firm births and firm deaths breaks down.<sup>7</sup> Even a significant inflection point from rapid to slow job growth may reflect a breakdown of this relationship and thus generate substantive downward revisions to the initial sample estimates.

## Tracking One State Through an Entire Year

To examine the accuracy of our Early Benchmarks, let’s look at one state, New Jersey, over the course of one year. At the beginning of March 2022, and prior to its annual state benchmark revisions, the BLS estimated 3.8 percent job growth for New Jersey from September 2020 to September 2021. That’s

equivalent to 144,800 jobs added over the year. However, our Early Benchmark process, which used the 2021 third quarter (Q3) vintage of QCEW data, suggested an upward revision to 4.8 percent—equivalent to 183,900 jobs added over the year. And indeed, the BLS, as part of its annual state benchmark revisions, revised job growth to 5.1 percent for the one-year period ending September 2021—or 198,100 additional jobs (Figure 1).

Revisions for individual quarters of growth are often larger than revisions over an entire year, because quarterly revisions sometimes offset each other over the course of the year. Our Early Benchmark estimates using the QCEW’S 2021 Q3 vintage suggested a 3.7 percent growth path (annualized)<sup>8</sup> for New Jersey in just the fourth quarter of 2020, in contrast to the CES estimate of 0.5 percent. The BLS’s subsequent state benchmark revisions matched our estimated 3.7 percent growth for the fourth quarter.

The QCEW data are continually revised as late reports from some firms for a given quarter trickle in—sometimes for more than a year. Thus, our Early Benchmark results for any given quarter tend to converge quickly and then shift slowly toward the eventual BLS annual state benchmark revision. For example, as noted above, the BLS, relying on its CES sample, had initially indicated a growth rate of 0.5 percent for the fourth quarter of 2020. Meanwhile, our Early Benchmark estimates for that quarter, which were based on four consecutive QCEW vintages (beginning with the 2020 Q4 vintage and ending with the 2021 Q3 vintage) evolved from 2.7 percent to 3.1 percent, then 3.4 percent, and finally 3.7 percent—matching the BLS’s state benchmark growth rate (Figure 2).

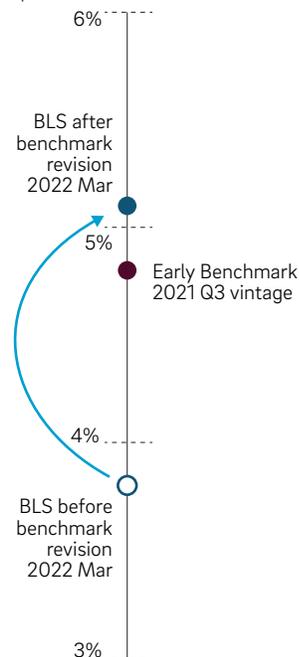
## National Estimates from the QCEW

Now let’s examine the accuracy of the sum-of-states using our Early Benchmarks versus the CES U.S. estimates. In December 2021, prior to the benchmark revisions of the CES U.S. data, the growth estimate from September 2020 to September 2021 had been 4.2 percent.<sup>9</sup> According to subsequent CES U.S. estimates available in March 2022, which had just been benchmarked to March 2021, the nation’s payroll jobs grew 4.0 percent from September 2020 to September 2021. This remains the official U.S.

FIGURE 1

### Our Early Benchmark Pointed Toward the BLS’s Eventual Annual Benchmark Revision

Job growth estimates (percent) for New Jersey, September 2020 to September 2021



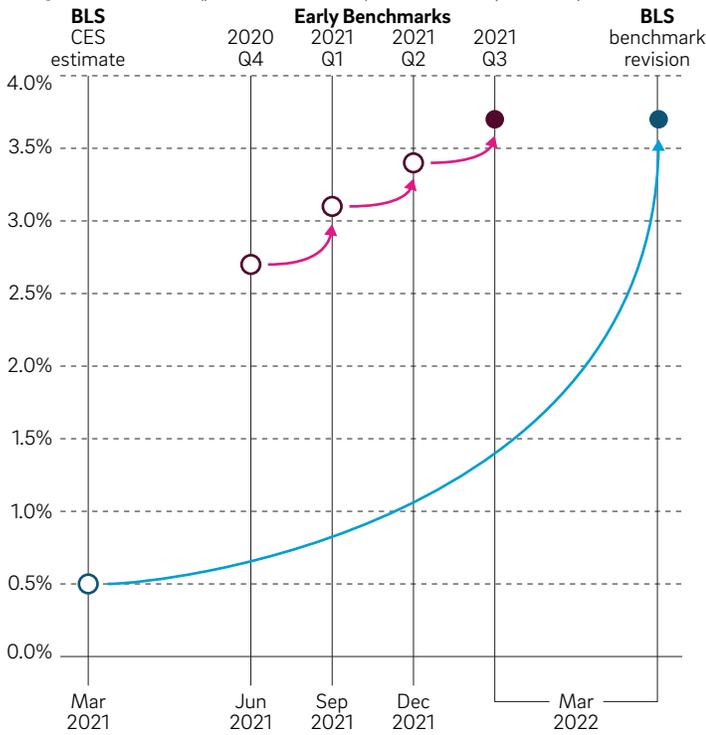
Source: U.S. Bureau of Labor Statistics’ Current Employment Statistics (CES) and Philadelphia Fed Early Benchmarks.

FIGURE 2

## The BLS's Annual Revision for an Individual Quarter Is Often Large

Our Early Benchmarks often point to the BLS's eventual revision months ahead of time.

Job growth estimates (percent annualized) for New Jersey, fourth quarter 2020



Source: U.S. Bureau of Labor Statistics' Current Employment Statistics (CES) and Philadelphia Fed Early Benchmarks.

estimate for that period, and the BLS will not revise it again until February 2023.

However, the BLS did issue its annual preliminary benchmark announcement in September, which indicated an upward revision of 0.3 percent for March 2022 based on QCEW data alone.<sup>10</sup> Our Early Benchmarks indicated upward revisions for three of the four quarters ending in March 2022. Because the BLS uses a wedge-back approach to revise employment estimates between March of each year, some of the upward revision for March 2022 is distributed across both the September 2020 to September 2021 period and the subsequent September 2021 to September 2022 period.

Meanwhile, the sum-of-states using CES state estimates for the same period showed an even lower 3.7 percent growth rate just prior to the BLS release of its annual benchmark revisions for CES state data on March 14, 2022.

However, during the prior year, our Early Benchmarks for all 50 states suggested that upward revisions would occur for the last quarter of 2020 and the first two quarters of 2021. Our estimates indicated downward revisions for only the third quarter of 2021, when economic disruptions from the Delta variant were peaking. And indeed, after the BLS released its 2021 Q3 vintage of QCEW data on March 9, 2022, our Early Benchmarks estimated an overall growth rate of 4.4 percent from September 2020 to September 2021. Given that the economy was still recovering from the

### CES U.S. estimates

The Current Employment Statistics (CES) program of the Bureau of Labor Statistics (BLS) reports monthly estimates of nonfarm payroll jobs for the U.S. based on a sample survey of 670,000 establishments. These estimates are typically released on the first Friday of the following month and represent the headline number closely watched by economic observers.

### U.S. benchmark revisions

In February of each year, the BLS revises its series of CES U.S. estimates. These revisions incorporate a benchmark to the more complete employment count from the QCEW for March of the prior year, new seasonal factors, and several other adjustments.

### CES state estimates

Using the same sample as the CES U.S. estimate but different methodological approaches, the BLS reports monthly estimates of nonfarm payroll jobs for each state and the District of Columbia. These estimates are typically released on the third Friday of the following month.

### State benchmark revisions

In March of each year, the BLS revises its series of CES state estimates. These revisions incorporate a benchmark to the more complete employment counts from the QCEW for each month through September of the prior year, new seasonal factors, and several other adjustments.

### QCEW state estimates

The Quarterly Census of Employment and Wages (QCEW) program of the BLS reports monthly estimates (on a quarterly basis) of state employment based on the complete administrative records for 11.3 million establishments (as of the first quarter of 2022). These estimates are typically released within five months of the end of each quarter. For example, data for the third quarter of 2021 was released on March 9, 2022.

### The Philadelphia Fed's Early Benchmarks

The Early Benchmarks from the Federal Reserve Bank of Philadelphia use the QCEW data to produce monthly estimates of nonfarm payroll jobs for each state and the District of Columbia. Our estimates are typically released within a week to 10 days of the QCEW data release.

### Sum-of-states

The sum-of-states refers generally to any aggregation of the 50 states plus the District of Columbia for any of the state estimates, including our Early Benchmarks. Because of methodological differences, the sum-of-states applied to the CES state estimates does not equal the CES U.S. estimate.

pandemic shock, the upward revision was not surprising. When the BLS released its annual state benchmark revisions five days later, there were indeed upward revisions, and the growth rate for the sum-of-states was precisely 4.4 percent. This result plus the results from our new quarterly releases (described below) suggest that the growth path for national employment for the one-year period ending September 2021 may be revised upward again in February 2023 when the BLS benchmarks the U.S. data through March 2022.

### Our New Quarterly Releases Begin

As this article was being written, we had access to the 2021 fourth quarter (Q4) and 2022 first quarter (Q1) vintages of QCEW data (released on June 8, 2022, and September 7, 2022, respectively). With that data, we produced the first two of our quarterly Early Benchmarks releases.<sup>11</sup>

Our Early Benchmark estimates indicated that total payroll job growth from September 2021 through December 2021 was substantially faster in Delaware and New Jersey and somewhat faster in Pennsylvania than the then-current BLS's CES-based estimates indicated.

For New Jersey, our Early Benchmark estimate of fourth quarter growth was 9.4 percent (annualized), significantly more than the 4.0 percent growth based on CES estimates (Figure 3). Our fourth quarter estimate will evolve slightly with each new release of QCEW data. However, the BLS will surely revise its estimate upward when it issues its benchmark revisions next March.

Likewise, for the nation, the 2021 Q4 vintage of QCEW data suggests that the BLS may revise upward the growth path from September 2021 to December 2021. The CES's U.S. estimate indicated 5.3 percent growth, and its sum-of-states estimate indicated 4.9 percent growth. In contrast, the growth path from our Early

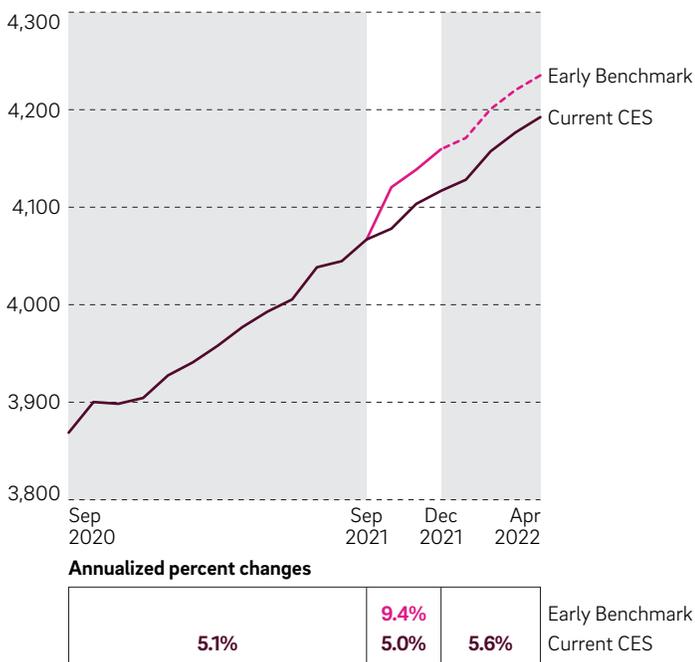
Benchmark estimates was higher than both, at 5.6 percent. Our Early Benchmark estimates were significantly higher in 11 states and significantly lower in three states, with lesser changes in the remaining 36 states plus the District of Columbia (Figure 4). The subsequent QCEW vintage for the first quarter of 2022 further reinforced the expectation of upward revisions for the fourth quarter of 2021 as our Early Benchmarks generated a still higher growth rate of 5.9 percent.

Our Early Benchmark process produces a more accurate path of job growth for states within two quarters. In particular, given the partial disruption from the Omicron wave, it would not have been surprising if QCEW's 2022 Q1 vintage suggested a slight downward revision to the 4.4 percent estimate of U.S. growth derived from both the current CES U.S. and sum-of-states estimates. Instead, our Early Benchmarks generated an estimate of 4.6 percent growth—slightly higher, but not significantly different from the CES sample estimates.

FIGURE 3

### Our Estimate Will Evolve Slightly with New Data Releases

But the BLS will likely revise its estimate upward toward our estimate when it issues its benchmark revisions next March. Job growth estimates (percent annualized and number) for New Jersey, 2021 Q4 vintage of data as of June 2022, for 12-month, 3-month, and 4-month periods

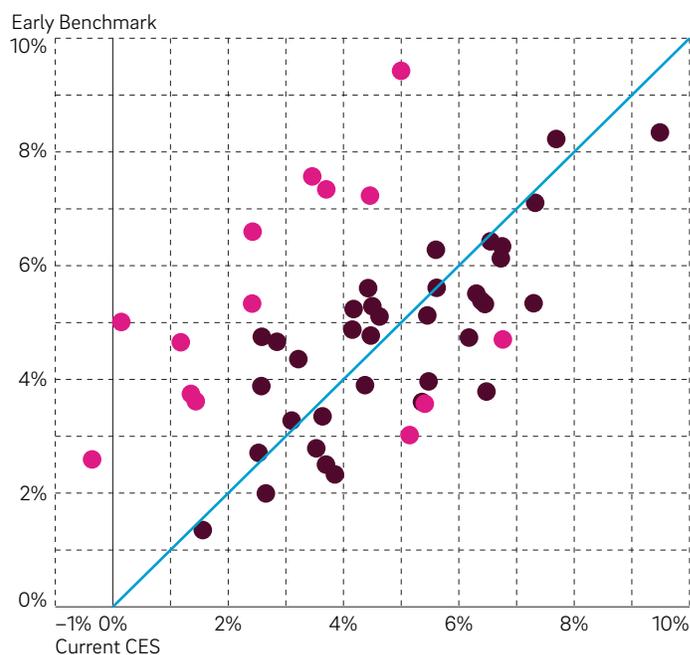


Source: U.S. Bureau of Labor Statistics' Current Employment Statistics (CES) and Philadelphia Fed Early Benchmarks.

FIGURE 4

### Our Early Benchmark Estimates Were Significantly Higher in 11 States and Lower in Three States

BLS annual benchmark revision should approach our estimates. Job growth estimates (% annualized), for 50 states and D.C., fourth quarter 2021



Source: U.S. Bureau of Labor Statistics' Current Employment Statistics (CES) and Philadelphia Fed Early Benchmarks.

During periods when job trends are relatively steady, Early Benchmarks are less likely to differ from, and more likely to affirm, the CES sample estimates. Moreover, a series of upward revisions during the pandemic’s recovery period is also neither surprising nor worrisome. In contrast to recessions, strong recovery periods are often marked by upward revisions. However, the upcoming QCEW releases for the next three 2022 vintages are of greater interest to economists, who are currently searching for any signs of a recession.

## Foretelling the Eventual Growth Path of National Payroll Jobs

We are currently investigating whether our Early Benchmarks also provide a more accurate path of job growth for the nation. Although direct comparisons are complicated by timing issues, our Early Benchmarks tend to indicate the direction of subsequent revisions to national employment trends.<sup>12</sup>

For example, in June 2019, when the BLS released its third (monthly) CES estimate of March 2019 U.S. payroll jobs, the implicit growth rate from March 2018 to March 2019 stood at 1.70 percent. Neither the monthly job estimates nor the growth rate for that one-year period changed until early February 2020, when the BLS released its annual U.S. benchmark revisions. Meanwhile, the sum-of-states data for the same period consistently registered a comparable growth rate of 1.67 percent before new state benchmark revisions were released in March 2020. After the national benchmark revisions, the growth path from March 2018 to March 2019 was revised downward to 1.37 percent. It stands at 1.39 percent today. The current sum-of-states estimated growth rate is 1.33 percent for the same period.

In contrast, our Early Benchmarks for that period were finalized in September 2019, predicting a growth path of 1.24 percent, which is much closer to the current 1.39 percent estimate.<sup>13</sup>

Another example: For the following year (March 2019 to March 2020), the preliminary growth estimate was 0.54 percent from the CES (in June 2020) and 0.46 percent from our Early Benchmarks (in September 2020). It is now 0.44 percent from the CES U.S. benchmark revisions.

These are just two examples of revisions over an entire year. We need to track this work over more years to learn whether our Early Benchmarks regularly predict the direction of data revisions to the CES estimates of national data.

## Early Benchmark Revisions May Offer the Greatest Advantage During Recessions

We were not producing Early Benchmark estimates during the Great Recession. However, our subsequent experience has demonstrated that our Early Benchmark growth rates improve significantly upon the growth rates generated by the pre-benchmark CES sum-of-states estimates and confirm—if not outperform—the CES U.S. estimates. By looking at the prebenchmark and postbenchmark CES sum-of-states data during the Great Recession (as observed in March 2010), we have an idea of how much larger our Early Benchmark revisions can be during recessions.

For the one-year period from September 2008 to September 2009 (during the Great Recession), the downward revisions from prebenchmark to postbenchmark CES sum-of-states data affected nearly all states, became progressively more negative from the prior two years, and were much deeper than normal. The revision was downward by 1.2 percentage points, or 1.5 million additional jobs. The overall decline was 5.2 percent.

In contrast, the preliminary CES U.S. growth estimate was –4.11 percent for the same period (in December 2009). The BLS revised it downward to –4.72 percent in February 2010. Today, it is –4.76 percent. Had we been producing our Early Benchmarks on a quarterly basis, we would have identified much of that downward revision with each quarterly release—well in advance of the BLS benchmark revisions in February and March (for the states).

Based on five years of experience, our Early Benchmark revisions of job growth are often larger on a quarterly basis, whereas the annual growth rates lessen much of the variation—sometimes obscuring key trends. Our quarterly Early Benchmark releases allow us to observe trend shifts in aggregate U.S. job growth on a timely basis, but how should we evaluate these signals? To warrant concern, downward revisions must be: 1) pervasive—downward revisions must appear among a majority of states and among a majority of large states; 2) persistent—downward revisions must persist over several quarters and not appear as a random walk around a trend; and 3) deep—downward revisions must grow increasingly (cumulatively) larger.

Real-time payroll job growth for the nation has typically weakened and turned negative for a few months starting at or soon after the month that the NBER (eventually) selects as the peak of the business cycle. However, in real time, the trend is often neither well defined nor stable, and economists are often skeptical about only one month of data or several months of volatile data. Although our Early Benchmark revisions lag the real-time data by five months, the results are typically strong enough at turning points to corroborate otherwise shaky national trends.

The Pandemic Recession, however, is an exception. Jobs fell suddenly and sharply, leaving no doubt about the change in trend. As defined by the NBER and delineated by payroll jobs numbers, this recession lasted only two months from its peak in February 2020 to its trough in April 2020.

However, this short span and the economy’s response had more in common with nonrecessionary shocks, such as 2005’s Hurricane Katrina in New Orleans or the 1959 national steel strike’s impact on Pittsburgh. Neither our Early Benchmarks nor any other economic signal can predict a pandemic.

## Conclusion: Interpreting Our Early Benchmarks in Real Time and at Critical Times

Our Early Benchmark process reveals a more accurate path of job growth for individual states within two quarters of the event, rather than only in March of each year, when the CES issues its state benchmark revisions. Had Omicron caused U.S. payroll job growth to dip during the first quarter of 2022, our aggregate Early Benchmarks may have hinted at the shift as early as September 2022. (They did not.)

If payroll job growth did shift to a markedly slower pace during the second quarter of the year as interest rates were raised to counter high inflation, our Early Benchmark process should note larger downward revisions in December 2022.<sup>14</sup> Not until February 2024—with the incorporation of the March 2023 benchmarks—will the CES estimates offer a full accounting of U.S. employment for the bulk of 2022.

Unfortunately, our Early Benchmarks lag the moments when critical policy deliberations are made, but they do offer earlier confirmation of apparent shifts in recent payroll job trends.

And pervasive, persistent, and deep downward revisions may presage the NBER’s declaration of a recession. 

## Notes

**1** Unfortunately, even our quarterly revisions fail to “repair the tail”—that is, they shed no light on the accuracy of the most recent five months of payroll jobs estimates.

**2** The BLS releases its annual revisions of CES U.S. estimates every February.

**3** Annual benchmark revisions of monthly CES state employment estimates released in any given year typically affect 21 months of not-seasonally-adjusted data and five years of seasonally-adjusted data (ending in December of the prior year). Occasionally, revisions will reach further back for specific geographic areas and/or industrial sectors. See Bureau of Labor Statistics (2022).

**4** White (2007).

**5** See Bureau of Labor Statistics (2010).

**6** See Bureau of Labor Statistics (2022).

**7** The BLS cannot develop a stable relationship because it is unable to predict these turning points.

**8** All quarterly rates of change are annualized throughout the article.

**9** For the comparative analysis between the CES U.S. estimate and our Early Benchmarks, we often use growth rates over 12-month periods rather than individual quarters because of two key confounding differences between the BLS benchmark revision processes for states and the nation. First, the national estimates are benchmarked to March of the prior year, whereas state data are benchmarked to September of the prior year. Second, revisions to the state estimates represent the actual job count, whereas revisions to the national data use a wedge-back approach between one March and the next, which does not reflect the contributions of each individual quarter.

**10** See CES Preliminary Benchmark Announcement at <https://www.bls.gov/web/empisit/cesprelbnk.htm>.

**11** See “Early Benchmark Revisions of State Payroll Employment” at <https://www.philadelphiafed.org/surveys-and-data/regional-economic-analysis/early-benchmark-revisions>.

**12** Estimates for the nation are typically released on the first Friday of the following month. National data and other information can be found at <https://www.bls.gov/ces/>. For more technical details, see <https://www.bls.gov/web/empisit/cestn.htm>.

**13** For comparisons with growth estimates as they were observed during prior time periods, we are indebted to the resources available at the Philadelphia Fed’s Real-Time Data Research Center.

**14** The BLS is scheduled to release the 2022 second quarter (Q2) vintage of QCEW data on December 6, 2022. Our third quarterly release of Early Benchmarks will be available on December 13, 2022, at <https://www.philadelphiafed.org/surveys-and-data/regional-economic-analysis/early-benchmark-revisions>.

**15** Estimates for the nation are typically released on the first Friday of the following month. National data and other information can be found at <https://www.bls.gov/ces/>. For more technical details, see <https://www.bls.gov/web/empisit/cestn.htm>.

**16** State estimates are typically released about 10 business days after the U.S. release. Estimates for MSAs are released about seven business days after state estimates. Data and other information for states and MSAs can be found at <http://www.bls.gov/sae/>.

**17** QCEW data is released within five months after the end of each quarter and can be found at <https://www.bls.gov/cew/>. For more technical details, see <https://www.bls.gov/opub/hom/cew/home.htm>.

**18** Early benchmarks for selected states can be found at: Early Benchmarked Employment Data—FEDERAL RESERVE BANK OF NEW YORK ([https://www.newyorkfed.org/research/regional\\_economy/early-benchmarked-employment](https://www.newyorkfed.org/research/regional_economy/early-benchmarked-employment)); Texas Employment Data—(<https://www>

dallasfed.org/research/econdata/tx-emp.aspx); LMI Gateway Home page (colmigateway.com) for Colorado; Oregon (<https://www.qualityinfo.org/ed-ceest/>); ESDWAGOV—Washington employment estimates (WA-QB & CES) (<https://esd.wa.gov/labormarketinfo/employment-estimates>).

**19** For more on BLS research about pursuing quarterly benchmarks, see Bureau of Labor Statistics (2017). For a statement on the BLS decision, see Bureau of Labor Statistics (2021).

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