# Improving estimation and benchmarking of State labor force statistics

*A new estimation procedure, including bivariate models with real-time benchmarking, was introduced into the BLS LAUS program with the January estimates; the new approach to estimation ensures monthly additivity of State and national estimates, thereby reflecting economic events in a timely manner and reducing the size of the annual revision to the State series*

Sharon P. Brown

Among the important economic data developed by the Bureau of Labor Statistics (BLS, the Bureau), unemployment estimates for States and local areas are viewed as key indicators of local economic conditions. These estimates are produced by State workforce agencies under the Federal-State cooperative Local Area Unemployment Statistics (LAUS) program. Currently, monthly estimates of employment, unemployment, and the unemployment rate are prepared for more than 7,000 areas—regions; divisions; all States and the District of Columbia; metropolitan areas and areas with small labor markets; counties; cities with a population of 25,000 or more; and all cities and towns in New England, regardless of population.[1] The LAUS estimates are used by a number of agencies in the United States to allocate more than $40 billion in Federal funds to States and areas for a variety of socioeconomic programs. State and local governments use the estimates for planning and budgetary purposes and as determinants of the need for local services and programs. With the State labor force estimates released by the Bureau 5 weeks after the reference week and just 2 weeks after the national estimates, the LAUS estimates are one of the timeliest subnational economic measures issued by the U.S. Government. In operating the LAUS program, the Bureau is responsible for concepts and definitions, technical procedures, and review, analysis, and publication of the estimates. The State agencies are responsible for producing the estimates and for analyzing and disseminating the data to their own customers.

As the principal fact-finding agency for the Federal Government in the broad field of labor economics and statistics, the Bureau strives to ensure that its programs satisfy a number of criteria: relevance to social and economic issues, timeliness in reflecting today's rapidly changing economic conditions, accuracy and consistently high statistical quality, and impartiality. With its estimates for January 2005, the LAUS program has completed a redesign that includes the introduction of real-time benchmarking in current estimation, an approach that is on the frontier of benchmarking methods and applications to official statistics. These improvements to LAUS methodology further the BLS mission of providing the best data possible on a timely basis.

## State and large-area estimation

A key element of the Bureau's approach to subnational labor force estimation is to ensure that the estimates are comparable to the official concepts and measures of the labor force used in the Current Population Survey (CPS), the survey of households that is designed to provide reliable monthly labor force estimates for the Nation. To support the reliability of subnational estimates, the CPS employs a State-based sample design with a constraint

Sharon P. Brown is Chief of the Division of Local Area Unemployment Statistics, Bureau of Labor Statistics. This article is an expanded version of her paper, "Benchmarking State Labor Force Estimates in the United States," presented at the June 2003 OECD Short-term Economic Statistics Expert Group meeting in Paris, France. E-mail: brown.sharon@bls.gov

which ensures that the survey sample in a State is large enough that there is no more than an 8-percent coefficient of variation on the annual average level of unemployment when the unemployment rate is 6 percent. (For comparison, the national reliability standard is a 1.9-percent coefficient of variation on the monthly level.)

A hierarchy of estimation methods is used to produce the 7,000 estimates covered by the LAUS program, based in large part on the availability and quality of data from the CPS. The strongest estimating method—signal-plus-noise univariate models for current estimation and annual average CPS benchmarks—has been employed as far as back as 1989 for four large areas (New York City, the Los Angeles metropolitan area, the balance of New York State, and the balance of California), the remaining 48 States, and the District of Columbia. While not reliable enough to use directly, the monthly CPS values are integral to the signal-plus-noise estimation.

As the official source of labor force statistics, the CPS provides the State series with the benchmark measure for purposes of current estimation and periodic adjustment. In order to ensure comparability across States, the annual average employment and unemployment levels from the CPS were used as the benchmarks for the modeled LAUS estimates. (In the rest of this article, the term "State" will be used to refer to all areas modeled.)

In general, the previous method of model estimation resulted in an overestimate of employment and an underestimate of unemployment and the unemployment rate in States, compared with the national CPS estimates. This discrepancy is shown in charts 1–3, which depict the differences in the LAUS sum-of-States and independent national CPS estimates from January 2000 to December 2004.

Chart 1 describes the relationship between the sum-of-States model-based estimates and the independent CPS-based estimate of employment for the Nation. Over the entire 5-year period, with the exception of 4 months, the LAUS model-based sum-of-States estimate was higher than the CPS national estimate. The overestimation reached its highest levels in 2001, a year in which the Nation went into a recession starting in March and experienced the terrorist attacks of September. The State LAUS employment overestimation reached a peak of nearly 2.9 million in August 2001.

Chart 2 depicts the relationship between the sum-of-States model-based estimates of unemployment and the national estimate of unemployment. For this labor force measure, with the exception of 3 months, the model has consistently *under*-estimated unemployment relative to the national CPS measure. Consistent, large monthly underestimates of unemployment began in 2001. The average monthly difference was greatest in 2002 (–352,600), while the largest monthly difference (–602,000) occurred in June 2003.

Chart 3 describes the relationship between the unemployment rate developed from the sum-of-States LAUS estimates and the CPS national measure. For nearly the entire period, the sum-of-States estimate fell below the independent national jobless rate. (In 2 months, the rates were identical.) While, for many months, the difference was –0.2 percentage point or less, it is important to note that the direction of the difference is consistent. Starting in 2001, sum-of-States differences of –0.3 point and greater were reported with increasing frequency. In 2001, differences of –0.3 percentage point and more were recorded for 5 months; in 2002, for 9 months; and in 2003, for 5 months.

To address the over- and underestimation associated with current model-based estimates, the model-based estimates of employment and unemployment were benchmarked to the respective annual average estimates from the CPS. However, the use of annual average State CPS benchmarks created other problems. For example, it (1) reintroduced sampling error into the series and resulted in significant end-of-year revisions in a large number of States, (2) caused economic anomalies that were an artifact of the benchmarking approach, (3) distorted seasonality in the previous year so that analysis was impaired, and (4) often missed shocks to the economy. (A detailed discussion of these issues follows.)

A fiscal-year 2001 budget initiative provided the Bureau with resources to improve the methods used to develop State and area LAUS estimates, including upgrading and enhancing the modeling approach, extending it to more areas, and incorporating decennial updates to procedures, data inputs, and geographical definitions. As part of this major LAUS program redesign, the Bureau implemented an innovative alternative to model benchmarking that is part of improved monthly model-based estimation. This alternative addresses longstanding issues related to accuracy and the end-of-year revision and also enhances the analytical capability of the estimates.

The new method of estimation ensures that State estimates add to the national estimates of employment and unemployment each month (real-time benchmarking). In the process, the benchmark has been changed from annual average State-level estimates of employment and unemployment to monthly national estimates of these measures and is part of current monthly estimation. In this way, economic changes will be reflected in the State estimates on a real-time basis, and end-of-year revisions will be significantly smaller.

## Previous modeling and benchmarking

In 1989, time-series models for developing labor force estimates were first implemented in 39 less populated States and the District of Columbia. In 1996, the time-series approach to sample survey data was extended to the remaining, more populated, States; thus, all States and the District of Columbia employed the time-series methodology. The purpose of the approach was to reduce the high variability in monthly CPS estimates due to small sample sizes.

A signal-plus-noise form of the model was used, with the monthly CPS sample estimate described as the sum of the true

**Chart 1.** **LAUS sum-of-States minus CPS employment, January 2000–December 2004**

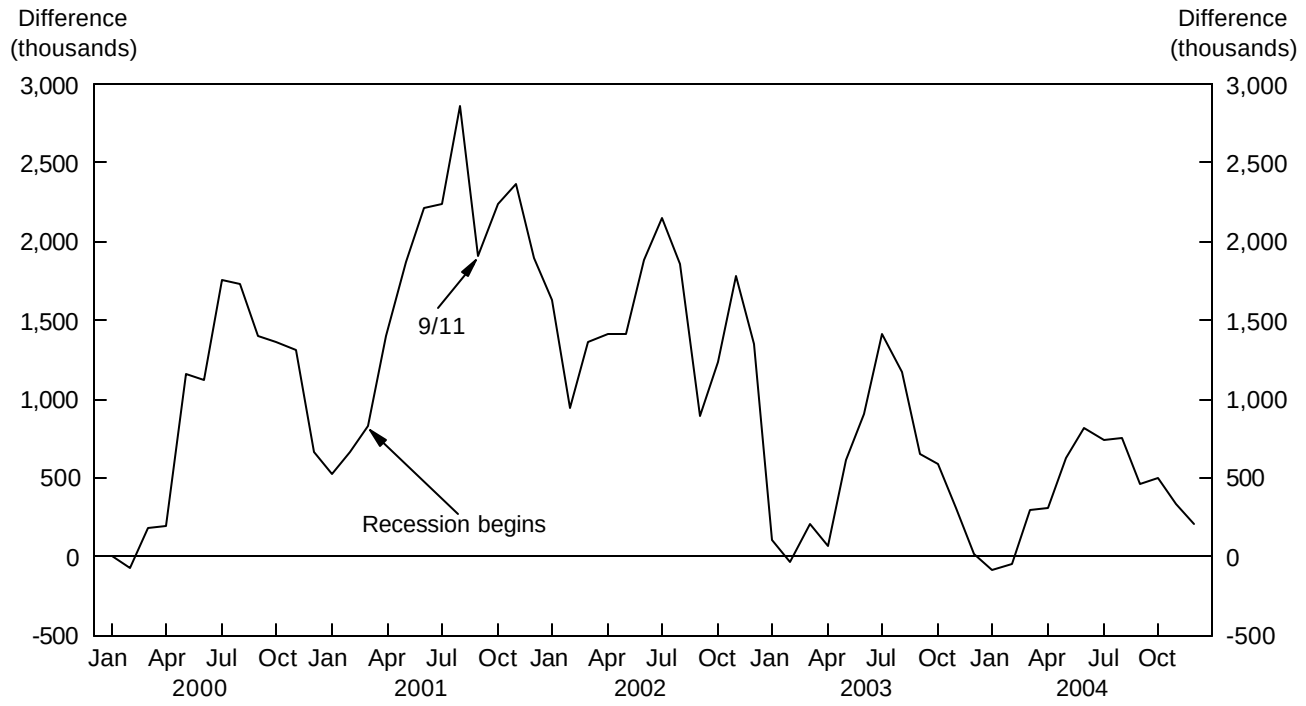



**Chart 2.** **LAUS sum-of-States minus CPS unemployment, January 2000–December 2004**

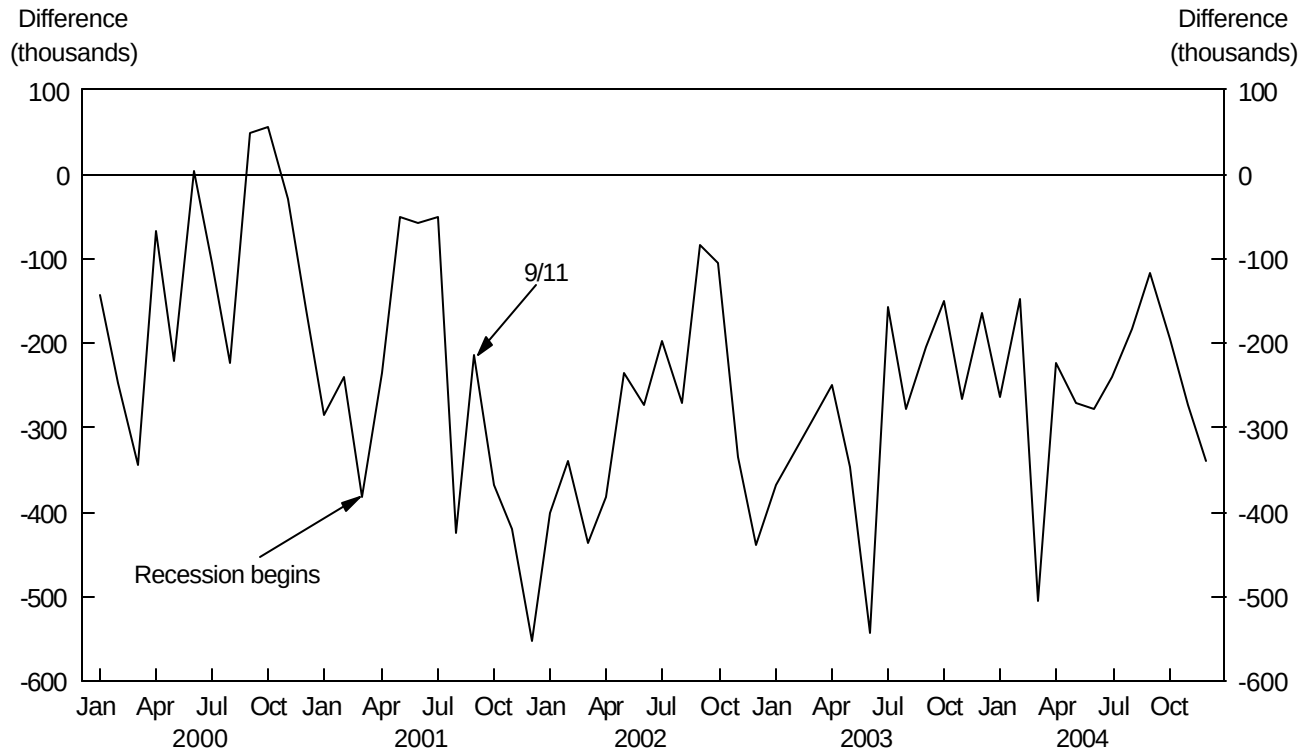
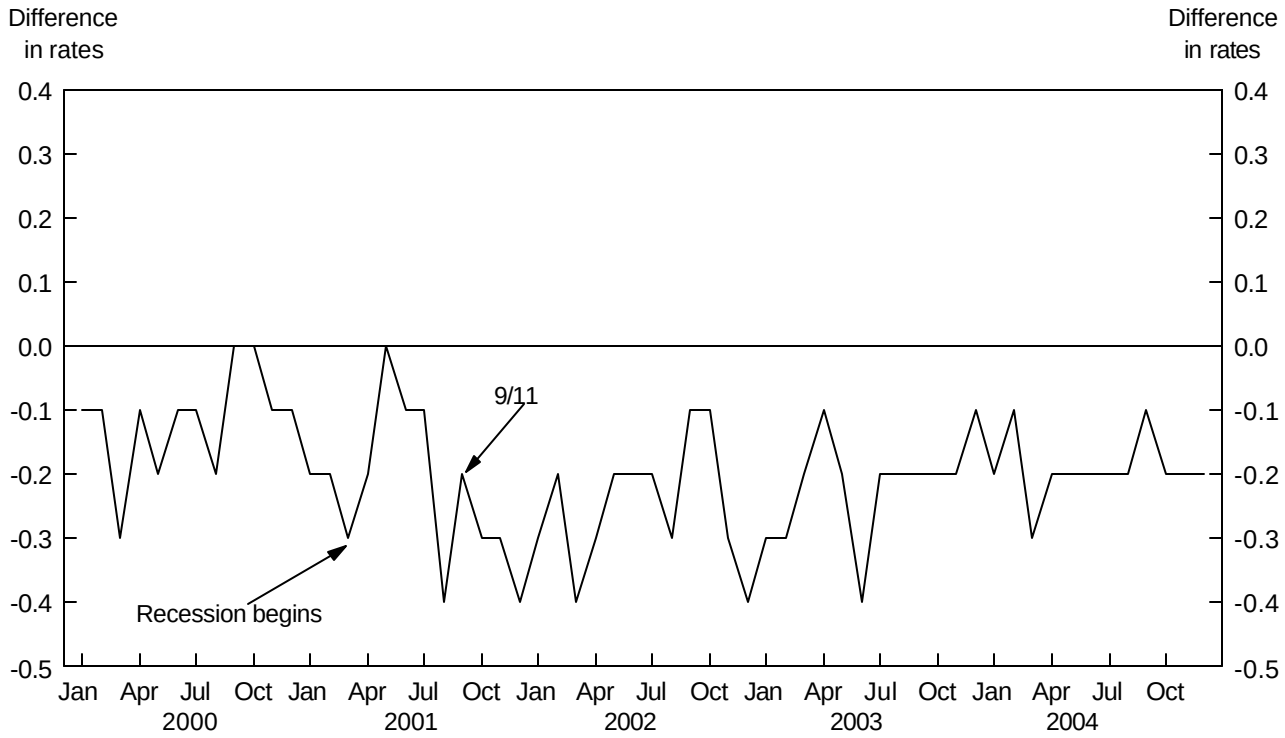


**Chart 3. LAUS sum-of-States minus CPS unemployment rate, January 2000–December 2004**




labor force value (the signal) and sampling error (the noise). Two models—one for the employment-population ratio and one for the unemployment rate—were developed for each State. In estimating the signal, the employment-population ratio model used the statewide monthly estimate of workers on nonfarm payrolls and intercensal population data, while the unemployment rate model used both counts of unemployment insurance claimants who file during the CPS reference week and nonfarm payroll data. Each model had a trend, a seasonal, and an irregular component, as well as the regression component. An important feature of the model was the use of the Kalman filter to update regression coefficients and trend and seasonal terms when gradual structural changes occurred. The signal term allowed the extraction of noise from the CPS time-series data, thus providing a better estimate of the true value of the signal. The error term of the model reflected unique sampling error characteristics of the CPS, outliers, and irregular movements in the underlying true series. Seasonal adjustment was performed externally, with the application of X–11 ARIMA software to the unadjusted estimates.

Because of the potential for bias in the models, and to ensure comparability in the estimates across all States, each year the monthly estimates of employment and unemployment were benchmarked to the respective CPS annual averages. (Also as part of annual benchmarking, inputs to the model were revised as necessary, and the models were reestimated and smoothed in an iterative process that allowed each observation to benefit from all observations in the series.) The primary external impetus for benchmarking to the CPS annual averages was to address the use of the estimates in distributing Federal funds. Beyond addressing this legislative use, benchmarking to the CPS was viewed as appropriate, given the role of the CPS in providing the conceptual standard for the program.

The goal assigned to the statistical benchmarking procedure was twofold: (1) to ensure that the annual average of the final benchmarked series equaled the CPS annual average and (2) to preserve the monthly pattern of the model series as much as possible. In practice, the two goals were conflicting, and some changes to the monthly pattern were necessary to meet the first goal. The particular approach used was the Denton method, which combined a constraint feature (relating to goal 1) and a feature that maintained the monthly pattern of the original series (goal 2). The specific routine sought to minimize the squares of the percent differences in the model, or benchmarked, series estimates from month to month. The method was used because of the overall modeling goal of accuracy in the month-to-month changes. The method was applied to 3 years in pairs of years, to minimize discontinuities within the benchmark period.

## Issues with previous benchmarking

An annual average CPS benchmark had been employed in the LAUS program since 1974; the Denton method of benchmarking had been used since 1989. The Denton method is a mechanical procedure that does not take into account the properties of the time-series models and that ignores the survey error. As a result, no reliability measures were available for the benchmarked estimates.

While the previous estimation-benchmark procedures achieved the specific goals of ensuring comparability of estimates across States and addressing potential bias in the models, a number of methodological and analytical issues surfaced in regard to those procedures. Among these issues were the reintroduction of sampling error into monthly estimates, discontinuities between December benchmarked and January model estimates, impaired comparability of data over the year, and inability to address, on a timely basis, "shocks" to the model, such as the September 11 terrorist attacks and the onset of economic recessions.

*Reintroducing sampling error.* Despite the State-based sample design of the CPS, the State samples are fairly small (averaging about 950 households in less populated States and 2,200 in more populated States), and the resultant annual averages contain a significant degree of sampling error. By contrast, the previous model did a very good job of removing error from the current CPS estimates. The noise component of the signal-plus-noise model is a sophisticated measure of the error in the CPS that is related to the unique aspects of the CPS sample design, as well as to outliers and variance. Thus, the previous model estimate of the signal was viewed as a good estimate of the true labor force value. Because the variance of the model was less than the sampling error of the annual average CPS estimate, by using the CPS annual average State employment and unemployment levels as the point benchmarks, the current method puts variability back into the monthly estimates.

The reliability criterion for the State CPS sample is a coefficient of variation of 8 percent or less on the annual average level of unemployment when the unemployment rate is 6 percent. This translates into a 90-percent confidence interval of ±0.8 percentage point on the annual average unemployment rate in a typical State. Each year, some number of States experienced significant benchmark revisions that were related to the random nature of sampling error.

The last time a retrospective annual average benchmark was used in the LAUS program was in 2004, when monthly estimates were benchmarked to 2003 State CPS estimates. For 2003, the benchmark revision for 10 States was 0.5 percentage point or more, with the maximum being 0.8 percentage point. (See table 1.) Underscoring the random nature of the CPS variance and its reflection in the State benchmark revision, six of the States with large unemployment rate revisions to the 2003 CPS annual averages did not have significant revisions in the previous year. In sum, as long as the LAUS estimates were benchmarked to the CPS annual average, each year a small group of States was expected to experience large noneconomic revisions in the series.

*Discontinuity between December benchmarked and January model estimates: the endpoint effect.* Under the previous methodology, the past year's December level—the endpoint of the benchmarking—reflected the adjustment to the CPS annual

**Table 1. Comparison of State unemployment rate benchmark revisions, selected States, 2000–03**

[In percent]

| State | Benchmark revision to total unemployment rate | | | 2003 | | | |
|---|---|---|---|---|---|---|---|
| | | | | Total unemployment rate | | Benchmark revision | CPS error range on total unemployment rate[1] |
| | 2000 | 2001 | 2002 | Model | CPS | | |
| Arkansas | 0.2 | **0.5** | 0.3 | 5.4 | 6.2 | **0.8** | ±.7 |
| Kansas | .3 | **.5** | **.6** | 4.8 | 5.4 | **.6** | ±.5 |
| Tennessee | .2 | .2 | .2 | 5.2 | 5.8 | **.6** | ±.6 |
| Alaska | **.6** | .4 | **1.1** | 7.5 | 8.0 | **.5** | ±.7 |
| North Dakota | .2 | .4 | **.7** | 3.5 | 4.0 | **.5** | ±.5 |
| New Mexico | **–.6** | **–.9** | **–.6** | 5.9 | 6.4 | **.5** | ±.7 |
| Connecticut | .0 | **.5** | .4 | 5.0 | 5.5 | **.5** | ±.5 |
| Kentucky | .2 | **.8** | .3 | 5.7 | 6.2 | **.5** | ±.6 |
| Minnesota | **.6** | .1 | .3 | 4.5 | 5.0 | **.5** | ±.5 |
| Vermont | .2 | **.5** | –.2 | 4.1 | 4.6 | **.5** | ±.4 |

[1] Error ranges are shown at the 90-percent confidence level and reflect the actual coefficients of variation.

NOTE: Boldface type indicates an absolute value of 0.5 or greater for the benchmark revision.

average and the sampling error that it contained, while the January estimate was based on the model. December–January is a highly seasonal period, with predictable changes in employment in many States. Depending on the size and direction of the employment benchmark revision in the State, the December–January employment change may not have reflected economic reality. Rather, it was an artifact of the benchmarking method. In the past, procedures were instituted that maintained the December–January model relationship for employment (the November endpoint), but they created serious distortion in the historical series.

*Impaired analysis over the year.* Regardless of whether the endpoint was moved to November (to preserve the December–January change) or kept at December, the ability to analyze over-the-year changes in labor force series was compromised in a number of States each year. With a November endpoint, the difference between the annual average of the model series and the CPS estimate was forced into 11 months, causing the series to rotate around August. This distortion in the series affected analyses of the labor force data over time. Even with the December endpoint, comparisons of modeled with benchmarked estimates provided spurious results, depending on the size of the benchmark revision in the State.

*Addressing "shocks" to the series: sum-of-States estimates compared with national estimates*. In the previous methodology, the State model estimates were developed independently of the national CPS estimates. Although the monthly State CPS input data summed to the national measures, the sum-of-States model estimates generally did not equal the national CPS estimates. To evaluate the performance of the model, each month the sum-of-States model estimates were compared with the national CPS estimates. Until 2001, the difference between the two estimates was well within the sampling error of the national estimates. In 2001, significant deviations occurred in the sum-of-States estimates, compared with the national CPS measures, in a number of months—specifically, March, August, and October through December. The national economy was shocked by both the onset of the recession and the September 11 terrorist attacks. These economic shocks were not reflected in the State model estimates, because the model viewed the increase in the State CPS unemployment estimates during that time as related to sampling error. Most evident was the post-September 11 period, exacerbating the economic recession and continuing into 2002. The inability of the previous methodology to reflect economic shocks degraded the use of the estimates in allocating Federal funds and in analyzing labor markets. Table 2 shows the difference between LAUS sum-of-States and CPS national unemployment rates from 1996 through 2004.

## Real-time benchmarking

As part of the LAUS redesign, the signal-plus-noise univariate models of the unemployment rate and the employment-population ratio were replaced with new, improved models that are also signal-plus-noise models; however, the signal this time is a bivariate model of the unemployment or employment levels. The unemployment insurance claims and nonfarm payroll employment inputs themselves are modeled, as is their interaction with the appropriate CPS series. The resultant correlations provide important information that is useful in understanding and analyzing monthly model estimates. Seasonal, trend, and irregular components are developed for each estimate modeled. Within the model's structure, seasonal adjustment occurs through the removal of the seasonal component. The models produce reliability measures for the seasonally adjusted and unadjusted series and for over-the-month changes.

The new bivariate models incorporate a major change in the BLS approach to benchmarking: rather than continue with a *retrospectively applied annual average State* benchmark that

**Table 2. Difference between LAUS sum-of-States and CPS national unemployment rates, not seasonally adjusted, 1996– 2004, to date**

[In percent]

| Month | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|
| January | –0.2 | –0.2 | –0.1 | 0.0 | –0.1 | –0.2 | –0.3 | –0.3 | –0.2 |
| February | –.1 | –.2 | –.1 | –.1 | –.1 | –.2 | –.2 | –.3 | –.1 |
| March | –.2 | –.3 | –.3 | .0 | –.3 | –.3 | –.4 | –.2 | –.3 |
| April | –.2 | .0 | .1 | –.1 | –.1 | –.2 | –.3 | .1 | –.2 |
| May | –.2 | –.1 | .0 | .0 | –.2 | .0 | –.2 | –.2 | –.2 |
| June | .0 | –.1 | –.1 | –.1 | –.1 | –.1 | –.2 | –.4 | –.2 |
| July | –.1 | .0 | –.1 | –.2 | –.1 | –.1 | –.2 | –.2 | –.2 |
| August | .0 | –.1 | –.2 | –.2 | –.2 | –.4 | –.3 | –.2 | –.2 |
| September | .0 | .0 | –.1 | –.1 | .0 | –.2 | –.1 | –.2 | –.1 |
| October | –.1 | .1 | –.1 | .0 | .0 | –.3 | –.1 | –.2 | –.2 |
| November | –.1 | .1 | .0 | .0 | –.1 | –.3 | –.3 | –.2 | –.2 |
| December | –.1 | –.1 | .0 | .0 | –.1 | –.4 | –.4 | –.1 | –.2 |

reintroduces sampling error to the historical monthly estimates, the proposed approach uses a reliable *real-time monthly national* benchmark for controlling current State model estimates of employment and unemployment. In this process, benchmarking is part of monthly State model estimation, instead of a once-a-year retrospective adjustment.

The model-based approach to estimation and benchmarking will produce reliability measures that take into account survey error in the monthly State estimates, as well as error in the benchmark series (including any correlations between the State and national survey errors) and estimation error in the models. Through historical benchmarking to the national CPS estimates, the resultant series will not be distorted, so that historical analysis of the estimates will be improved.

*General methodological approach*. Under real-time benchmarking, a tiered approach to estimation is followed. Using univariate signal-plus-noise models, BLS analysts develop model-based estimates for the nine Census divisions of the United States. (Census division groupings have long been used to analyze and publish LAUS estimates.) The division models are similar to the State models, but do not use unemployment insurance claims or nonfarm payroll employment as variables. This approach allows the models to be developed in a timely manner without sacrificing reliability. The division estimates are benchmarked to the national levels of employment and unemployment on a monthly basis. The benchmarked division model estimate is then used as the benchmark for the States within the division.

The proposed approach for adjusting the State model estimates to the division model is *constrained estimation*. Under this approach, a constraint is imposed such that the State estimates must equal the division estimates. One type of constrained estimation uses a model-based methodology which produces estimates that satisfy the constraint. This methodology has been tested on the division models and is still under development for practical program use. Until the model-based methodology is judged ready, external (pro rata) benchmark adjustment, which was evaluated and found to be adequate, is being adopted as an interim measure. Thus, the new method uses the distribution of State model estimates within the division as the basis for the monthly benchmark adjustment to the division-level estimates. In the interim procedure, the relative shares of each State's model estimate to its division total are preserved by the monthly benchmark adjustment, and the absolute size of the adjustment to a State's monthly model estimates is directly related to the size of those estimates. Supporting this procedure, the monthly State model estimation will discount extreme monthly CPS values and therefore avoid affecting the monthly benchmarking adjustment.

*Evaluation of real-time benchmarking.* In order to determine whether real-time benchmarking should be used in the official methodology for developing employment and unemployment estimates for States and large areas, a comparison and evaluation of the estimates from the new models with real-time benchmarking and those from the previous models with the retrospective State annual average benchmark was undertaken. In addition, the performance of the proposed method was evaluated in real time during a 1-year dual-estimation period.

The comparison and evaluation of the new models and the previous method focused on the 2000–04 period. By design, the monthly discrepancy between the sum-of-States estimate and the national estimate of employment and unemployment was eliminated. Also by design, December–January discontinuities and distortions in past-year estimates associated with the previous method were removed.

The comparison of methods for 2001 was particularly important. Two events which took place that year—the onset of the recession and the September terrorist attacks—underscored the inability of the previous method to reflect the labor market impact of those events on a timely basis and led to the consideration of alternatives to the annual benchmark. Indeed, the comparison of methods for 2001 labor force estimation provides actual examples of how real-time benchmarking addresses shocks to the economy.

For the first 6 months of 2001, the difference between the national unemployment rate and the rate developed by aggregating State estimates was small, reaching 0.3 percentage point in March. In the latter half of the year, as the recession began to have an impact on unemployment and the Nation reacted to the events of September 11, a different picture emerged. The difference between the sum-of-States estimate and the national estimate of the unemployment rate reached 0.4 percentage point in August and December and 0.3 percentage point in October and November. Of course, the new models with real-time benchmarking preclude such differences.

Of great interest is the performance of the new method as regards New York City, one of the sites of the terrorist attacks, and Florida, one of the major locations for vacations in the United States. In the LAUS program, estimates for New York City are developed in the same way as State estimates. For the first 4 months of 2001, the unemployment rate for New York City calculated with the new method was virtually the same as that calculated with the previous method. The onset of the recession, combined with the impact of the terrorist attacks, was recorded with the new method, in which the higher rates were registered by means of real-time benchmarking, with the difference reaching 0.5 percentage point in November and December. (See chart 4.)

Jobless rate comparisons for Florida are similar, but more extreme. Differences in jobless rates developed with the two approaches were noted in the last half of 2001, when vacation travel declined as a result of the terrorist attacks. By October, the new model's unemployment rate was 1.3 percentage points higher than the previous model's, and differences of more than

1.0 percentage point remained through the end of the year. (See chart 4.)

The impact of the recession on the unemployment rates of States with significant manufacturing employment was also better measured by the new method with real-time benchmarking. Such States include Michigan and North Carolina.

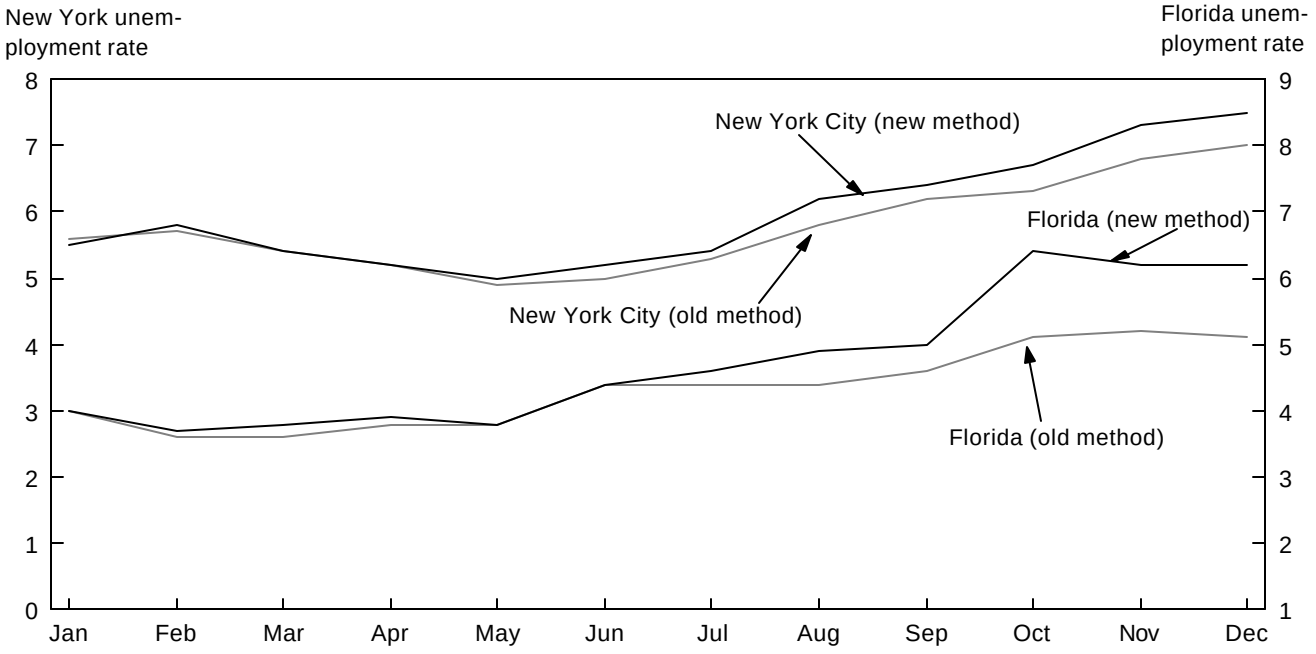
As part of the evaluation, a dual-estimation period was conducted from February to December 2004 so that proposed methodologies and operational systems could be reviewed in a real-time environment and the impact on estimation evaluated. During the dual-estimation period, it became clear that the new models were addressing issues associated with the previous models with a retrospective State benchmark. In brief, the new models with real-time benchmarking produced somewhat higher estimates of unemployment and the unemployment rate and lower estimates of employment, addressing the consistent under- and overestimation described in charts 1–3. A slight increase in month-to-month volatility was seen in the unemployment series. Operating systems and estimation processes were also successfully tested in a real-time environment.

*Implementation.* On the basis of a statistical and empirical evaluation of the estimates developed from models with real-time benchmarking, as well as BLS experience during the 2004 dual-estimation period, the Bureau determined that the new method of developing estimates of employment and unemployment at the State level was more accurate than the previous procedure and would be implemented with the January 2005 estimates. The full historical series for the States going back to 1976 was replaced with estimates developed with the new models and real-time benchmarking to the national estimates.

Annual historical benchmarking will continue for State estimates, but will be greatly altered. Each year, model inputs will be updated, models reestimated, and independent population controls updated and incorporated. Also, each month, the revised State model estimates will be adjusted to the national CPS employment and unemployment levels. However, the impact of these benchmark activities on the historical series is considered to be fairly small, especially in comparison with annual revisions using the previous methodology.

THE INTRODUCTION OF BIVARIATE MODELS WITH REAL-TIME BENCHMARKING is viewed as one of the most significant methodological changes in the LAUS program. The new estimation approach will ensure additivity of the State estimates to national estimates on a monthly basis, thus addressing the timely reflection of economic events and reducing the expected size of the annual revision to the series.

**Chart 4. Effects of shocks to the economy on unemployment rates, New York City and Florida, January 2001–December 2001**



For the first time, estimated standard errors for seasonally adjusted estimates will be provided, in addition to reliability measures for the unadjusted series and for over-the-month changes. □

## Note

[1] Information on the technical procedures used in the Local Area Unemployment Statistics program can be obtained from the *BLS Handbook of Methods*, Bulletin 2490 (Bureau of Labor Statistics, August 1997); on the Internet at **http://www.bls.gov/lau/**.