

QUARTERLY BENCHMARK RESEARCH TEAM

Final Report

December 1994

| | | |
|-----------------------|-----------------------|-----------------|
| Martha Dailey | Massachusetts | Co-Chair |
| Patricia Getz | BLS Washington | Co-Chair |
| John Gordon | BLS Dallas | |
| Spencer Hoynes | Georgia | |
| Ed Merrifield | West Virginia | |
| Kirk Mueller | BLS Washington | |
| Fred Pang | Hawaii | |
| Linda Unger | BLS Washington | |

Quarterly Benchmark Research Team Report

I. Background

The final report of a special panel of the American Statistical Association (ASA), chartered to develop a research agenda for the CES and ES-202 programs, recommended that CES estimates be benchmarked to the ES-202 on a quarterly basis, after ES-202 quality issues are resolved. The ASA report suggested that BLS makes too little use of the ES-202 by benchmarking only on an annual basis when, in fact, the data are available quarterly. However, the report recognized that there are also data quality issues surrounding the ES-202 which led to the caveat concerning the resolution of these quality issues. The issues include items such as response error, which occurs when respondents consistently report exactly the same employment levels for the three months of each quarter; and the persistent differences in CES and ES-202 seasonal trends, especially in the December to January time period.

While it was quarterly benchmarking which was specifically recommended by the ASA, in forming the charter for the quarterly benchmark research team, the sponsoring BLS/ICESA workgroup also decided to consider the option of interim revision. Interim revision was broadly defined as an adjustment done prior to the next regularly scheduled annual benchmark process; it would be triggered by a large divergence between CES and ES-202 employment levels in one or more of the interbenchmark quarters (i.e., 2nd, 3rd, or 4th quarter). The team was to decide the feasibility of such an approach, appropriate trigger levels, and the procedures for an interim revision adjustment.

Note on National versus State Issues

It is important to recognize at the outset that evaluating quarterly benchmarking and interim revision for the State and national series constitute two different issues because of the differing benchmark methodologies currently employed at the national and State levels. The primary relevant difference is that States uniformly replace estimates for the interbenchmark months with ES-202 levels while the interbenchmark months for the national series are adjusted by linearly wedging the difference between the March estimate and benchmark level back over the previous 11 months. Thus the CES national series largely retain the month-to-month movements shown in the original published series while State trends often change substantially when CES estimates are replaced with ES-202 monthly levels.

II. Definitions

For purposes of the team's work and this report, the following definitions were established:

Semi-Annual Benchmark -- A process identical to the current annual benchmarking except that it is done twice a year with March and September as the reference months. The process includes both the replacement of estimates since the last benchmark and the reprojection of estimates subsequent to the benchmark reference month. For State and area data, interbenchmark months are replaced with ES-202 levels, while for the national data a six month linear wedge is assumed.

Quarterly Benchmark -- A process identical to the current annual benchmarking except that it is done each quarter, with the last month of each quarter as the reference month. The process includes both the replacement of interbenchmark months data and the reprojection of estimates subsequent to the benchmark reference month.

Interim Revision -- A process by which corrections are made to the estimates based on a divergence between CES estimates and ES-202 total nonfarm employment levels. The process would be triggered by a certain amount of discrepancy and would involve both replacement with ES-202 and reprojection of estimates but might not encompass all published series.

Interim Adjustment -- A process by which an intervention is made in the current estimates to account for a divergence from the ES-202 without replacing ES-202 data or adjusting historical series.

III. Discussion Topics

The goal of the either interim revision or quarterly benchmarking is to correct CES estimation errors sooner than would be accomplished through an annual benchmark process. The benchmark would not only correct historical data but presumably improve more current estimates by projecting them from a more correct level; while adjustments might be more frequent they would also presumably be smaller than under an annual adjustment process. Toward this end the team's research and discussion led to exploration of an additional option for controlling CES/ES-202 discrepancies -- one best described as an interim adjustment. This is distinct from an interim revision or a benchmark in that it does not entail the correction of historical data nor the reprojection of current estimates, but uses the most currently available ES-202 data on an ongoing quarterly basis to make adjustments, through bias factors or otherwise, to current monthly estimates as they are being produced. The three basic options -- more frequent regular benchmarking, interim revision on an as needed basis, and interim adjustment, are described in detail below.

1. Quarterly, Semi-Annual, and Annual Benchmarking

The initial charge for the team was to examine the desirability of quarterly versus annual benchmarking for the CES State and national estimates. We also decided to examine semi-annual benchmarking as a compromise solution which would provide more frequent reconciliation with less workload burden than quarterly adjustments.

For State and area estimates the issue of annual versus more frequent benchmarking is almost entirely one of the trade-off between increased workload and a quicker correction process. Quarterly adjustments put a greater burden than annual benchmarks on the data producers and consumers alike, however they may prevent the CES estimates from straying too far from the ES-202 levels and prevent the larger revisions that could occur with the annual benchmark process.

After discussion concerning the workload involved in quarterly benchmarking and the actual size of historical annual CES benchmark revisions, the team rejected the idea of regular quarterly benchmarking as too expensive for the gains it could produce. In addition, quarterly benchmarking increases the number of times an estimate is revised which could become burdensome to the data users.

We reviewed semi-annual benchmark as another option because it would have the advantage of adjusting more frequently but not be as much of a workload burden, either to the data producers or users, as a quarterly adjustment.

State Semi-Annual Benchmark Simulations – We produced a number of simulations of the effect on semi-annual benchmarking on national and selected States' series. The results (detailed in attachment 1) indicate the desired effect for the most part with respect to the State series. Semi-annual benchmarks to the September ES-202 figure reduced in most cases the size of the benchmark revision

for the following March. Because of time and resource limitations we were able to conduct only limited simulations, using the March 1992-93 period for 15 States. In each case we produced purely sample-based estimates at the 3-digit SIC level and summed them to the total private level.

The results were somewhat mixed but overall favored semi-annual benchmarking. In 8 cases benchmarking at September 1992 reduced the required adjustment at March 1993 significantly. This effect was especially notable in the States which had large March benchmarks under an annual benchmarking scenario. Florida, Massachusetts, Michigan, New Jersey, and Virginia would definitely have benefited from a September benchmark by correcting their under estimation problems sooner and then experiencing relatively small March revisions. In three States (Iowa, Illinois, Arkansas), there was little effect from the more frequent benchmarking. In the other four States (South Carolina, Alaska, Maine, Missouri), a significantly larger March benchmark resulted when there was a semi-annual adjustment done for September. In each of these cases, relatively large upward revisions in September were followed by significant downward adjustments in March.

National semi-annual and quarterly benchmark simulations -- More extensive simulations were possible for national series because of the availability of suitable input files. Simulations of the effects of both quarterly and semi-annual benchmarking were produced for 1986 forward (attachment 2). The results do not favor the introduction of either for national series. They indicate that the seasonal trend differences between the CES and ES-202 overwhelm other effects and would cause much larger revisions than we currently experience with the March-only annual benchmark. For example the 1st quarter benchmark would always be downward and the 2nd quarter upward because the ES-202 shows a much stronger seasonal downturn in January than CES. Under semi-annual benchmark simulations, the 3rd quarter revision is consistently upward and the 1st quarter revision consistently downward. Which series seasonal trends are more correct is still somewhat unknown.

While this same phenomenon occurs in many States, it is not as much of an issue because State methodology currently calls for the replacement of CES estimates with ES-202 levels and thus the issue of changing seasonal trends is already present in the State and areas series.

2. Interim Adjustment

Another option investigated was the introduction of an interim adjustment process to improve the CES estimates. An interim adjustment was defined as an intervention or additional activity that would serve to compensate for underestimation or overestimation in the regular methodology. The team identified two methods for interim adjustment. The first was the use of bias adjustment in the estimating process and, the second was the use of an ad-hoc adjustment to the estimating cell employment level as a result of a review of quarterly ES-202 data.

In addition to reviewing and testing the use of these methods for improving the estimates, we decided to conduct an informal survey through the regional offices to determine to what extent the States were using these two methods of intervention. The regional offices were asked to briefly respond for each of their States to three questions: 1) does the state currently use bias factors in the estimates, 2) does the state use and analyze quarterly ES-202 data when available, and 3) as a result of this ES-202 review does the State do any interim adjustment or intervention in the estimates.

Survey results showed 14 states using bias factors, but some use them on a very limited basis. Most of the States are reviewing and analyzing ES-202 data when it becomes available and 13 states are using the results of that analysis to do some kind of intervention or adjustment to the CES data, although it was unclear what type or how aggressive the intervention was.

The use of bias adjustment was identified as a possible enhancement to the estimated procedures because of its use in the National estimates and its contribution to reducing the size of the benchmark adjustment for those estimates. In order to test the use of bias and its effect on the amount of revision, simulations for four States using the bias adjustment methodology from the CES Manual were run. The simulations were done using sample data from the four states and with estimates calculated at the three digit SIC level. Estimates were produced for the period covered by the March 1993 benchmark (April 1992 – March 1993) using sample only and using sample plus bias. Bias factors were the three year average revision and were applied to all estimating cells. In addition, simulations were done using bias in combination with a semi-annual benchmark (see attachment 3).

The results of the simulations did not reveal any conclusive evidence of an improvement in the amount of revision for the four States tested. For all of the States, the simulation of an annual benchmark with bias resulted in major downward revisions for the March benchmark while the estimates without bias reflected the upward revisions that had actually occurred. The semi-annual benchmark estimates with bias also resulted in downward revisions to the estimates for the March 1993 benchmark, although three of the four States would have had upward revisions at the September 1992 semi-annual benchmark.

Since the results of the simulations failed to indicate that any improvement in the estimates and reduction in benchmark revision would be gained by using bias adjustment factors as an interim adjustment methodology, the team decided not to pursue bias adjustment as a possible solution.

Another type of interim adjustment investigated involved the use of ad-hoc intervention in the current estimates or employment levels as a result of ES-202 review. The survey conducted by the group showed that some States do intervene in the estimating process, however, it was unknown exactly how this intervention was done or its need determined. The survey failed to identify any formal method either through a level or percentage of error that triggered the adjustment. This type of intervention is done by adjusting the employment levels for the current estimating period (prior month revised and current month preliminary) by some of the amount of the discrepancy in the most recent ES-202. Thus, a difference seen in the comparison of June data for the CES and ES-202 (which is available at the end of November) would be applied to the revised October and preliminary November estimates which are prepared in mid-December.

The team felt that there were several problems with this type of intervention. First, it is outside the traditional methodology for preparing estimates and benchmarking. Also it is undefined in terms of when it should be done and how it should be introduced in the data. In addition, there is no way to identify when this intervention has taken place and the effect on the over the month changes could be very misleading to the data users. As a result of the lack of structure and corresponding audit trail, the team believed this type of adjustment should not be pursued.

3. Interim Revision

An additional charge contained in the team's charter was to research the use of interim revision as a way to improve CES estimates. The group defined interim revision as an intervention done on current estimates that is not a full benchmark but does involve the adjustment of historical as well as current data.

Initial discussion of interim revision in the CES program focused on the effects on the comparability of data across States and the potential negative effects to the program by publicizing errors and perhaps confusing users. Another issue for the team was the difficulty of implementing the interim revision policy that had existed in the past. Issues that argued toward developing an interim revision policy included the fact that when estimates are in need of large revisions, data users are generally

aware of the problems; the credibility of the CES program can be damaged by continuing to publish data known to be in error; and the comparison across states of estimates with very unequal error levels may lead to erroneous conclusions by the data users. In addition, the BLS/ICESA workgroup members believed that an interim revision policy was needed and requested that the team develop criteria for that policy.

In addressing the development of interim revision policy and procedures we reviewed the historical benchmark revisions for the States, considered the previous interim revision policy for the program, and reviewed some historical situations in which states may have needed to make an interim revision. Other issues examined included determining at which aggregation the trigger should be applied, what type of trigger should be used, i.e. percent or level, how much correction should be made and, which types of estimates should be revised.

The team decided that a percent should be the measure of divergence used to trigger an interim revision and its application should be at the total nonfarm employment level. Since the CES program covers a very wide range of total nonfarm employment levels, the percent trigger should vary with the employment level, the smaller the total employment level the higher the percent divergence allowed. In addition, the team believed that the number of cells revised should be minimized, so that the methodology should allow for revisions to those series that account for the bulk of the error and the amount of revision should be sufficient to get below the trigger.

Since the intent of an interim revision is to more closely reflect the data that will be published as a result of a full benchmark, it was decided that the interim revision should be made by replacing the series in error with the ES-202 data and that revision/ replacement should be done back to the last benchmark month. In addition, the trigger measure should be applied to the third month of the quarter being reviewed as that reflects the measure of regular benchmark adjustment. It was also determined that all published data (employment, hours and earnings) should be revised as part of the process.

It was the general consensus of the team that if the recommendation of semi-annual benchmarking were to be adopted, there should be very few instances where an interim revision would be necessary since it would require a major one quarter divergence in employment levels. It was also the team's opinion that there should be some indication that the divergence represents an ongoing trend and is not a one month blip. This could be done through a review by the regional office of the state's proposed revision reviewing all three months of data and perhaps looking at a preliminary ES-202 for the next quarter.

ES-202 Revisions – An issue which arose in conjunction with both more frequent regular benchmarking and interim revision concerns the editing and corrections made to ES-202 levels. Under either a quarterly, semi-annual, or interim revision scenario, the ES-202 files utilized would be subject to less review and editing time. There was some concern over whether this would materially affect the ES-202 levels, thus affecting both the size of the CES benchmark revisions and the final, published time series. A series of comparisons of “preliminary” and “final” ES-202 data were conducted for the national level ES-202 and some of the States on the team. All of the comparisons indicated that changes were relatively small at both aggregate and detailed industry levels, mitigating concern in this area. The team decided this issue was not a significant factor in our evaluation of the feasibility of more frequent benchmarking. Attachment 4 contains a description of the ES-202 comparisons and results.

IV. User Interviews and Results

The team consulted informally with some of the major CES data users to discuss the issue of more frequent benchmarking and how it might affect them. There was no overall consensus from the user community in terms of the issue of more frequent benchmarking. This stemmed from the fact that users vary in the characteristics of the CES data that are important to them. For example the Wall Street community is interested in national level data and current over-the-month change almost exclusively. Thus more frequent benchmarking was of little interest to them because it would do nothing to improve the accuracy of first closing over-the-month changes. On the other hand, discussions with state revenue forecasters indicated strong interest in more frequent, preferably quarterly, benchmarking.

Of the 13 users interviewed, nearly all said they used both national and State data, with about half indicating use of area data. Most were interested in both over-the-month and over-the-year change, with a smaller number (5) indicating that the level itself was very important. On the issue of more frequent benchmarking 7 favored it, 4 did not, and 2 were undecided. Those who favored more frequent benchmarking generally were users who concentrated on State and/or area data rather than national and who did not see it as imposing a significantly heavier workload burden on them. Those who did not favor it were more interested in over-the-month changes, especially at the national level, and also generally believed it was too much work and too confusing to add any more revisions to the CES series.

See attachment 5 for a more detailed description of user reactions.

V. Quarterly Benchmark Team Recommendations

The team has recommendation in two primary areas: regular semi-annual benchmarking for all CES series, and a provision for interim revision to be triggered in cases of extreme and documentable problems with CES estimates which occur in the single, individual quarters between the semi-annual benchmarks.

(1) Semi-Annual Benchmarking for State and Area Series

The team identified semi-annual benchmarks as a way to improve the quality of CES State and area series by providing more frequent reconciliation with ES-202 universe counts with less burden to users and producers than quarterly benchmarking. It is the recommendation of the team that an assessment be made of the resources and workload involved in semi-annual benchmarking and that the decision on implementation of semi-annual benchmarking be made based on an evaluation of that study.

- The benchmark reference months would be March and September
- The recommendation is made contingent upon changes to the SIC refiling procedures which are expected to mitigate the effect on non-economic code changes on industry series. At the present time, code changes are too large to be wedged out over a 6-month period.
- States would replace monthly estimates with ES-202 levels for the 6 months covered by each semi-annual benchmark and reproject forward to the current month using CES sample links. (see attachment 6 for a sample work flow)

- The two different methods now used in national versus State series impact on the viability of adopting semi-annual benchmarking. Because research and simulations at the national level have demonstrated that CES/ES-202 divergences are historically small and often reflect seasonal differences which offset over the course of a year, gains from semi-annual benchmarking are not as clear for the national series as for States where ES-202 replacement is the standard methodology and the semi-annual is more a matter of changed timing than anything else. The potential advantages of adopting semi-annual benchmarks for national series would be consistency across the program and real gains in a year such as 1994 where the CES/ES-202 difference was relatively large and grew over time. However the team does not recommend regular semi-annual benchmarking for the national series at this time.

(2) Interim Revision for National, State, and Area Series

Although the team believes that semi-annual benchmarking will be sufficient in most instances to prevent the State and area CES estimates from drifting too far from the ES-202 universe counts, we also recommend a policy of interim revision for the rare cases where, in a single quarter, the CES and ES-202 estimates have diverged significantly and estimates need to be corrected immediately to retain the credibility of the CES series.

- When a single quarter's CES/ES-202 divergence reaches or exceeds the trigger levels in the third month of the quarter, the State will undertake a mandatory review of the divergence and its likely causes and make a decision on interim revision. Regional Offices will review and validate the revision.
- An interim revision will only be triggered by a divergence at the total nonfarm level. This endorses the topside figure as the most important estimate and the only divergence serious enough to warrant this extraordinary measure.
- A percent measure will be the determinant of what constitutes a significant divergence and the percent should vary by the level of total nonfarm employment; the smaller the employment, the larger percentage divergence is allowed.
- Further research should be done to determine the optimal percent triggers for the varying employment levels. The team identified one set of percent triggers and applied them to all CES States and areas. The test triggers are listed below and the results of the study on all CES areas follow that list.

The operative principles for interim revision are:

- Minimize the number of industry series revised to get below the trigger level. For example if most of the problem can be traced to construction, it may be necessary only to revise the construction series and the topside aggregates.
- All published data series will be revised, not just the all employee series
- Standard benchmark methodology (i.e., ES-202 replacement and CES sample-based reprojection) will be used.
- Because the issues are somewhat different for National versus State series because of the different benchmark methodologies in use, the trigger test for national series should be based on

a comparison of CES/ES-202 differences from seasonally adjusted series, and set at 0.5%, the upper end of the historical benchmark error range.

VI. Outstanding Issues

1. While semi-annual benchmarking is seen as improving the data, the issue of seasonal adjustment was not addressed by the team. Prior to implementation, the team recommends research be done on the effects of semi-annual benchmarking on seasonal adjustments and any needed changes be made to the seasonal adjustment methodologies and/or procedures.
2. In assessing the potential of quarterly benchmarking, an increase in workload for states and regional offices was apparent. For semi-annual benchmarking the effect on workload was not as clear. Given the time frame for the team's research it was not possible to quantify and assess the additional workload or costs associated with semi-annual benchmarking. The team recommends that such an assessment be undertaken prior to a decision on implementation.
3. In order to lessen the impact of semi-annual benchmarking on workload and resources, system improvements and modernizations and cost cutting procedures for benchmarking that will not adversely affect the quality of the data should be identified and implemented.
4. The need to lessen the effects of non-economic code changes on published series was identified by the team as an issue critical to semi-annual benchmarking and one which is being addressed by the SIC Refile team. However even with the reduction in the effects of non-economic code changes, the implementation of semi-annual benchmarking may require a change in methodology for their introduction as a nine month backward wedge may no longer be feasible.
5. While the team identified some potential percent trigger levels and reviewed the CES State and areas that would be included in each level, further research on trigger levels is recommended by the team before an interim revision policy is finalized.

Test Interim Revision Trigger Levels

| Total Nonfarm Employment | Pct Difference |
|-----------------------------|-------------------|
| ≤ 1,000,000 | 2.0% * |
| 1,000,001-2,500,000 | 1.5% |
| 2,500,001-4,000,000 | 1.0% |
| ≥ 4,000,001 | 0.5% |

*Revisions must be at least 1,000 employees

Interim Benchmark Triggers

| State Code | MSA Code | Name | March 1993 Empl. | Absolute Change | Trigger | Sept 1994 Empl |
|------------|----------|---|------------------|-----------------|-------------------|----------------|
| 06 | 0000 | California | 12007.3 | 60.04 | 0.005 | 11966.3 |
| 36 | 5581 | New York-Northeastern New Jersey, NY-NJ | 7758.6 | 38.79 | 0.005 | 0 |
| 36 | 0000 | New York | 7634.5 | 38.17 | 0.005 | 7836.7 |
| 48 | 0000 | Texas | 7378.1 | 36.89 | 0.005 | 7781.4 |
| 12 | 0000 | Florida | 5559.5 | 27.80 | 0.005 | 5785.9 |
| 17 | 0000 | Illinois | 5228.1 | 26.14 | 0.005 | 5453.4 |
| 42 | 0000 | Pennsylvania | 5043.2 | 25.22 | 0.005 | 5198.3 |
| 39 | 0000 | Ohio | 4818.7 | 24.09 | 0.005 | 4998.1 |
| 36 | 5591 | New York and Nassau-Suffolk, NY | 4774.1 | 23.87 | 0.005 | 4837.2 |
| | | 7 States and 2 MSAs | | | .5% Trigger Level | |
| 26 | 0000 | Michigan | 3925.1 | 39.25 | 0.01 | 4155.8 |
| 36 | 5600 | New York, NY | 3739.4 | 37.39 | 0.01 | 3777.4 |
| 06 | 4480 | Los Angeles-Long Beach, CA | 3725 | 37.25 | 0.01 | 3664.1 |
| 17 | 1600 | Chicago, IL | 3638.5 | 36.39 | 0.01 | 3818.2 |
| 34 | 0000 | New Jersey | 3428.8 | 34.29 | 0.01 | 3570.8 |
| 36 | 5611 | New York City, NY | 3259.4 | 32.59 | 0.01 | 3289.3 |
| 37 | 0000 | North Carolina | 3179.5 | 31.80 | 0.01 | 3359.9 |
| 13 | 0000 | Georgia | 3041.8 | 30.42 | 0.01 | 3280.8 |
| 51 | 0000 | Virginia | 2861.4 | 28.61 | 0.01 | 3034.4 |
| 25 | 0000 | Massachusetts | 2771.2 | 27.71 | 0.01 | 2948.8 |
| 18 | 0000 | Indiana | 2564.3 | 25.64 | 0.01 | 2675.7 |
| | | 7 States and 4 MSAs | | | 1% Trigger Level | |
| 55 | 0000 | Wisconsin | 2355 | 35.33 | 0.015 | 2498.1 |
| 29 | 0000 | Missouri | 2343.3 | 35.15 | 0.015 | 2512.4 |
| 11 | 8840 | Washington, DC-MD-VA-WV | 2296.8 | 34.45 | 0.015 | 2329.2 |
| 47 | 0000 | Tennessee | 2281.4 | 34.22 | 0.015 | 2420.6 |
| 53 | 0000 | Washington | 2215.1 | 33.23 | 0.015 | 2317.5 |
| 27 | 0000 | Minnesota | 2193.8 | 32.91 | 0.015 | 2322.8 |
| 42 | 6160 | Philadelphia, PA-NJ | 2117.6 | 31.76 | 0.015 | 2148 |
| 24 | 0000 | Maryland | 2058.9 | 30.88 | 0.015 | 2132.2 |
| 26 | 2160 | Detroit, MI | 1852.9 | 27.79 | 0.015 | 1948.5 |
| 01 | 0000 | Alabama | 1696.2 | 25.44 | 0.015 | 1737.1 |
| 25 | 1120 | Boston-Brockton-Nashua, MA-NH | 1690.1 | 25.35 | 0.015 | 1787.1 |
| 48 | 3360 | Houston, TX | 1643 | 24.65 | 0.015 | 1687 |
| 08 | 0000 | Colorado | 1642.9 | 24.64 | 0.015 | 1728.6 |
| 22 | 0000 | Louisiana | 1636.5 | 24.55 | 0.015 | 1713.5 |
| 13 | 0520 | Atlanta, GA | 1592.6 | 23.89 | 0.015 | 1744.6 |
| 04 | 0000 | Arizona | 1565.4 | 23.48 | 0.015 | 1661.1 |
| 45 | 0000 | South Carolina | 1547.9 | 23.22 | 0.015 | 1599.5 |
| 09 | 0000 | Connecticut | 1518.6 | 22.78 | 0.015 | 1540.8 |
| 21 | 0000 | Kentucky | 1517.4 | 22.76 | 0.015 | 1586 |
| 48 | 1920 | Dallas, TX | 1447.1 | 21.71 | 0.015 | 1552 |
| 27 | 5120 | Minneapolis-St. Paul, MN-WI | 1420.3 | 21.30 | 0.015 | 1496.4 |
| 41 | 0000 | Oregon | 1283.3 | 19.25 | 0.015 | 1373.2 |
| 19 | 0000 | Iowa | 1249.7 | 18.75 | 0.015 | 1320.8 |
| 40 | 0000 | Oklahoma | 1234.9 | 18.52 | 0.015 | 1272.3 |
| 29 | 7040 | St. Louis, MO-IL | 1167.6 | 17.51 | 0.015 | 1230.5 |

Interim Benchmark Triggers

| State Code | MSA Code | Name | March 1993 Empl. | Absolute Change | Trigger | Sept 1994 Empl |
|------------|----------|--|------------------|-----------------|--------------------|----------------|
| 53 | 7600 | Seattle-Bellevue-Everett, WA | 1133.5 | 17.00 | 0.015 | 1176.4 |
| 20 | 0000 | Kansas | 1119.6 | 16.79 | 0.015 | 1166.8 |
| 06 | 5945 | Orange County, CA | 1116.1 | 16.74 | 0.015 | 1115.4 |
| 24 | 0720 | Baltimore, MD | 1078 | 16.17 | 0.015 | 1109.3 |
| 04 | 6200 | Phoenix-Mesa, AZ | 1050.6 | 15.76 | 0.015 | 1115.8 |
| 36 | 5380 | Nassau-Suffolk, NY | 1034.7 | 15.52 | 0.015 | 1059.8 |
| 39 | 1680 | Cleveland-Lorain-Elyria, OH | 1029.7 | 15.45 | 0.015 | 1062.3 |
| 42 | 6280 | Pittsburgh, PA | 1013.6 | 15.20 | 0.015 | 1049.1 |
| | | 17 States and 16 MSAs | | | 1.5% Trigger Level | |
| 28 | 0000 | Mississippi | 980.5 | 19.61 | 0.02 | 1039.9 |
| 05 | 0000 | Arkansas | 978.4 | 19.57 | 0.02 | 1041.2 |
| 06 | 7320 | San Diego, CA | 943.1 | 18.86 | 0.02 | 929.4 |
| 06 | 7360 | San Francisco, CA | 903.9 | 18.08 | 0.02 | 900.7 |
| 34 | 5640 | Newark, NJ | 896.3 | 17.93 | 0.02 | 920.7 |
| 12 | 8280 | Tampa-St. Petersburg-Clearwater, FL | 895.1 | 17.90 | 0.02 | 929.4 |
| 12 | 5000 | Miami, FL | 887.4 | 17.75 | 0.02 | 923.9 |
| 08 | 2080 | Denver, CO | 886.9 | 17.74 | 0.02 | 926.8 |
| 06 | 5775 | Oakland, CA | 870.9 | 17.42 | 0.02 | 856.8 |
| 43 | 0000 | Puerto Rico | 861.4 | 17.23 | 0.02 | 868.9 |
| 51 | 5751 | Northern Virginia, VA | 841.9 | 16.84 | 0.02 | 905.5 |
| 29 | 3760 | Kansas City, MO-KS | 793.5 | 15.87 | 0.02 | 835.1 |
| 06 | 7400 | San Jose, CA | 792.3 | 15.85 | 0.02 | 780.5 |
| 49 | 0000 | Utah | 789.7 | 15.79 | 0.02 | 878.6 |
| 55 | 5080 | Milwaukee-Waukesha, WI | 759.9 | 15.20 | 0.02 | 787.5 |
| 41 | 6440 | Portland-Vancouver, OR-WA | 754.7 | 15.09 | 0.02 | 796.7 |
| 24 | 8125 | Suburban Maryland-D.C. | 752.5 | 15.05 | 0.02 | 783.4 |
| 39 | 1640 | Cincinnati, OH-KY-IN | 749.4 | 14.99 | 0.02 | 786 |
| 31 | 0000 | Nebraska | 747.9 | 14.96 | 0.02 | 789.6 |
| 06 | 6780 | Riverside-San Bernardino, CA | 735.9 | 14.72 | 0.02 | 743.8 |
| 18 | 3480 | Indianapolis, IN | 722 | 14.44 | 0.02 | 749.7 |
| 39 | 1840 | Columbus, OH | 713.9 | 14.28 | 0.02 | 732.4 |
| 42 | 6161 | Philadelphia City, PA | 688.4 | 13.77 | 0.02 | 686.2 |
| 11 | 0000 | District of Columbia | 670.9 | 13.42 | 0.02 | 664.5 |
| 32 | 0000 | Nevada | 652 | 13.04 | 0.02 | 722.9 |
| 12 | 5960 | Orlando, FL | 640.7 | 12.81 | 0.02 | 689.7 |
| 37 | 1520 | Charlotte-Gastonia-Rock Hill, NC-SC | 637.3 | 12.75 | 0.02 | 670.2 |
| 54 | 0000 | West Virginia | 636.3 | 12.73 | 0.02 | 679.5 |
| 35 | 0000 | New Mexico | 613.6 | 12.27 | 0.02 | 665.6 |
| 48 | 2800 | Fort Worth-Arlington, TX | 602.6 | 12.05 | 0.02 | 637.8 |
| 51 | 5720 | Norfolk-Virginia Beach-Newport News, VA-NC | 596.5 | 11.93 | 0.02 | 622.7 |
| 34 | 0875 | Bergen-Passaic, NJ | 595.6 | 11.91 | 0.02 | 613.5 |
| 09 | 3280 | Hartford, CT | 577.2 | 11.54 | 0.02 | 591.5 |
| 48 | 7240 | San Antonio, TX | 565.6 | 11.31 | 0.02 | 591.4 |
| 22 | 5560 | New Orleans, LA | 561.5 | 11.23 | 0.02 | 579.9 |
| 37 | 3120 | Greensboro-Winston-Salem-High Point, NC | 559.7 | 11.19 | 0.02 | 581.7 |
| 06 | 6920 | Sacramento, CA | 551.9 | 11.04 | 0.02 | 563 |
| 15 | 0000 | Hawaii | 543.8 | 10.88 | 0.02 | 522.2 |

Interim Benchmark Triggers

| State Code | MSA Code | Name | March 1993 Empl. | Absolute Change | Trigger | Sept 1994 Empl |
|------------|----------|-------------------------------------|------------------|-----------------|---------|----------------|
| 12 | 2680 | Fort Lauderdale, FL | 540.4 | 10.81 | 0.02 | 564.1 |
| 43 | 7440 | San Juan-Bayamon, PR | 538.6 | 10.77 | 0.02 | 538.7 |
| 34 | 5015 | Middlesex-Somerset-Hunterdon, NJ | 535.1 | 10.70 | 0.02 | 557.6 |
| 49 | 7160 | Salt Lake City-Ogden, UT | 534.9 | 10.70 | 0.02 | 589.2 |
| 47 | 5360 | Nashville, TN | 534.4 | 10.69 | 0.02 | 562.3 |
| 36 | 1280 | Buffalo-Niagara Falls, NY | 518.3 | 10.37 | 0.02 | 538.5 |
| 36 | 6840 | Rochester, NY | 505.3 | 10.11 | 0.02 | 521.5 |
| 37 | 6640 | Raleigh-Durham-Chapel Hill, NC | 503.4 | 10.07 | 0.02 | 527.2 |
| 23 | 0000 | Maine | 497.9 | 9.96 | 0.02 | 538.8 |
| 21 | 4520 | Louisville, KY-IN | 488.6 | 9.77 | 0.02 | 509 |
| 33 | 0000 | New Hampshire | 486 | 9.72 | 0.02 | 521.1 |
| 47 | 4920 | Memphis, TN-AR-MS | 485 | 9.70 | 0.02 | 498.3 |
| 44 | 6480 | Providence-Warwick, RI | 467.7 | 9.35 | 0.02 | 487.7 |
| 51 | 6760 | Richmond-Petersburg, VA | 467.3 | 9.35 | 0.02 | 490.3 |
| 26 | 3000 | Grand Rapids-Muskegon-Holland, MI | 457.2 | 9.14 | 0.02 | 486.5 |
| 48 | 0640 | Austin-San Marcos, TX | 445.6 | 8.91 | 0.02 | 478.5 |
| 40 | 5880 | Oklahoma City, OK | 445.1 | 8.90 | 0.02 | 454.1 |
| 32 | 4120 | Las Vegas, NV-AZ | 443 | 8.86 | 0.02 | 493.4 |
| 39 | 2000 | Dayton-Springfield, OH | 436.8 | 8.74 | 0.02 | 450.2 |
| 12 | 3600 | Jacksonville, FL | 433.2 | 8.66 | 0.02 | 454.3 |
| 34 | 1311 | Camden, NJ | 423.8 | 8.48 | 0.02 | 442.5 |
| 16 | 0000 | Idaho | 420 | 8.40 | 0.02 | 472.5 |
| 15 | 3320 | Honolulu, HI | 419.2 | 8.38 | 0.02 | 399.6 |
| 44 | 0000 | Rhode Island | 418.2 | 8.36 | 0.02 | 438.5 |
| 34 | 3181 | Hackensack, NJ | 415.5 | 8.31 | 0.02 | 429.7 |
| 36 | 0160 | Albany-Schenectady-Troy, NY | 415.4 | 8.31 | 0.02 | 428.9 |
| 01 | 1000 | Birmingham, AL | 411.3 | 8.23 | 0.02 | 427.3 |
| 24 | 0721 | Baltimore City, MD | 410.8 | 8.22 | 0.02 | 414.7 |
| 45 | 3160 | Greenville-Spartanburg-Anderson, SC | 408.8 | 8.18 | 0.02 | 425.9 |
| 12 | 8960 | West Palm Beach-Boca Raton, FL | 371.1 | 7.42 | 0.02 | 369.9 |
| 36 | 8971 | Westchester County, NY | 366.1 | 7.32 | 0.02 | 372.5 |
| 10 | 0000 | Delaware | 339.1 | 6.78 | 0.02 | 359.9 |
| 31 | 5920 | Omaha, NE-IA | 338.4 | 6.77 | 0.02 | 352.3 |
| 40 | 8560 | Tulsa, OK | 329.7 | 6.59 | 0.02 | 338.1 |
| 36 | 8160 | Syracuse, NY | 324.1 | 6.48 | 0.02 | 333.2 |
| 34 | 5190 | Monmouth-Ocean, NJ | 321 | 6.42 | 0.02 | 346.4 |
| 42 | 3240 | Harrisburg-Lebanon-Carlisle, PA | 315.2 | 6.30 | 0.02 | 321.8 |
| 30 | 0000 | Montana | 314.4 | 6.29 | 0.02 | 346.6 |
| 46 | 0000 | South Dakota | 308.2 | 6.16 | 0.02 | 333.7 |
| 47 | 3840 | Knoxville, TN | 287.3 | 5.75 | 0.02 | 301.5 |
| 39 | 0080 | Akron, OH | 287.2 | 5.74 | 0.02 | 301.4 |
| 39 | 8400 | Toledo, OH | 284.3 | 5.69 | 0.02 | 296.6 |
| 35 | 0200 | Albuquerque, NM | 283.3 | 5.67 | 0.02 | 308.3 |
| 38 | 0000 | North Dakota | 277.8 | 5.56 | 0.02 | 297 |
| 04 | 8520 | Tucson, AZ | 274.8 | 5.50 | 0.02 | 291 |
| 05 | 4400 | Little Rock-North Little Rock, AR | 267.9 | 5.36 | 0.02 | 279.9 |
| 10 | 9160 | Wilmington-Newark, DE-MD | 264.2 | 5.28 | 0.02 | 275 |

Interim Benchmark Triggers

| State Code | MSA Code | Name | March 1993 Empl. | Absolute Change | Trigger | Sept 1994 Empl |
|------------|----------|---------------------------------------|------------------|-----------------|---------|----------------|
| 42 | 7560 | Scranton-Wilkes-Barre-Hazleton, PA | 260.3 | 5.21 | 0.02 | 268.7 |
| 50 | 0000 | Vermont | 253.3 | 5.07 | 0.02 | 262.1 |
| 22 | 0760 | Baton Rouge, LA | 252 | 5.04 | 0.02 | 264.2 |
| 42 | 0240 | Allentown-Bethlehem-Easton, PA | 250.5 | 5.01 | 0.02 | 255.8 |
| 06 | 2840 | Fresno, CA | 249.7 | 4.99 | 0.02 | 259.3 |
| 20 | 9040 | Wichita, KS | 249.3 | 4.99 | 0.02 | 250.7 |
| 45 | 1760 | Columbia, SC | 245.6 | 4.91 | 0.02 | 250.1 |
| 18 | 2960 | Gary, IN | 243.9 | 4.88 | 0.02 | 246.4 |
| 26 | 0440 | Ann Arbor, MI | 243.7 | 4.87 | 0.02 | 248.2 |
| 18 | 2760 | Fort Wayne, IN | 241.7 | 4.83 | 0.02 | 252.5 |
| 02 | 0000 | Alaska | 241.6 | 4.83 | 0.02 | 269.7 |
| 19 | 2120 | Des Moines, IA | 239.1 | 4.78 | 0.02 | 250.9 |
| 55 | 4720 | Madison, WI | 236.4 | 4.73 | 0.02 | 249.5 |
| 09 | 5480 | New Haven-Meridian, CT | 234.6 | 4.69 | 0.02 | 233.3 |
| 21 | 4280 | Lexington, KY | 234 | 4.68 | 0.02 | 245.6 |
| 25 | 8000 | Springfield, MA | 232.6 | 4.65 | 0.02 | 242.5 |
| 06 | 8735 | Ventura, CA | 226.8 | 4.54 | 0.02 | 223.3 |
| 34 | 3640 | Jersey City, NJ | 225.4 | 4.51 | 0.02 | 237.7 |
| 39 | 9320 | Youngstown-Warren, OH | 224.2 | 4.48 | 0.02 | 234.3 |
| 48 | 2320 | El Paso, TX | 221.4 | 4.43 | 0.02 | 228.7 |
| 26 | 4040 | Lansing-East Lansing, MI | 214.6 | 4.29 | 0.02 | 218.6 |
| 12 | 7510 | Sarasota-Bradenton, FL | 207.2 | 4.14 | 0.02 | 213.2 |
| 45 | 1440 | Charleston-North Charleston, SC | 205.5 | 4.11 | 0.02 | 205 |
| 47 | 1560 | Chattanooga, TN-GA | 204 | 4.08 | 0.02 | 211.5 |
| 25 | 9240 | Worcester, MA | 202.7 | 4.05 | 0.02 | 210.5 |
| 56 | 0000 | Wyoming | 199.9 | 4.00 | 0.02 | 220.8 |
| 34 | 8480 | Trenton, NJ | 194.7 | 3.89 | 0.02 | 193.7 |
| 26 | 3720 | Kalamazoo-Battle Creek, MI | 194.4 | 3.89 | 0.02 | 201.6 |
| 28 | 3560 | Jackson, MS | 192.5 | 3.85 | 0.02 | 204.5 |
| 01 | 5160 | Mobile, AL | 192.1 | 3.84 | 0.02 | 199.8 |
| 42 | 4000 | Lancaster, PA | 191.6 | 3.83 | 0.02 | 199 |
| 13 | 0600 | Augusta-Aiken, GA-SC | 186.5 | 3.73 | 0.02 | 191.6 |
| 47 | 3660 | Johnson City Kingsport-Bristol, TN-VA | 183.5 | 3.67 | 0.02 | 184.2 |
| 34 | 6040 | Patterson-Clifton-Passaic, NJ | 180.1 | 3.60 | 0.02 | 183.8 |
| 09 | 8040 | Stamford-Norwalk, CT | 179.7 | 3.59 | 0.02 | 182.3 |
| 09 | 1160 | Bridgeport, CT | 173.9 | 3.48 | 0.02 | 173.9 |
| 55 | 0460 | Appleton-Oshkosh-Neenah, WI | 170.1 | 3.40 | 0.02 | 179.2 |
| 06 | 0680 | Bakersfield, CA | 169.3 | 3.39 | 0.02 | 170.3 |
| 12 | 4900 | Melbourne-Titusville-Palm Bay, FL | 166.9 | 3.34 | 0.02 | 170.1 |
| 17 | 1960 | Davenport-Moline-Rock Island, IA-IL | 163.8 | 3.28 | 0.02 | 172.1 |
| 01 | 3440 | Huntsville, AL | 163.8 | 3.28 | 0.02 | 160.1 |
| 26 | 2640 | Flint, MI | 163.1 | 3.26 | 0.02 | 170.1 |
| 39 | 1320 | Canton-Massillon, OH | 163 | 3.26 | 0.02 | 173.2 |
| 26 | 6960 | Saginaw-Bay City Midland, MI | 160.8 | 3.22 | 0.02 | 171.1 |
| 34 | 0560 | Atlantic-Cape May, NJ | 156.5 | 3.13 | 0.02 | 180.3 |
| 16 | 1080 | Boise City, ID | 153.9 | 3.08 | 0.02 | 170.6 |
| 12 | 3980 | Lakeland-Winter Haven, FL | 153.3 | 3.07 | 0.02 | 156.3 |

Interim Benchmark Triggers

| State Code | MSA Code | Name | March 1993 Empl. | Absolute Change | Trigger | Sept 1994 Empl |
|------------|----------|--------------------------------------|------------------|-----------------|---------|----------------|
| 06 | 8120 | Stockton-Lodi, CA | 153 | 3.06 | 0.02 | 161.6 |
| 17 | 6880 | Rockford, IL | 152.5 | 3.05 | 0.02 | 161.3 |
| 42 | 9280 | York, PA | 152.4 | 3.05 | 0.02 | 157.1 |
| 22 | 7680 | Shreveport-Bossier City, LA | 151.5 | 3.03 | 0.02 | 160.4 |
| 42 | 6680 | Reading, PA | 150.5 | 3.01 | 0.02 | 155.6 |
| 17 | 6120 | Peoria-Pekin, IL | 149.5 | 2.99 | 0.02 | 149 |
| 48 | 0840 | Beaumont-Port Arthur, TX | 149.1 | 2.98 | 0.02 | 151.8 |
| 32 | 6720 | Reno, NV | 146.4 | 2.93 | 0.02 | 158.5 |
| 06 | 7480 | Santa Barbara-Santa Maria-Lompoc, CA | 142.9 | 2.86 | 0.02 | 141.2 |
| 01 | 5240 | Montgomery, AL | 142.3 | 2.85 | 0.02 | 144.7 |
| 06 | 7500 | Santa Rosa, CA | 142.3 | 2.85 | 0.02 | 147.3 |
| 48 | 1880 | Corpus Christi, TX | 140.6 | 2.81 | 0.02 | 142.2 |
| 06 | 8720 | Vallejo-Fairfield-Napa, CA | 140 | 2.80 | 0.02 | 140.6 |
| 18 | 2440 | Evansville-Henderson, IN-KY | 139.6 | 2.79 | 0.02 | 141.3 |
| 12 | 2020 | Daytona Beach, FL | 138.2 | 2.76 | 0.02 | 139.8 |
| 12 | 6080 | Pensacola, FL | 136 | 2.72 | 0.02 | 139.8 |
| 29 | 7920 | Springfield, MO | 135 | 2.70 | 0.02 | 147.1 |
| 12 | 8240 | Tallahassee, FL | 134 | 2.68 | 0.02 | 138.2 |
| 22 | 3880 | Lafayette, LA | 133.4 | 2.67 | 0.02 | 139.8 |
| 12 | 2700 | Fort Myers-Cape Coral, FL | 132.9 | 2.66 | 0.02 | 135.7 |
| 08 | 1125 | Boulder-Longmont, CO | 132.3 | 2.65 | 0.02 | 138.9 |
| 13 | 4680 | Macon, GA | 130.5 | 2.61 | 0.02 | 135.5 |
| 25 | 4160 | Lawrence, MA | 130 | 2.60 | 0.02 | 137 |
| 51 | 6800 | Roanoke, VA | 127.3 | 2.55 | 0.02 | 134.8 |
| 31 | 4360 | Lincoln, NE | 127 | 2.54 | 0.02 | 131.4 |
| 42 | 2360 | Erie, PA | 121.8 | 2.44 | 0.02 | 127.4 |
| 36 | 8680 | Utica-Rome, NY | 121.1 | 2.42 | 0.02 | 127.1 |
| 23 | 6400 | Portland, ME | 120.6 | 2.41 | 0.02 | 126.7 |
| 44 | 6060 | Pawtucket-Woonsocket-Attleboro, RI | 120.4 | 2.41 | 0.02 | 0 |
| 18 | 7800 | South Bend, IN | 119.2 | 2.38 | 0.02 | 126.3 |
| 41 | 2400 | Eugene-Springfield, OR | 117.9 | 2.36 | 0.02 | 124.3 |
| 06 | 5170 | Modesto, CA | 117.8 | 2.36 | 0.02 | 128.1 |
| 13 | 7520 | Savannah, GA | 117.4 | 2.35 | 0.02 | 122 |
| 54 | 1480 | Charleston, WV | 115.1 | 2.30 | 0.02 | 122.3 |
| 55 | 3080 | Green Bay, WI | 113.3 | 2.27 | 0.02 | 125 |
| 02 | 0380 | Anchorage, AK | 112.5 | 2.25 | 0.02 | 123.9 |
| 48 | 4880 | McAllen-Edinburg-Mission, TX | 112.4 | 2.25 | 0.02 | 118.9 |
| 05 | 2580 | Fayetteville-Springdale-Rogers, AR | 112.3 | 2.25 | 0.02 | 124 |
| 41 | 7080 | Salem, OR | 112.1 | 2.24 | 0.02 | 122.3 |
| 36 | 0960 | Binghamton, NY | 111.9 | 2.24 | 0.02 | 111.4 |
| 36 | 5660 | Newburgh, NY-PA | 111.6 | 2.23 | 0.02 | 116.7 |
| 54 | 3400 | Huntington-Ashland, WV-KY-OH | 110.6 | 2.21 | 0.02 | 109.7 |
| 06 | 7120 | Salinas, CA | 106.8 | 2.14 | 0.02 | 107.4 |
| 49 | 6520 | Provo-Orem, UT | 105.6 | 2.11 | 0.02 | 120 |
| 17 | 7880 | Springfield, IL | 105.2 | 2.10 | 0.02 | 108.6 |
| 36 | 5950 | Orange County, NY | 105 | 2.10 | 0.02 | 0 |
| 36 | 2281 | Dutchess County, NY | 104.8 | 2.10 | 0.02 | 102.3 |

Interim Benchmark Triggers

| State Code | MSA Code | Name | March 1993 Empl. | Absolute Change | Trigger | Sept 1994 Empl |
|------------|----------|--------------------------------------|------------------|-----------------|---------|----------------|
| 18 | 2330 | Elkhart-Goshen, IN | 104.2 | 2.08 | 0.02 | 112 |
| 48 | 4600 | Lubbock, TX | 101.9 | 2.04 | 0.02 | 105.1 |
| 12 | 2900 | Gainesville, FL | 100.2 | 2.00 | 0.02 | 105.7 |
| 13 | 1800 | Columbus, GA-AL | 99 | 1.98 | 0.02 | 103 |
| 25 | 4560 | Lowell, MA | 99 | 1.98 | 0.02 | 103.2 |
| 33 | 6450 | Portsmouth-Rochester, NH | 99 | 1.98 | 0.02 | 105 |
| 27 | 2240 | Duluth-Superior, MN-WI | 98.5 | 1.97 | 0.02 | 101.2 |
| 19 | 1360 | Cedar Rapids, IA | 96 | 1.92 | 0.02 | 102.7 |
| 36 | 6901 | Rockland County, NY | 96 | 1.92 | 0.02 | 97.2 |
| 37 | 0480 | Ashville, NC | 94.7 | 1.89 | 0.02 | 98.8 |
| 20 | 8440 | Topeka, KS | 93.2 | 1.86 | 0.02 | 95.6 |
| 17 | 1400 | Champaign-Urbana, IL | 91.5 | 1.83 | 0.02 | 91.7 |
| 51 | 4640 | Lynchburg, VA | 90.6 | 1.81 | 0.02 | 96.6 |
| 48 | 5800 | Odessa-Midland, TX | 90.4 | 1.81 | 0.02 | 92.6 |
| 46 | 7760 | Sioux Falls, SD | 86.4 | 1.73 | 0.02 | 90.2 |
| 48 | 1240 | Brownsville-Harlingen-San Benito, TX | 85.7 | 1.71 | 0.02 | 89.7 |
| 50 | 1305 | Burlington, VT | 85.5 | 1.71 | 0.02 | 90.6 |
| 05 | 2720 | Fort Smith, AR-OK | 85.1 | 1.70 | 0.02 | 89.5 |
| 48 | 8800 | Waco, TX | 84.6 | 1.69 | 0.02 | 91.2 |
| 18 | 3920 | Lafayette, IN | 83.6 | 1.67 | 0.02 | 88.2 |
| 48 | 2920 | Galveston-Texas City, TX | 83.5 | 1.67 | 0.02 | 85 |
| 38 | 2520 | Fargo-Moorhead, ND-MN | 82.4 | 1.65 | 0.02 | 86.2 |
| 33 | 4760 | Manchester, NH | 82.3 | 1.65 | 0.02 | 87.1 |
| 48 | 0320 | Amarillo, TX | 81.8 | 1.64 | 0.02 | 87.1 |
| 48 | 3810 | Killeen-Temple, TX | 81.4 | 1.63 | 0.02 | 87.8 |
| 42 | 3680 | Johnstown, PA | 81.2 | 1.62 | 0.02 | 84.9 |
| 09 | 1930 | Danbury, CT | 80.9 | 1.62 | 0.02 | 83.6 |
| 25 | 1200 | Brockton, MA | 79 | 1.58 | 0.02 | 84 |
| 36 | 5700 | Niagara Falls, NY | 78.9 | 1.58 | 0.02 | 0 |
| 09 | 8880 | Waterbury, CT | 78.6 | 1.57 | 0.02 | 79.7 |
| 33 | 5350 | Nashu, NH | 77.7 | 1.55 | 0.02 | 81.9 |
| 48 | 4420 | Longview-Marshall, TX | 77.2 | 1.54 | 0.02 | 81.1 |
| 27 | 6980 | St. Cloud, MN | 75.4 | 1.51 | 0.02 | 79 |
| 55 | 6600 | Racine, WI | 74.6 | 1.49 | 0.02 | 79.4 |
| 51 | 1540 | Charlottesville, VA | 70.7 | 1.41 | 0.02 | 73.6 |
| 22 | 3960 | Lake Charles. LA | 70.6 | 1.41 | 0.02 | 74 |
| 43 | 6360 | Ponce, PR | 70.3 | 1.41 | 0.02 | 69.6 |
| 17 | 1040 | Bloomington-Normal, IL | 69.7 | 1.39 | 0.02 | 71.9 |
| 48 | 1145 | Brazoria, TX | 69.4 | 1.39 | 0.02 | 71.8 |
| 01 | 8600 | Tuscaloosa, AL | 68 | 1.36 | 0.02 | 70.8 |
| 27 | 6820 | Rochester, MN | 67.8 | 1.36 | 0.02 | 70 |
| 26 | 0870 | Benton Harbor, MI | 65.9 | 1.32 | 0.02 | 69.8 |
| 35 | 7490 | Santa Fe, NM | 65.9 | 1.32 | 0.02 | 70.6 |
| 48 | 8640 | Tyler, TX | 65.8 | 1.32 | 0.02 | 68.6 |
| 18 | 8320 | Terre Haute, IN | 65.5 | 1.31 | 0.02 | 65.3 |
| 19 | 8920 | Waterloo-Cedar Falls, IA | 64.8 | 1.30 | 0.02 | 66 |
| 43 | 4840 | Mayaguez, PR | 64.1 | 1.28 | 0.02 | 63.7 |

Interim Benchmark Triggers

| State Code | MSA Code | Name | March 1993 Empl. | Absolute Change | Trigger | Sept 1994 Empl |
|------------|----------|----------------------------------|------------------|-----------------|---------|----------------|
| 54 | 6020 | Parkersburg-Marietta, WV-OH | 62.2 | 1.24 | 0.02 | 65.6 |
| 42 | 8050 | State College, PA | 61.7 | 1.23 | 0.02 | 63.3 |
| 55 | 3870 | La Crosse, WI-MN | 61.6 | 1.23 | 0.02 | 64.4 |
| 22 | 5200 | Monroe, LA | 61.6 | 1.23 | 0.02 | 63 |
| 55 | 3620 | Janesville-Beloit, WI | 61.4 | 1.23 | 0.02 | 64.3 |
| 48 | 1260 | Bryan-College Station, TX | 61.1 | 1.22 | 0.02 | 63 |
| 13 | 0500 | Athens, GA | 60.8 | 1.22 | 0.02 | 59.7 |
| 55 | 2290 | Eau Claire, WI | 59.8 | 1.20 | 0.02 | 63.5 |
| 19 | 3500 | Iowa City, IA | 59.7 | 1.19 | 0.02 | 60.2 |
| 09 | 5440 | New Britain, CT | 59.5 | 1.19 | 0.02 | 0 |
| 54 | 9000 | Wheeling, WV-OH | 59.1 | 1.18 | 0.02 | 61.7 |
| 25 | 5400 | New Bedford, MA | 58.8 | 1.18 | 0.02 | 62.4 |
| 18 | 1020 | Bloomington, IN | 58.5 | 1.17 | 0.02 | 61.6 |
| 19 | 7720 | Sioux City, IA-NE | 58.4 | 1.17 | 0.02 | 60.4 |
| 22 | 3350 | Houma, LA | 58.1 | 1.16 | 0.02 | 61.3 |
| 41 | 4890 | Medford-Ashland, OR | 56.9 | 1.14 | 0.02 | 60.9 |
| 18 | 5280 | Muncie, IN | 56.6 | 1.13 | 0.02 | 60.9 |
| 43 | 1310 | Caguas, PR | 55.7 | 1.11 | 0.02 | 55.7 |
| 55 | 8940 | Wausau, WI | 55.5 | 1.11 | 0.02 | 58.3 |
| 34 | 8760 | Vineland-Millville-Bridgeton, NJ | 54.9 | 1.10 | 0.02 | 57.6 |
| 26 | 3520 | Jackson, MI | 54.2 | 1.08 | 0.02 | 57.7 |
| 42 | 0280 | Altoona, PA | 53.8 | 1.08 | 0.02 | 58.4 |
| 17 | 2040 | Decatur, IL | 53.7 | 1.07 | 0.02 | 52.1 |
| 48 | 4080 | Laredo, TX | 52.5 | 1.05 | 0.02 | 56 |
| 55 | 7620 | Sheboygan, WI | 52.5 | 1.05 | 0.02 | 56.5 |
| 48 | 9080 | Wichita Falls, TX | 52.4 | 1.05 | 0.02 | 54.3 |
| 13 | 0120 | Albany, GA | 50.7 | 1.01 | 0.02 | 53.1 |
| 42 | 9140 | Williamsport, PA | 50.2 | 1.00 | 0.02 | 50.7 |
| 48 | 0040 | Abilene, TX | 50.1 | 1.00 | 0.02 | 50.6 |
| 52 | 0000 | Virgin Islands | 49.3 | 0.99 | 0.02 | 44.3 |
| 22 | 0220 | Alexandria, LA | 48.7 | 0.97 | 0.02 | 50.4 |
| 18 | 3850 | Kokomo, IN | 48.6 | 0.97 | 0.02 | 50.5 |
| 25 | 2480 | Fall River, MA | 48.2 | 0.96 | 0.02 | 0 |
| 48 | 8360 | Texarkana, TX-Texarkana, AR | 48 | 0.96 | 0.02 | 48 |
| 25 | 2600 | Fitchburg-Leominster, MA | 47.8 | 0.96 | 0.02 | 49.5 |
| 19 | 2200 | Dubuque, IA | 47 | 0.94 | 0.02 | 47.7 |
| 35 | 4100 | Las Cruces, NM | 45.8 | 0.92 | 0.02 | 47.2 |
| 48 | 5040 | Midland, TX | 45.1 | 0.90 | 0.02 | 0 |
| 55 | 3800 | Kenosha, WI | 44.7 | 0.89 | 0.02 | 46.2 |
| 38 | 2985 | Grand Forks, ND-MN | 44.2 | 0.88 | 0.02 | 47.6 |
| 36 | 2975 | Glens Falls, NY | 44.1 | 0.88 | 0.02 | 50.6 |
| 38 | 1010 | Bismarck, ND | 42.5 | 0.85 | 0.02 | 44.9 |
| 51 | 1950 | Danville, VA | 42.1 | 0.84 | 0.02 | 44.9 |
| 42 | 7610 | Sharon, PA | 41.8 | 0.84 | 0.02 | 44.2 |
| 20 | 4150 | Lawrence, KS | 40.5 | 0.81 | 0.02 | 40.8 |
| 46 | 6660 | Rapid City, SD | 40 | 0.80 | 0.02 | 44.7 |
| 36 | 2335 | Elmira, NY | 39.3 | 0.79 | 0.02 | 40.4 |

Interim Benchmark Triggers

| State Code | MSA Code | Name | March 1993 Empl. | Absolute Change | Trigger | Sept 1994 Empl |
|------------|----------|-------------------------|------------------|-----------------|---------|--------------------|
| 48 | 7200 | San Angelo, TX | 39.1 | 0.78 | 0.02 | 40.7 |
| 25 | 6320 | Pittsfield, MA | 39 | 0.78 | 0.02 | 41.4 |
| 21 | 5990 | Owensboro, KY | 38.2 | 0.76 | 0.02 | 39.8 |
| 17 | 3740 | Kankakee, IL | 38.1 | 0.76 | 0.02 | 39.4 |
| 23 | 4240 | Lewiston-Auburn, ME | 38 | 0.76 | 0.02 | 41.4 |
| 40 | 4200 | Lawton, OK | 37.8 | 0.76 | 0.02 | 38 |
| 48 | 7640 | Sherman-Denison, TX | 36.3 | 0.73 | 0.02 | 37.8 |
| 05 | 6240 | Pine Bluff, AR | 34.6 | 0.69 | 0.02 | 35.2 |
| 51 | 1181 | Bristol, VA | 33.5 | 0.67 | 0.02 | 34.6 |
| 48 | 8750 | Victoria, TX | 31.3 | 0.63 | 0.02 | 33.1 |
| 50 | 0741 | Barre-Montpelier, VT | 28.4 | 0.57 | 0.02 | 28.8 |
| 56 | 1350 | Casper, WY | 27.3 | 0.55 | 0.02 | 29.3 |
| 40 | 2340 | Enid, OK | 22.8 | 0.46 | 0.02 | 22.9 |
| 36 | 6561 | Putnam County, NY | 17.9 | 0.36 | 0.02 | 18.3 |
| 25 | 0740 | Barnstable-Yarmouth, MA | 0 | 0.00 | 0.02 | 0 |
| 09 | 5520 | New London-Norwich, CT | 0 | 0.00 | 0.02 | 0 |
| | | 22 States and 267 MSAs | | | | "2% Trigger Level" |

Historical State Benchmark Revisions 1988-1993

Table 2. Percent difference between nonfarm payroll employment benchmarks and estimates by State, March 1988-93

| State | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 |
|---------------------------|------------------|------|------------------|------------------|------------------|------------------|
| Alabama | 1.5 | 1.1 | 1.9 | -0.3 | 0.9 | 0.4 |
| Alaska | .8 | 2.1 | 2.0 | .6 | 1.0 | .2 |
| Arizona | -.1 | 1.6 | -1.1 | -1.3 | .2 | .7 |
| Arkansas | .2 | .4 | .9 | -1.3 | -.1 | .3 |
| California | -2 | 1.0 | .7 | -2.6 | -1.2 | .3 |
| Colorado | 1.9 | 2.3 | 1.1 | -.6 | 1.0 | 1.7 |
| Connecticut..... | .3 | -.7 | -1.9 | -3.1 | .4 | 1.9 |
| Delaware | -.8 | .7 | -.1 | (¹) | -.5 | -.7 |
| District of Columbia..... | .8 | -.7 | (¹) | -1.3 | .8 | -.7 |
| Florida | .2 | -1.1 | -1.1 | -1.3 | 1.1 | 1.3 |
| Georgia | 2.1 | -.7 | -.8 | -.7 | .4 | .6 |
| Hawaii | 1.3 | 2.1 | 1.4 | .7 | .1 | .8 |
| Idaho | .6 | .7 | -.7 | -1.1 | .6 | .5 |
| Illinois..... | 1.4 | .4 | 1.0 | -1.0 | (¹) | 1.0 |
| Indiana | .1 | .6 | .5 | -.9 | .2 | 1.2 |
| Iowa | .2 | .2 | -.3 | -.3 | .1 | .5 |
| Kansas | 1.1 | .8 | -.4 | -.7 | -.6 | -.6 |
| Kentucky..... | 1.0 | 2.0 | .2 | -2.0 | .7 | .1 |
| Louisiana | .1 | .4 | 2.9 | -1.1 | -.7 | 1.1 |
| Maine..... | -.8 | 2.0 | -.8 | -1.7 | -2.0 | -.3 |
| Maryland..... | 2.0 | 1.2 | .5 | -3.0 | .7 | .6 |
| Massachusetts..... | .5 | -.4 | -2.0 | -1.2 | .1 | 1.2 |
| Michigan..... | 1.2 | .0 | 1.5 | (¹) | .7 | .5 |
| Minnesota | .4 | .4 | -.4 | .3 | .7 | .3 |
| Mississippi..... | .2 | .4 | (¹) | -.8 | .6 | .3 |
| Missouri..... | .8 | 1.5 | .7 | -1.0 | 1.0 | .9 |
| Montana..... | 1.2 | -.6 | -.6 | -.3 | 2.1 | -.7 |
| Nebraska..... | 2.0 | -.8 | .1 | -3.0 | .9 | .6 |
| Nevada..... | .9 | .6 | -.3 | -1.3 | -1.8 | -.1 |
| New Hampshire..... | -1.2 | -.2 | (¹) | -1.9 | 1.4 | .5 |
| New Jersey..... | -.5 | 1.0 | -1.0 | -2.5 | .6 | 1.5 |
| New Mexico | .1 | 1.4 | 1.1 | .2 | 1.1 | 2.0 |
| New York | (¹) | .2 | -.9 | -1.8 | (¹) | (¹) |
| North Carolina..... | .7 | 1.1 | .4 | -1.7 | .5 | .3 |
| North Dakota | (¹) | -.2 | -.4 | -.5 | -.2 | .3 |
| Ohio | -.2 | .8 | -.3 | -1.7 | 1.2 | .1 |
| Oklahoma | 2.8 | 1.2 | 1.5 | .9 | 1.2 | 1.3 |
| Oregon | .9 | .5 | -.1 | -1.3 | -.3 | .8 |
| Pennsylvania..... | .3 | .5 | .7 | -1.3 | .5 | .1 |
| Rhode Island..... | .2 | .7 | -1.2 | -3.8 | (¹) | .5 |
| South Carolina..... | .1 | -.2 | (¹) | -2.2 | 1.0 | -.2 |
| South Dakota | 1.9 | 2.2 | 2.5 | -.6 | 1.1 | .5 |
| Tennessee | .5 | 2.5 | .5 | -.6 | 1.7 | 1.8 |
| Texas | .9 | .5 | 1.4 | .5 | -.3 | -.2 |
| Utah | .4 | .7 | -.1 | -.3 | .3 | .4 |
| Vermont..... | .7 | .6 | -.9 | -2.1 | 1.3 | .8 |
| Virginia..... | -.5 | -1.1 | -.5 | -1.1 | .4 | 1.2 |
| Washington..... | .5 | .2 | .5 | -1.6 | .9 | (¹) |
| West Virginia..... | .6 | -.1 | .4 | -.6 | .4 | -.4 |
| Wisconsin | .2 | 1.0 | .4 | -.1 | .7 | .6 |
| Wyoming..... | 2.5 | -.3 | 1.8 | .7 | .1 | 1.0 |

¹Less than 0.05 percent

Attachment 1

Table 1a
 Comparison of Benchmark Revisions:
 Semi-Annual versus Annual Benchmarking
 September 1992 and March 1993 Benchmarks
 Estimation at 3-digit SIC level, Total

Private

| State | Annual BMK | Semi-Annual BMK | |
|----------------|------------|-----------------|--------|
| | Mar 93 | Sep 92 | Mar 93 |
| Alaska | -1.27 | 5.06 | -5.99 |
| Arkansas | -.68 | 2.71 | -3.97 |
| Florida | 75.34 | 50.7 | 14.12 |
| Georgia | 59.42 | 28.67 | 31.39 |
| Iowa | 5.99 | 11.92 | -7.36 |
| Illinois | 27.07 | -12.8 | 24.09 |
| Maine | -7.56 | 9.52 | -20.54 |
| Massachusetts | 44.22 | 50.9 | -7.9 |
| Michigan | 45.07 | 47.72 | -2.64 |
| Missouri | 8.54 | 26.22 | -19.34 |
| New Jersey | 50.86 | 41.8 | 13.03 |
| New York | 59.23 | 85.98 | -18.7 |
| Pennsylvania | 34.12 | 48.6 | -16.29 |
| South Carolina | -0.32 | 3.3 | -5.92 |
| Virginia | 22.54 | 24.57 | 4.71 |

**Table 1b: Simulated Quarterly Benchmark Revision Comparisons
for U.S. Total Private (1986-1993)**

Attachment 2

| Year | Published Mar bmk absolute revision | Sum of absolute revisions | 2nd Q revision | 3rd Q revision | 4th Q revision | 1st Q revision |
|-------------|--|--|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| 1986-87 | 21,000 | 924,000 | 149,000 | (310,000) | 324,000 | (141,000) |
| 1987-88 | 311,000 | 757,000 | 218,000 | (218,000) | (24,000) | (297,000) |
| 1988-89 | 93,000 | 598,000 | (64,000) | 253,000 | (46,000) | (235,000) |
| 1989-90 | 261,000 | 889,000 | 290,000 | 25,000 | (111,000) | (463,000) |
| 1990-91 | 583,000 | 1,335,000 | 169,000 | 214,000 | (5,000) | (947,000) |
| 1991-92 | 130,000 | 846,000 | 109,000 | (44,000) | 252,000 | (441,000) |
| 1992-93 | 288,000 | 1,081,000 | 327,000 | 142,000 | 220,000 | (392,000) |
| 1993-94 | NA | NA | 302,000 | 119,000 | 463,000 | NA |

**Table 1c: Simulated Semiannual Benchmark Revision Comparisons
for U.S. Total Private (1986-1993) – Absolute Revisions**

| Year | Published Mar bmk absolute revision | Sum of absolute revisions | 3rd Q revision | 1st Q revision |
|-------------|--|--|--------------------------------------|--------------------------------------|
| 1986-87 | 21,000 | 339,000 | (160,000) | 179,000 |
| 1987-88 | 311,000 | 323,000 | 2,000 | (321,000) |
| 1988-89 | 93,000 | 471,000 | 189,000 | (282,000) |
| 1989-90 | 261,000 | 888,000 | 314,000 | (574,000) |
| 1990-91 | 583,000 | 1,335,000 | 382,000 | (953,000) |
| 1991-92 | 130,000 | 259,000 | 65,000 | (194,000) |
| 1992-93 | 288,000 | 643,000 | 468,000 | (175,000) |
| 1993-94 | NA | NA | 403,000 | NA |

Attachment 3

| CES Benchmark Revision Simulations: Estimation at 3-Digit SIC Level for March 1993 Benchmark | | | | |
|---|------------------------------|------------------------|-------------------------|------------------------|
| State | Semi Annual | | Annual | State Published |
| | Sept. 1992 Bmk Revision | Mar. 1993 Bmk Revision | Mar. 1993 Bmk Revision | |
| FL | 50.7 | 14.1 | 75.3 | 74.7 |
| MA | 50.9 | -7.9 | 44.2 | 24.6 |
| NJ | 41.8 | 13.0 | 50.9 | 54.2 |
| SC | 3.3 | -5.9 | -.3 | -.1 |
| State | Semi-Annual With Bias | | Annual With Bias | Annual |
| | Sept. 1992 | Mar. 1993 | Mar. | Mar. |
| FL | .7 | -57.3 | -50.6 | 75.3 |
| MA | 20.9 | -46.5 | -92.8 | 44.2 |
| NJ | 24.0 | -12.4 | -10.5 | 50.9 |
| SC | -45.6 | -67.1 | -135.0 | -.3 |
| | | | | |

Attachment 4

Revisions to National ES-202 Data Between first and second receipts (3 month lag) 4th Q 1990 – 4th Q 1993

| | Mean Abs Pct Revision | Mean Pct Revision | Pct of Series With MAPR Less Than 0.5% |
|--------------------|-----------------------------|-------------------------|--|
| Total | 0.04% (40,884) | 0.009% (7,304) | - |
| Major Divisions | 0.1 | 0.03 | 100% |
| 2-digit SIC | 0.1 | 0.005 | 94 |
| 3-digit SIC | 0.3 | 0.009 | 88 |
| 4-digit SIC | 0.4 | 0.03 | 82 |

Attachment 5

User Interviews on More Frequent Benchmarking

| User | Primary Data Interests | More Frequent Benchmark? |
|---------------------------------|---|---|
| Solomon Bros research dept | OTM chg, OTY chg national, state, area | Yes, quarterly |
| forecasters | national OTM chg | No, too much confusion and added work |
| DRI national forecasters | national, state OTM chg, OTY chg | No, too much work, confusion |
| regional forecasters | national, state, area | Yes, quarterly |
| McGraw-Hill | national OTM chg, OTY chg, level | Don't Know |
| New England Economic Project | State primarily some national; Emp. Level only | Yes, quarterly |
| MA Dept of Revenue | State primarily some national; levels most important | Yes, quarterly |
| Texas Comptroller | national, state, area OTY chg, OTM chg | Yes, quarterly |
| Goldman Sachs | national, state OTM chg | No, too many revisions |
| Lehman Bros | national OTM chg | Don't Know |
| First Hawaii Bank | State, area OTM chg, OTY chg | No, too much confusion |
| Bank of Hawaii | national, state, area OTY chg | Yes, semi- -annual |
| Hawaii Electric | State, area OTY chg | Yes, quarterly |

Attachment 6

**Semi-Annual Benchmarking
State Processing Workflow**

Sample Workflow:

| | | |
|-----------|---|--|
| August | Oct-Dec ES-202 available Jan-Mar ES-202 available Non-ecs available | - Estimate July emp. - Review Oct-Mar ES-202 |
| September | | - Estimate Aug. emp - Review ES-202 data - Work on wedges |
| October | | - Estimate Sep. emp. - Review ES-202 - Prepare wedges |
| November | Apr.-Jun ES-202 available | - Estimate October emp. - Finalize Oct-Mar emp. - Set non-covered levels - Regional Office Review |
| December | | - Estimate Nov. emp - Reproject Mar-Oct - Apply wedges |
| January | | - Estimate December emp. - Reproject Nov-Dec. - Revise hours and earnings |
| February | July-Sep ES-202 available | - Estimate January emp. - Publish new benchmark - Review Apr-Sep. ES-202 |
| March | | - Estimate February emp. - Review Apr-Sep. ES-202 |
| April | | - Estimate March emp. - Review Apr-Sep. ES-202 |
| May | Oct-Dec ES-202 available | - Estimate April emp. - Finalize Apr-Sep emp. - Review noncovered levels - Regional Office review |
| June | | - Estimate May emp. - Reproject Oct-Mar emp. |
| July | | - Estimate June emp. - Reproject Apr-Jun emp. - Revise hours and earnings |
| August | Jan-Mar ES-202 available Nonecs available | - Estimate July emp. - Publish new benchmark - Review Oct-Mar ES-202 |

Charter for Quarterly and Interim Benchmarking Research

Objective

To evaluate for feasibility of adopting a policy of either interim or quarterly benchmarking for the CES National and State and Area programs.

Background

The final report of a special panel of the American Statistical Association, chartered to develop a research agenda for the CES and ES-202 programs, recommended that BLS benchmark the CES estimates to the ES-202 each quarter rather than just annually, after ES-202 quality issues are resolved.

The issue of more frequent benchmarking has also been raised at different times by individual States, in circumstances when CES and ES-202 counts have drifted apart between benchmarks. A recent example occurred in New Jersey when the ES-202 showed considerable more strength in the latter half of calendar year 1992 than what the CES sample-based estimates had recorded.

The Labor Market Information work group studying CES/ES202 quality issues concluded that interim rather than quarterly benchmarking should be researched as first priority; the subsequent sections of the charter reflect this prioritization.

Approach

The research has been separated into two distinct phases: interim benchmark issues and quarterly benchmark issues.

PHASE I – INTERIM BENCHMARKING

1) Examine Interim Benchmark Definitional Issues

Methodology

- full 202 replacement with reprojection
- selective adjustments using tolerance levels
- other possible alternatives

Timing

- appropriate level of CES/202 divergence to trigger an interim adjustment
- when and what version of the 202 is used
- when CES revisions would be published

2) Evaluate the extent to which interim benchmarking improves current monthly estimates

- Simulate a few examples of interim revisions for comparison purposes
- Examine seasonal adjustment complications resulting from 202 replacement at mid-benchmark year

- 3) Identify the potential costs and benefits of interim benchmarks, for example

Potential Costs:

- more frequent updates for users – consult with major users on this issue
- greater State and BLS resource expenditure
- revised software and procedures
- more complicated seasonal adjustment procedures

Potential Benefits:

- improved current estimates
- closer CES/202 data agreement
- closer national/SOS data agreement

PHASE II – QUARTERLY BENCHMARKING

A decision on whether to conduct this additional research will be made after Phase I work is completed. A less detailed outline of the approach for this phase follows.

- 1) Examine Quarterly Benchmark Definitional Issues
- 2) Identify Relation Between Quarterly Benchmarking and Interbenchmark Methodology
- 3) Evaluate the extent to which quarterly benchmarking improves current monthly estimates
- 4) Identify the potential costs and benefits of quarterly benchmarking
- 5) Review ES-202 Related Issues – as possible precursors to adopting quarterly benchmarking
- 6) Consider Quarterly Benchmarking as Temporary Solution

Completion Date

Phase I: Six months after the team is chartered

Phase II: To be determined

Deliverables

A report which include the findings of the interim benchmarking research and a set of recommendations relative to alternatives for the national, State, and area levels. Also a recommendation of whether to pursue a separate study on quarterly benchmarking should be included in the Phase I report.

Membership

Research team should be composed of both BLS and State representatives.