Bubble charts and snail trails - SouthPoint

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Bubble charts and snail trails

I used to look forward to the third Friday of every month. That's when the Bureau of Labor Statistics releases the regional and state employment and unemployment statistics. Since the reports have been negative for some time, we really have not anticipated these releases with much enthusiasm. That may be changing.

We learn the level of employment by state, metro area, and industry. We also get data on unemployment. This information, although it comes with a bit of a lag (August data come out September 18, for example), provides the broadest measure of regional economic performance available. We use a number of analytical tools to gauge the numbers, and we look for signs of improvement.

Although simple month-to-month net changes in total employment and a track of the unemployment rate are basic, they do make for a straightforward picture of where Southeastern states stand. Chart 1 does this for the combined states of the Sixth Federal Reserve District (Alabama, Florida, Georgia, Louisiana, Mississippi, and Tennessee). While the monthly net change in total employment continues to show declines, these declines have become less pronounced. However, the unemployment rate (calculated by dividing the total number of unemployed in all six states by the sum of these states' labor forces) has continued to rise.
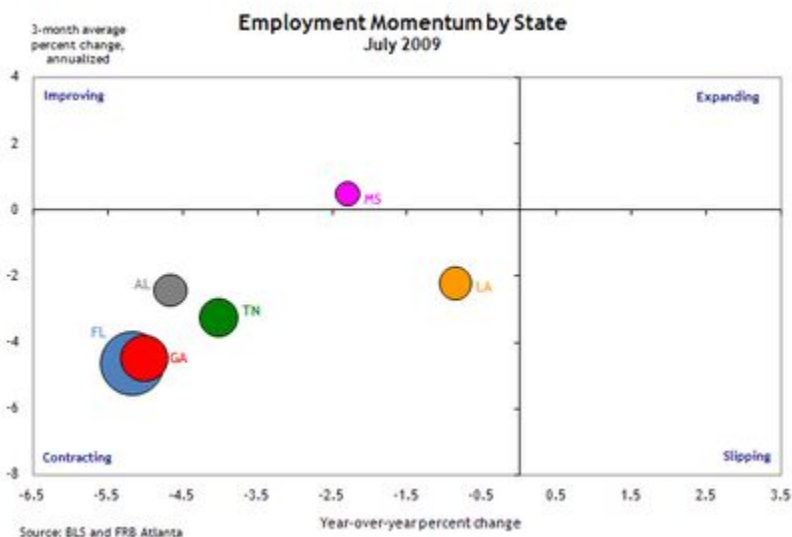
Chart 1

Payroll Employment and Unemployment Rate
for Sixth District States
through July
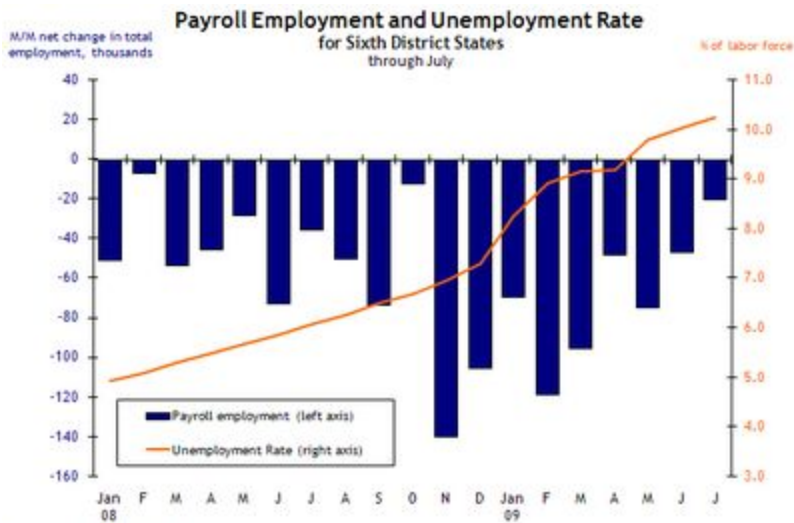
Source: BLS and FRB Atlanta

We use a few other tools to look at the employment data. One we call our "bubble charts"—we're kind of nerdy when it comes to data. The more acceptable title for these charts is "momentum charts." An employment momentum chart is basically an XY plot of the year-over-year percent change in total employment (X axis) and the three-month annualized percent change in total employment (Y axis). The size of each state's "bubble" is the proportion of total employment for all six states. Chart 2 is the momentum chart for July.

Chart 2

Employment Momentum by State
July 2009

Source: BLS and FRB Atlanta

We divide the chart into four quadrants, each representing a point in the business cycle—expanding (both measures are positive: Momentum is strong), slipping (year-over-year percent change is positive, but the three-month is negative: Momentum is weakening), contracting (both measures are negative: Momentum is very weak), and improving (the year-over-year percent change is negative, but the three-month measure is positive: Momentum is looking up). In July, all states in the Sixth District except Mississippi were in the contracting quadrant—employment momentum was very weak. Georgia and Florida, the two largest states in terms of employment in the Sixth District, had the weakest momentum.

The Employment Momentum chart's name might be a bit misleading because the chart shows the current point in the business cycle for the states, but it does not show the direction the momentum is headed. For that we use charts called "snail trails." The more technical name for this type of chart is "momentum tracks." Chart 3 shows the momentum track from January 2007 (the green dot) through July 2009 (the red dot). The chart shows the path of momentum for total employment for the states of the Sixth District, with each dot representing a month. From firmly in the expanding quadrant, momentum moves through the slipping quadrant, then into the contracting quadrant. What is interesting is the fact that although the path is still in the contracting sector, it has turned up and is moving toward the improving quadrant—an indication that employment momentum is headed in the right direction. I'm hopeful we can soon start looking forward to the third Friday in the month once again.

Chart 3
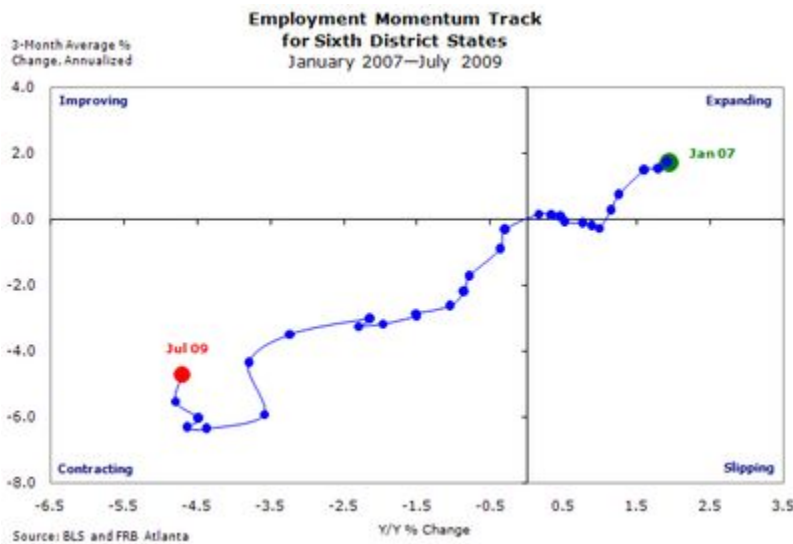
By Michael Chriszt, an assistant vice president in the Atlanta Fed's research department

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