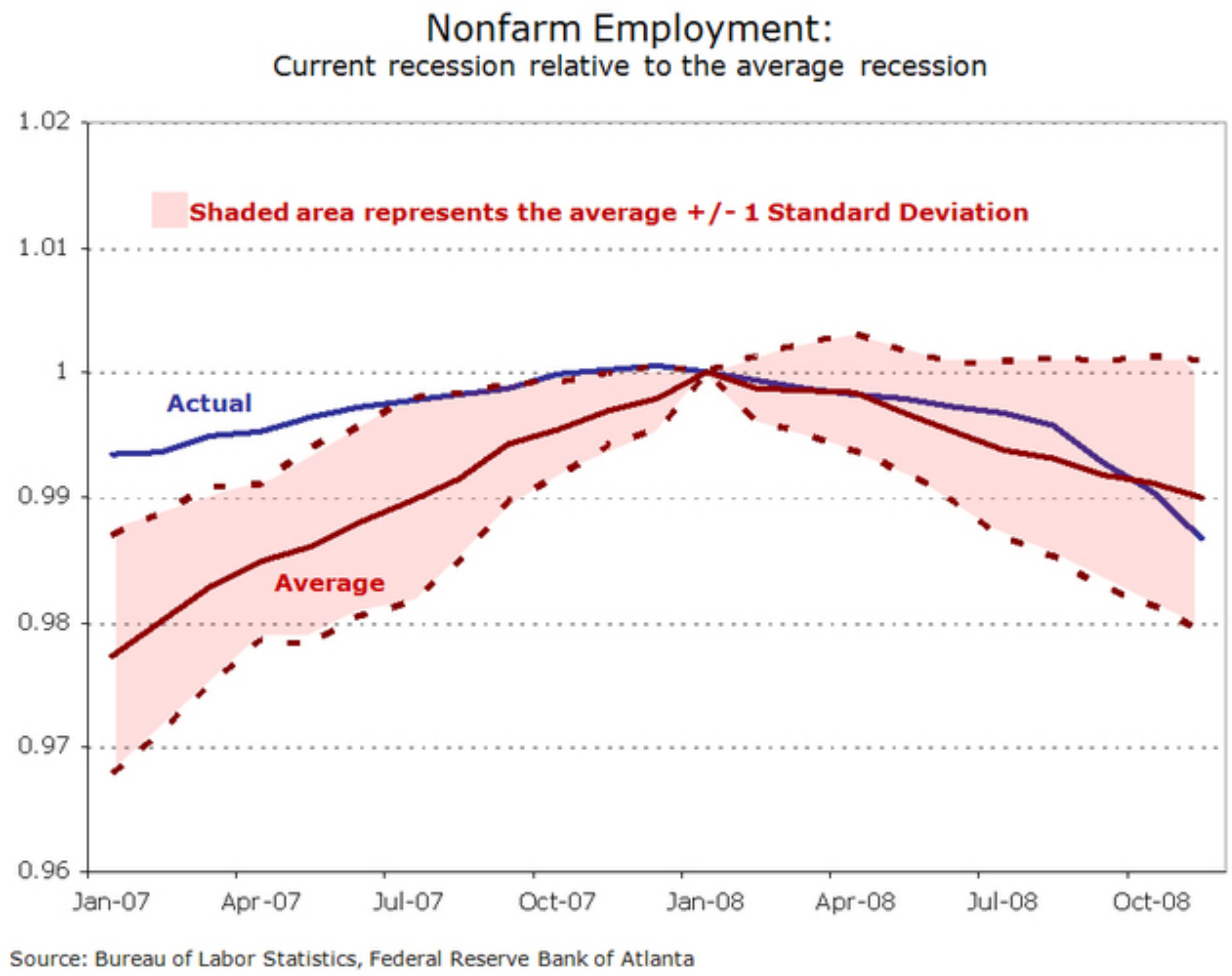
December 17, 2008

Thinking about averages

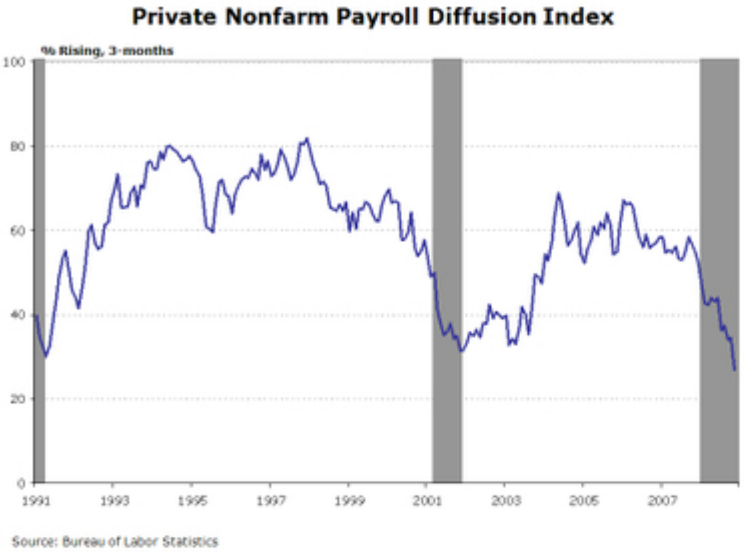
In a recent macroblog post [http://macroblog.typepad.com/macroblog/2008/12/the-recession-i.html], Dave Altig described the employment patterns in the current U.S. recession relative to the average recessionary experience. Dave made some observations from the data supported, in part, by a similar chart to the one produced below:

Before the November job report, the overall employment picture had been fairly unexceptional compared with the average recessionary experience. That comparison changed, as I guess will happen when a half-million job loss statistic arrives. As of today, a milder-than-average recession has turned into a somewhat deeper-than-average recession, at least in terms of employment. Assuming that we remained in recession through November—and I don't think that conjecture will draw much debate—the current episode is already a year in duration. A more apt comparison might therefore be the "bad" recessions of recent memory, the 1973–75 and 1981–82 episodes, both of which lasted 16 months.

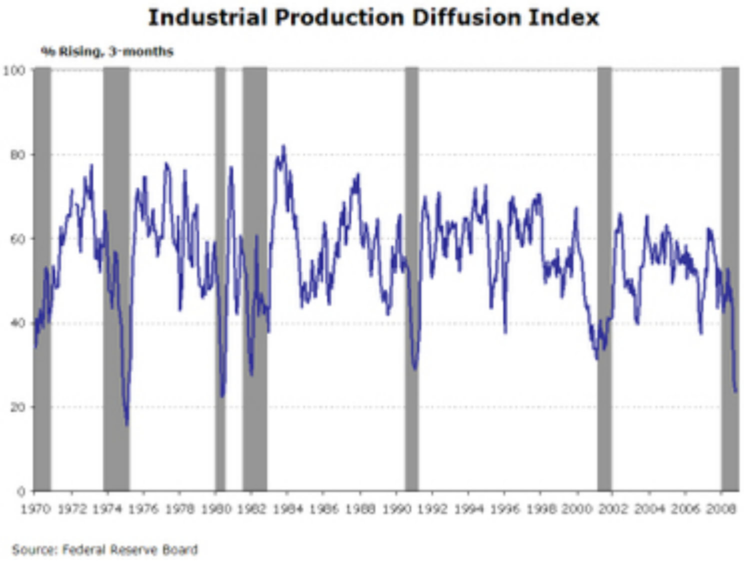


Dave's comparison addresses two important dimensions of the data—the magnitude of the recession and the duration of the recession. Another important dimension is the "breadth" of the recession. Here, perhaps, the distinction between this recession and historical average could be equally insightful.

We can gauge the breadth of the employment decline by way of the employment diffusion index, which simply calculates the proportion of the industries (a total of 274, according to the U.S. Bureau of Labor Statistics) reporting an employment gain relative to the proportion experiencing a decline. Recall that in a diffusion index, if a greater number of the measured series are rising than are declining, the index will be above 50; if fewer are rising than declining, it will be below 50. In the figure below, we see that the employment diffusion index during the three months ending in November was a mere 27 percent. Compare this number to the three-month employment diffusion index of the previous two recessions for which there are data. In the 2001–02 recession, the diffusion index bottomed out at 31.4 percent. In the 1990–91 episode, it hit a low of 30.1 percent.



Another diffusion index (for which there is a longer data history) comes from the industrial production data (shown below). A total of 255 component industries are measured in this index. Here, the three-month diffusion measure hit 23.7 percent in November. This "breadth" of production decline is greater than what we saw in the previous two recessions and is more on par with the "bad" recessions of 1973–75 and 1981–82. These indicators of the scope of the economic downturn would seem to confirm a point Dave made in his earlier post, that "the [more severe] recessions of 1973–75 and 1981–82 are almost certainly more sensible comparisons [to the current recessionary experience] at this point."



So, while the magnitudes of the employment and production declines are near their postwar averages, the recent data appear to show a clear acceleration in the pace of the decline. Given the length of the recession to date, the current recession experience is approaching the more extreme postwar recessions in terms of its length. To this we would add the following—that the *breadth* of the current downturn, at least in terms of employment and production, would also seem to be on par with those more virulent episodes.

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