

RECESSION DATING

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The 1990 peak

In April of this year, the NBER's Business Cycle Dating Committee determined that a recession had started in July of 1990. Figure 1 shows the data that most strongly influenced the committee – real personal income less transfers, real sales in manufacturing and trade, nonagricultural employment (because 1990 was a Census year, the committee also looked at private nonagricultural employment and nonagricultural employment less Census workers), and industrial production. The figure shows the basic problem of business cycle dating, that different cyclical indicators have different turning points.

In Figure 1, all four series are normalized so that they have the value 1.00 in July. Real income peaked in exactly that month. Real sales, a more volatile series, reached a pronounced peak in August. Employment peaked earlier, in June. And industrial production peaked two months later, in September.

The U.S. economy in 1990 reflected the combined influences of two rather different forces. One was a very broad slowdown starting in the spring. The other was a sharp contraction in autos and other industry segments following the spike in

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oil prices in August. The result was an unusual combination of leading employment and lagging industrial production. The July peak date is the reasonable compromise. It embodies the notion that breadth or dispersion is an important characteristic of a recession. When measures that span all sectors – income and employment – peak earlier, that fact that goods production stayed strong for two added months should not control the recession date.

The 1991 trough?

Figure 1 shows some of the challenges that will face the NBER committee in determining the date of the trough in activity. First, it makes it completely clear that any such determination in the near future would be quite premature. Should the economy begin to contract again, it is a distinct possibility that the trough would occur in late 1991 or 1992. A trough date cannot be assigned until activity has reached a sufficiently high level that a contraction would be a new recession, not a continuation of the existing one. As of October 1991, all four indicators were well below their July 1990 peaks, and one, employment, was hardly above its lowest level, attained in April 1991.

If the current pause is nothing more than a pause, and the expansion resumes, the trough date will be sometime in early 1991. Real income reached its bottom in February, real sales in January and again in March, employment in April, and industrial production in March.

Comparison with 1981-82

Figure 2 shows the same series in the same format for the last peak-trough combination, July 1981 and November 1982. Note the difference in the vertical scale – the earlier contraction was about twice as deep as the current one. Again, the peak date is a compromise. Real income peaked in August. Real sales were well

below their January 1981 level by July. Employment and industrial production both peaked in July.

Disagreement among the indicators was much more severe around the trough in November 1982. Real income reached bottom a month earlier, in October. Real sales coincided with the trough date in November. Employment and industrial production lagged by two months.

The false trough of January 1982 is a dramatic example of the need to wait until the recovery has reached close to the past peak before identifying a trough. The NBER committee did not declare the trough date until July 1983.

Special features of the 1990-91 recession

All recessions are hard to forecast, and the most recent was no exception. But this recession is particularly remarkable for the breakdown of the one apparently reliable principle of recession forecasting that had previously held. Financial market stress rather systematically preceded almost all previous recessions. Many different indicators of stress have been shown to have some forecasting power, including the stock market, monetary aggregates, and interest rates. The measures with the greatest forecasting success, according to systematic research carried out by James Stock and Mark Watson with the support of the NBER, are the differential between private and government short-term interest rates (specifically, the 6-month commercial paper rate less the 6-month treasury bill rate) and the differential between long the short rates (specifically, the 10-year treasury bond rate less the one-year rate). When the private short-rate premium rises sharply and short rates rise relative to long rates, the probability of a recession within a year rises dramatically. These two variables dominate all others in forecasting regressions.

In the typical recession, financial stress is followed by collapsing activity in sectors sensitive to financial developments, notably manufacturing and construction.

The recession then spreads to the rest of the economy. The Stock-Watson interest-rate measures showed signs of mild financial stress in 1989, but turned bullish before the recession began in 1990. Based on historical statistical relations, Stock and Watson derived extraordinarily low probabilities of an impending recession in early 1990, even when conventional forecasters were gloomy. The current recession is apparently a very different animal from the others summarized in the data Stock and Watson used. In particular, this recession began outside of the financially sensitive sector of the economy.

In another respect, the behavior of the economy during this recession fits into historical relationships. Sharp increases in oil prices cut auto sales and other elements of manufacturing demand. The relation of oil price increases to recessions has received a great deal of attention since the 1973-74 and 1979 shocks. James Hamilton has argued that the Suez oil price increase in 1956 was a factor in the 1957-58 recession as well. Interestingly, the oil price effect seems to be asymmetric – there was no sharp stimulus to the U.S. economy when oil prices collapsed in 1986. In this recession, oil prices rose in August 1990 (just after the recession began) and fell back in January. Although the period of high oil prices was brief, the asymmetry of the response may make the oil shock of 1990 a lasting factor in this recession.

Figure 1

The Recession of 1990-??

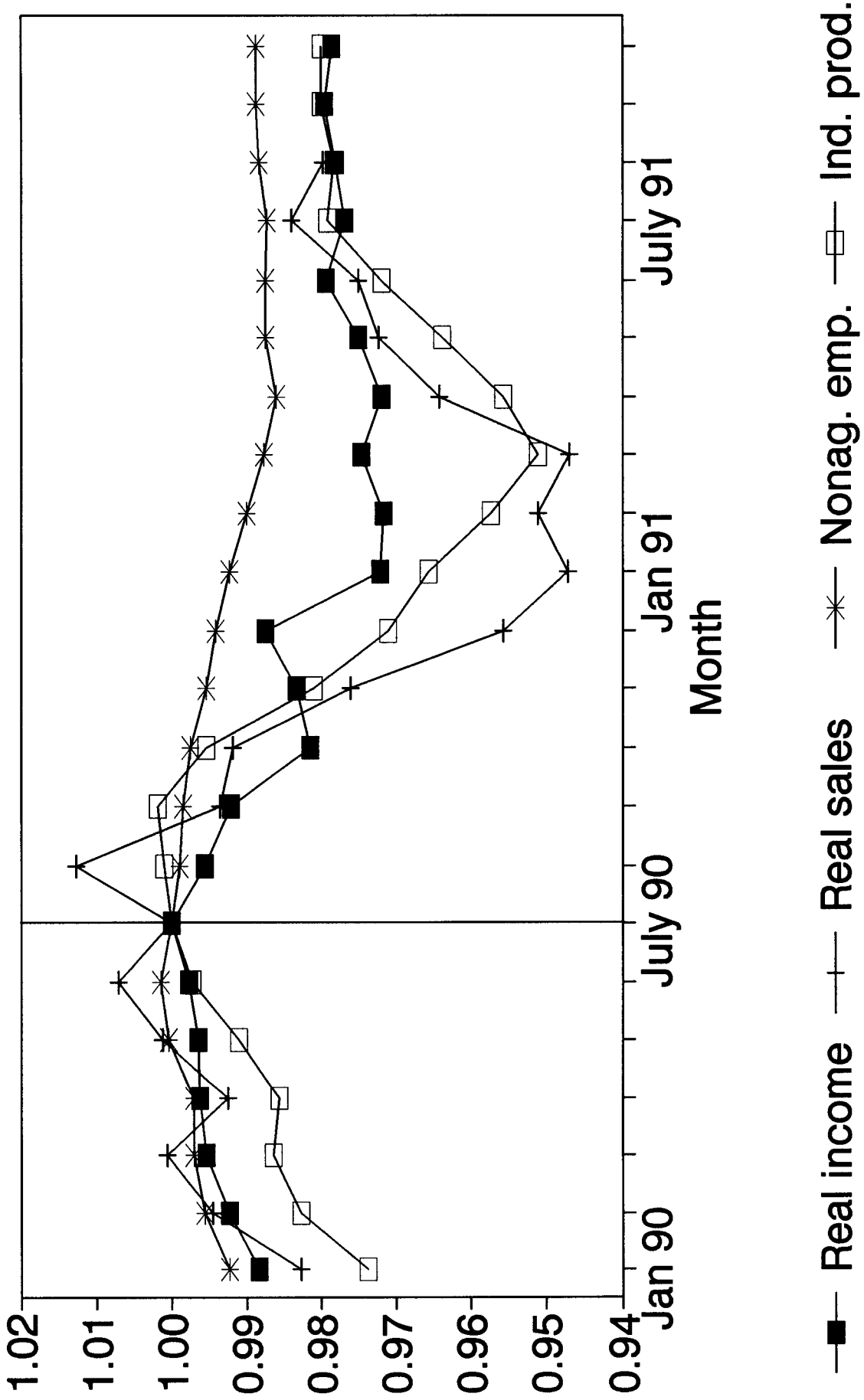


Figure 2

The Recession of 1981-82

