



How Accurate Are Forecasts in a Recession?

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Individual households and firms, as well as local, state, and federal governments, make economic decisions based on their view of the future. For a household, this may entail deciding whether to apply for a mortgage based on the expectation of having a job in the future. For a firm, a decision to invest in the building of a new plant rests on expected future demand for its products. Similarly, federal agencies make decisions about developing infrastructure based on expectations of future revenue.

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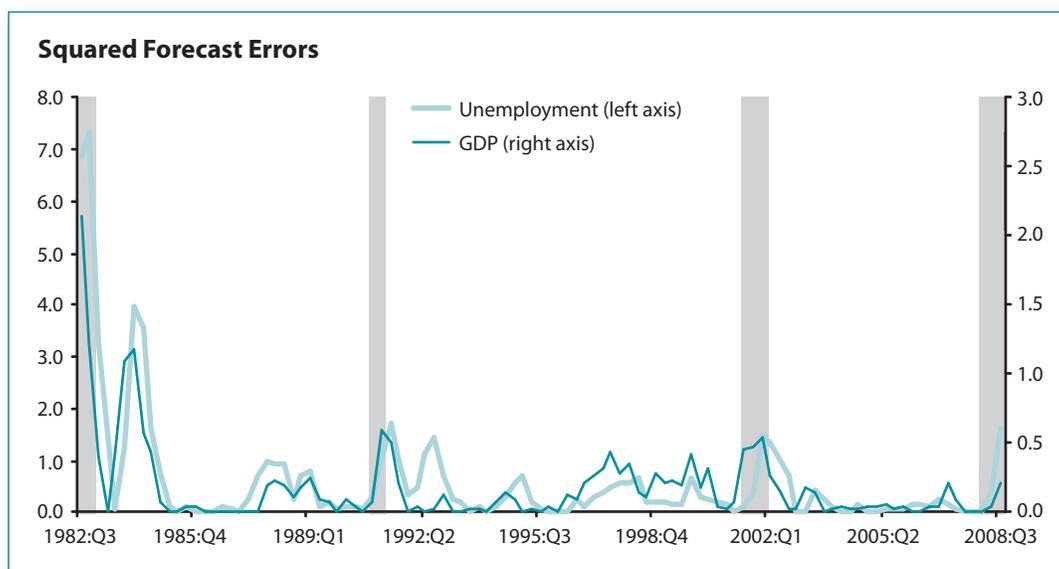
Firms and government agencies (and, to a lesser extent, households) look to professional forecasters for advice on the future state of the economy. This essay looks at how a recessionary environment affects the accuracy of economic forecasts, which in turn affects economic decisionmaking.

Although there are numerous professional economic forecasting agencies, the Survey of Professional Forecasters

(SPF) is a publicly available forecasting source that is commonly used and discussed in various media outlets. This discussion uses the mean of those forecasts as a proxy for professional forecasters in general.¹ In total, we review 26 years’ worth of quarterly, 1-year-ahead mean SPF forecasts from 1981:Q3 through 2007:Q3. The subsequent forecast errors—ranging from 1982:Q3 through 2008:Q3—are constructed using the most recent and updated data. We use the squares of these errors as a measure of their accuracy.

The chart shows the squared forecast errors associated with the mean SPF forecast of U.S. gross domestic product (GDP) growth² and the unemployment rate. The shaded areas indicate U.S. recessions, [as determined by the National Bureau of Economic Research](#). Over the time frame shown in the chart, on average, professional forecasters have tended to be less accurate when the U.S. economy was in recession.

During a recession, the mean squared errors (MSEs) associated with forecasts of GDP growth and the unemployment rate are 0.58 and 1.95, respectively. In each case, the MSEs are four times larger than those made when the economy is not in a recession. Even if the very large errors during and immediately after the 1981 recession are omitted



from the calculations, the MSEs are still roughly twice as large—a smaller but still significant difference.

One main contributor to the deterioration in the forecasts is an inability to detect turning points—that period when the economy shifts from being in a recession to not being in a recession—and vice versa. Another contributor is a clear bias in the forecasts during a recession. Forecasts of GDP growth and the unemployment rate both generally tend to be overly optimistic: Forecasts of GDP growth tend to be too high, whereas those for the unemployment rate

tend to be too low. Perhaps not surprisingly, the degree of accuracy of the two series tends to move together; the correlation between the two series is roughly 80 percent. The unfortunate conclusion is that during a recession, economic decisions are not only more important, but also more difficult to make. ■

¹ The SPF is available at www.philadelphiafed.org/research-and-data/real-time-center/survey-of-professional-forecasters/data-files/.

² The SPF predicts gross national product (GNP) through 1991 and GDP thereafter.