Non-fundamental expectations and economic fluctuations: Evidence from professional forecasts

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Abstract

It is theoretically possible that non-fundamental idiosyncratic shocks to agents’ rational expectations are a source of economic fluctuations. Studies using data on consumer and investor sentiment suggest that this is indeed an important source of fluctuations. We present the results of a study that uses forecasts from professional forecasters to extract non-fundamental shocks to expectations. In contrast to previous studies, we show that non-fundamental expectations are not a significant source of output fluctuations, although such shocks contributed to inflation.

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1. Introduction

It is theoretically possible for non-fundamental idiosyncratic shocks to rational expectations to be a source of economic fluctuations. Such a view can be justified by dynamic
models that generate multiple equilibria, e.g., Azariadis (1981), Cass and Shell (1983), Benhabib and Farmer (1994), and Farmer and Guo (1994). Under equilibrium indeterminacy, these “sunspot” shocks can affect the economy through endogenous forecast errors. If the resultant “animal spirit” fluctuations are important, then there are implications for macroeconomic policy, forecasting and perhaps forecast evaluation. For instance, Carlstrom and Fuerst (2001a,b) argue for monetary policy to be designed in a way that does not generate welfare-reducing sunspot fluctuations (see also Levin et al., 2001). Macroeconomic forecasting models would need to focus more on capturing the driving force behind seemingly inexplicable shifts in expectations and its effects on the economy (Fuhrer, 1993; Throop, 1992; Carroll et al., 1994).

One way to empirically verify the importance (or otherwise) of non-fundamental sources of economic fluctuations is to calibrate to data a structural model that allows for sunspots and examine whether the model supports this possibility (e.g., Hamilton and Whiteman, 1985; Farmer and Guo, 1994; Lubik and Schorfheide, 2004). An alternative approach is to directly measure the importance of the non-fundamental component of expectations in business cycle fluctuations, without specifying the exact mechanism through which it affects the economy. This approach identifies shocks to an expectations variable that are orthogonal to a set of fundamental variables as sunspot shocks, and then evaluates the importance of these particular shocks as a source of economic fluctuations. For example, Oh and Waldman (1990) use revisions to the initial release of the US Leading Index as expectation shocks and find that these shocks explain 20% of the fluctuations in quarterly growth rates of industrial production; Matsusaka and Sbordone (1995) use a vector autoregressive (VAR) approach and find that between 13% and 26% of output fluctuations can be accounted for by non-fundamental shifts in consumer sentiment; Chauvet and Guo (2003) consider both consumer and investor sentiment, allowing for asymmetric effects of non-fundamental expectational shocks over different stages of the business cycle, and find that these shocks played an important role in several recessions. Focusing on inflation, Leduc et al. (2002) use data from the Livingston Survey to identify non-fundamental shocks to expectations. They find that self-fulfilling expectations contributed to the inflation of the 1970s.

This paper pursues the second approach: we use forecasts of output and inflation from the Federal Bank of Philadelphia’s Survey of Professional Forecasters and interpret optimistic or pessimistic forecasts (relative to a set of fundamentals) as forecast shocks or sunspot shocks. We study the contribution of these shocks to fluctuations in both output and inflation. Our use of a survey of professional forecasters is a major difference between this paper and others that have studied the role of non-fundamental expectations in output fluctuations. As mentioned above, Leduc et al. (2002) use data from a different survey of forecasters in their study of inflation. Our results are interesting therefore in providing complementary perspectives on the role of non-fundamental expectations in economic fluctuations. In addition, we use real-time, rather than revised, data in generating shocks to expectations. While macroeconomic researchers today have available to them updated data, forecasters in real-time do not, and the use of real-time data instead of revised data can sometimes lead to drastic reversals of results in forecasting studies (Diebold and Rudebusch, 1991; Croushore and Stark, 2001).

The identification of sunspots with forecast shocks can be justified via the “strategic complementarity” argument in Oh and Waldman (1990) whereby false announcements, i.e., inaccurate forecasts concerning the economy, can lead agents to increase (or decrease)
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