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Do central banks react to the stock market? The case of the Bundesbank ☆

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Abstract

In this paper, we ask whether the Bundesbank, prior to the European Central Bank taking responsibility for monetary policy in 1999, reacted systematically to stock price movements. In contrast to the results for the US, our empirical findings show a generally weak relationship between German stock returns and short-term interest rates at the daily and the monthly frequency. The results are extremely robust to alternative model specifications. The evidence is inconsistent with the hypothesis of a systematic reaction of the Bundesbank to German stock prices. However, we do find that, as in the US, the Bundesbank may have reacted to the stock market crash of 1987 by loosening monetary policy.

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1. Introduction

Econometrics has made great strides in identifying the reactions of monetary authorities to economic developments from data that simultaneously reflect the behavior of agents in the economy. Rigobon (2003), Rigobon and Sack (2003) are the latest to offer a solution to the identification problem. Their approach relies on an identification procedure that exploits the heteroskedasticity of shocks to stock returns to identify regimes when the central bank reacts to stock market developments. Relying on US data covering the 1985–1999 period, Rigobon and Sack conclude that rising stock prices drive short-term interest rates in the same direction, suggestive of a systematic reaction of the Federal Reserve to stock price movements. Bjørnland and Leitemo (2005) rely on the short-run identification assumption of Christiano et al. (1999), and combine this with a restriction that the long-run impact of monetary policy on stock returns is neutral. Their findings are compatible with ones reported in Rigobon and Sack.

The impact of asset prices, especially stock prices, on the conduct of monetary policy has been debated for some time. For example, in 1987, the Federal Reserve was given credit for stemming the perceived negative macroeconomic effects of the stock market crash of that year (Blinder and Reis, 2005). Further impetus for this debate comes from the increased visibility and importance over the past several years given to the stock market's role in the monetary transmission process (Chami et al., 1999; Mishkin, 2001). Even in the European context, while stock markets are thought to pay a less prominent role than in the US, their importance is rising quickly suggesting that the gap between the two continents is narrowing (Goodhart and Hofmann, 2001; European Central Bank, 2002). Regardless of the extent of market capitalization in Germany and elsewhere in Europe, all that is needed is for asset prices to deviate far enough from fundamental values to influence expectations of inflation and, hence, central bank credibility. Therefore, stock market performance can have an indirect influence on the stance of monetary policy. Moreover, it is highly likely that events in the US, including ones pertaining to developments in stock markets, would have repercussions on the conduct of Bundesbank policy.

It has been popular to interpret monetary policy decisions by framing them around some monetary policy rule, namely a Taylor rule. Such rules have also been found to adequately describe the behavior of the Bundesbank (e.g., Clarida et al. (1998); but see Faust et al. (2001)). An unresolved issue is whether inflation and the output gap are the variables central banks respond to. The output gap is sufficiently imprecisely measured as to raise doubts about whether it plays a significant role in such policy rules. Others have asked whether, in addition to an inflation and an output gap, a term representing asset price movements should also be included (e.g., Bernanke and Gertler, 1999, 2001; Cecchetti et al., 2000; Bullard and Schalling, 2002; Gilchrist and Leahy, 2002).

The rising volatility of asset prices, such as stock prices, seems to have been associated with a diminution of volatility in business cycle movements. However, the stock