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The impact of the Federal Reserve Bank's open market operations☆

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Abstract

The Federal Reserve Bank has the ability to change the money supply and to shape the expectations of market participants through their open market operations. These operations may amount to 20% of the day's volume and are concentrated during the half hour known as "Fed Time". Using previously unavailable data on open market operations from 1982 to 1988, our paper provides the first comprehensive examination of the impact of the Federal Reserve Bank's trading on both fixed income instruments and foreign currencies. Our results detail a dramatic increase in volatility during Fed Time, consistent with market expectations of Fed intervention during this time interval. We find that there is little systematic difference in market impact between reserve-draining and reserve-adding operations. Additionally, Fed Time volatility is, on average, higher on days when open market operations are absent. These results suggest that the markets are potentially confused about the purpose of the open market operations during our sample period. The evidence is also consistent with the Fed

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operations conveying information which smooths market participants' expectations.

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1. Introduction

The goal of this paper is to investigate the impact of the Federal Reserve Bank's open market operations on the financial markets. These operations typically involve the purchase or sale of Treasury securities and can represent a substantial amount of any day's trading volume. Using new daily data on the operations, we are able to assess the impact on eight different financial markets: Treasury bill, Eurodollar, Treasury bond, and five U.S. dollar exchange rates.

The Federal Reserve Bank can be viewed as a trader with private information. This information is revealed to the market in many different ways: remarks by the Chairman of the Federal Reserve, testimony before the House and Senate Banking Committees, the release of the Beige book, the minutes of the Federal Open Market Committee (FOMC) meetings, changes in reserve requirements, changes in the discount rate, and open market operations. The last method is, by far, the primary and most actively employed policy tool of the Federal Reserve Bank in implementing its monetary policy. Therefore, our analysis provides a rare opportunity to study the effects of private information trading. Data on private trades are often unavailable and the identity of the informed traders is seldom known. In contrast, we are able to identify a major market participant with private information. We know the time interval of the day when this participant trades. We know the volume and the type of trade. With this information, we are in a position to assess the impact of the Federal Reserve Bank's operations on a number of important markets.[1]

Our study contributes to the literature on the impact of Federal Reserve's monetary policy. Specifically, our sample period is nestled between two policy changes. Between 1979 and 1982, the Fed policy is to target monetary aggregates. During our sample period from 1982 to 1988, the policy target is a mixture of borrowed reserves and federal funds rates. During this period, the Fed is highly secretive about the policy making process as well as its actual policy. It believes that the release of such information is detrimental to the

[1] Formal models of market microstructure with privately informed traders are provided by Kyle (1985), Admati and Pfleiderer (1988), Foster and Viswanathan (1990), and others.