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Has the Effect of Monetary Policy Announcements on Asset Prices Changed?

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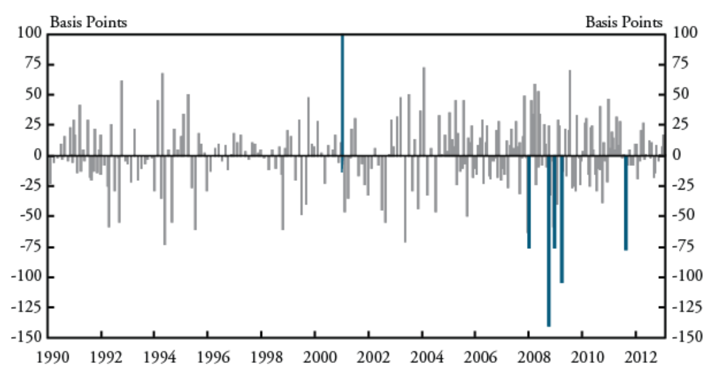
The Federal Reserve has relied increasingly on communication to implement monetary policy since the federal funds target rate reached its effective lower bound. However, the response of asset prices to policy guidance, which is a key monetary policy transmission channel, has generally weakened since the recent financial crisis.

Over the past few decades, the Federal Reserve has increased communication efforts regarding the future path of the federal funds target rate. In particular, since the rate reached its effective lower bound in late 2008, forward guidance about the path of the federal funds target rate became a primary tool of monetary policy.

With enhanced use of forward guidance, some evidence is now available regarding its effectiveness in influencing the real economy. A key gauge of its usefulness is the response of asset prices, an important channel through which monetary policy is transmitted to the real economy. Changes in forward guidance shift the private sector's expectations about the future path of the federal funds rate, which affect bond yields, stock prices, and other asset values. All of these changes in asset prices influence real activity through their effects on consumer and business spending.

There have been nearly 300 important announcements from the Federal Reserve relating to monetary policy in the period from January 1990 to January 2013. To measure the effects of these announcements, we construct a measure of market expectations regarding the future path of monetary policy. The nearby chart shows the resulting "path factor." Negative values of the path factor indicate that the market expects a more accommodative policy stance in the future. Two examples of negative values are the first announcement of large scale asset purchases on March 18, 2009, and the introduction of calendar-based guidance on August 9, 2011.

THE PATH FACTOR

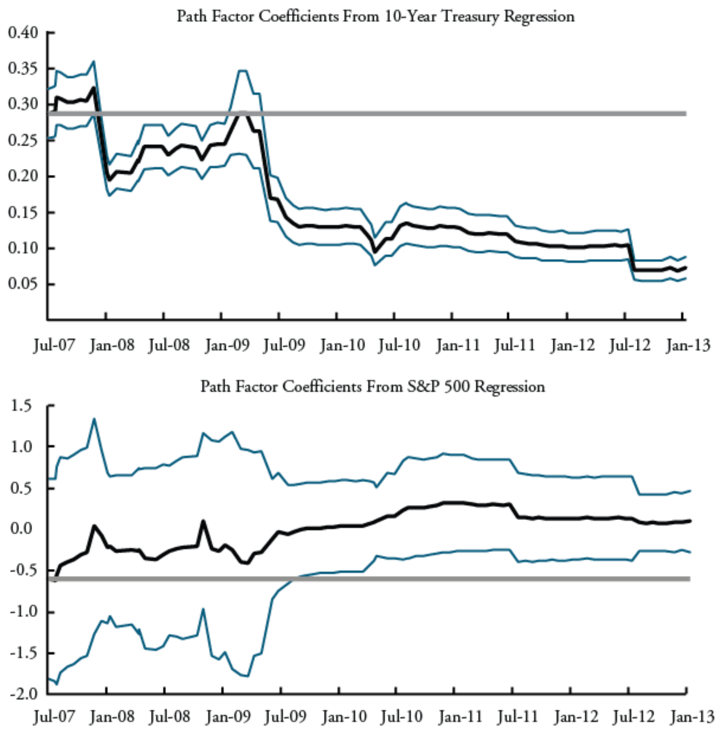


Notes: The vertical lines in the chart show the path factor realizations associated with all of the monetary policy announcements. Blue lines highlight the six largest path factor realizations.
Sources: Bloomberg LP and authors' calculations.

Policy announcements, captured by the path factor, can affect asset prices via two channels. Modern asset pricing theory implies that an asset's price should equal the expected discounted value of its payoff. Since the expected path of monetary policy affects the discount rate applied to the future cash flows of the asset, announcements about the future path of monetary policy should affect asset prices. For Treasury bonds that pay a predetermined amount of dollars over time, policy announcements affect Treasury prices only through their impact on the discount rate. For stocks that have uncertain payoffs, both the discount rate and the payoff matter. In this case, monetary policy announcements may affect not only the discount rate, but carry news about economic conditions that may affect future dividends.

These charts display rolling sample estimates of the regression coefficients of asset prices and interest rates (bond yields) on the path factor. The thick gray line in each shows the regression coefficient based on pre-crisis data. The charts show that the response of asset prices and interest rates to policy accommodation has generally weakened in the post-crisis period. For example, longer-term Treasury bond yields became less responsive to policy announcements about the future path of the federal funds target rate. At the same time, there has been noticeable change in the response of stock prices to the path factor. In particular, announcements of a more accommodative policy depressed stock prices in the post-crisis period on average, though were boosted by more accommodative policy in the pre-crisis period. All of these changes in the response of asset prices to policy guidance are significant in a statistical sense because the pre-crisis value of the response coefficient (black line) is two standard error confidence bands (blue lines) away from the current estimate in the chart.

ROLLING SAMPLE ESTIMATES OF REGRESSION COEFFICIENTS OF ASSET PRICES ON THE PATH FACTOR



Sources: Bloomberg LP and authors' calculations.

A detailed analysis of each observation in the sample suggests that the responses of stock prices and bond yields have changed for different reasons. For bond yields, the variability of policy expectations has declined because of the forward guidance provided about how long the federal funds rate is likely to be at its effective lower bound. In contrast, the weaker response of stock prices to policy guidance weakened because monetary policy announcements may have been interpreted as also providing news about the economic outlook. For example, investors may have perceived an unexpected announcement of a more accommodative policy path as coming due to a weaker economic outlook, which can cause stock prices to decline. Overall, the evidence suggests that the impact of the expected path of monetary policy plays an important role in affecting asset prices, but that the impact has changed since the onset and end of the financial crisis.

For more, see Doh, Taeyoung, and Michael Connolly, 2013. "Has the Effect of Monetary Policy Announcements on Asset Prices Changed?" Federal Reserve Bank of Kansas City, Economic Review, third quarter. The views expressed above are those of the authors and do not necessarily reflect the positions of the Federal Reserve Bank of Kansas City or the Federal Reserve System.