Research question: why do market-based metrics of monetary policy expectations sometimes yield contradictory signals in response to the release of Federal Open Market Committee (FOMC) meeting information?

In monetary policy economics, there is current a large amount of research on market-based approaches to measuring monetary policy expectations. Specifically, the following market-based metrics are potentially of interest:

* Federal Funds Futures Rates. The Chicago Mercantile Exchange runs the largest and most liquid exchange for this type of asset. These are futures contracts that are based on the Federal Reserve’s FFR target rate.
* Term Eurodollar Deposit Rates (LIBOR). These are US dollar denominated deposits held at banks overseas. The overnight LIBOR closely tracks FFR, however the most important difference between LIBOR and FFR is that LIBOR includes collateralized interbank lending whereas FFR only tracks uncollateralized loans. LIBOR quotes are offered by the British Banker’s Association.
* Eurodollar Futures Rates. This is CME’s market for LIBOR futures contracts.
* US Treasury Yield Curve. The Treasury offers data on this however it is only daily data. We may need to find a different source, potentially a source that tracks data on secondary markets.
* TIPS Spread. The difference between Treasury Inflation Protected Securities and the yield of regular US Treasury securities with the same maturity. If markets expect inflation, then market actors would be willing to pay slightly more for TIPS than normal Treasuries. The difference between the two interest rates offers an implicit market forecast of inflation.
* VTI or other broad stock market ETF. VTI tracks the stock prices of almost every publicly traded corporation in America. VTI is generally considered the cheapest option for people who want to buy ETFs however for research purposes it may be better to look at other ETFs that are more liquid. This indicator isn’t directly related to monetary policy, however market ETFs can sometimes exhibit strange behavior after FOMC meetings (Jarociński and Karadi). This is worth investigating.
* Vanguard Treasury Bond ETFs. These ETFs are for US Treasury bonds only. Movement in these ETF prices can potentially signal changes in market forecasts of FFR however the signal will not be as precise or consistent as interest rate-based metrics.

When considering what datasets to choose there are several relevant factors. The most important is whether the data sources will be free. CME requires payment for their historical data but there are some economists who will offer it for free upon request if its being used for research purposes.

The frequency of the data will also be important. Ideally, we should be able to get prices in the 30 minutes before and after an FOMC press release. Daily data will be a big compromise, but it doesn’t usually make a difference. The timing window becomes more important when the Bureau of Labor Statistics releases a jobs report on the same day (Gürkaynak et al.). The effect of BLS reports are predictable and very consistent so using daily data may not be the worst concession to make.

Maturity lengths will be very relevant for the interest rate-based metrics. Short term maturities are generally available, but I am very interested in longer term maturities as well. Their behavior is likely important during zero interest rate policy periods.

Finally, the quality of the data will be important as well. More liquid markets are better. The Eurodollar futures market is the most liquid in entire world.

There is a large literature base on market-based indicators of monetary policy. Nakamura and Steinsson investigate the response of Fed Funds futures and Eurodollar futures on the TIPS spread. They argue for a “Fed information effect.” When the FOMC announces an unexpected rate cut, sometimes the TIPS spread will forecast a decrease in inflation which is the opposite of what we would expect. They argue that FOMC press releases also reveal information about the state of the economy. This is information could be non-public. If markets had no reason to expect a recession, but the Fed does, then the press release would also update market forecasts of inflation as well as interest rates (Nakamura and Steinsson). This has potential policy implications. It could be evidence that the Fed’s forecasts of inflation and real output are functionally policy instruments (Svensson). Or even more directly, their paper could be an argument for the TIPS spread directly being the policy instrument (Sumner).

Bibliography

Gürkaynak, Refet S., et al. “Market-Based Measures of Monetary Policy Expectations.” *Journal of Business and Economic Statistics*, vol. 25, no. 2, 2007, pp. 201–12, doi:10.1198/073500106000000387.

Jarociński, Marek, and Peter Karadi. “Deconstructing Monetary Policy Surprises-The Role of Information Shocks.” *American Economic Journal: Macroeconomics*, vol. 12, no. 2, 2020, pp. 1–43, doi:10.1257/mac.20180090.

Nakamura, Emi, and Jón Steinsson. “High-Frequency Identification of Monetary Non-Neutrality: The Information Effect.” *Quarterly Journal of Economics*, vol. 133, no. 3, 2018, doi:10.1093/QJE/QJY004.

Sumner, Scott. “Nominal GDP Futures Targeting.” *Journal of Financial Stability*, vol. 17, 2015, doi:10.1016/j.jfs.2014.10.001.

Svensson, Lars E. O. “Inflation Forecast Targeting: Implementing and Monitoring Inflation Targets.” *European Economic Review*, vol. 41, no. 6, 1997, doi:10.1016/S0014-2921(96)00055-4.