The Importance of Fed Chair Speeches as a Monetary Policy Tool

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Abstract

I estimate the effects of FOMC announcements, post-FOMC press conferences, and speeches and Congressional testimony by the Fed Chair on stock prices, Treasury yields, and interest rate futures from 1988–2019. I show that for all but the very shortest-maturity interest rate futures, Fed Chair speeches are more important than FOMC announcements. My results suggest that the previous literature's focus on FOMC announcements has ignored the most important source of variation in U.S. monetary policy.

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1. Introduction

Many recent studies have used high-frequency changes in asset prices around the Federal Reserve's Federal Open Market Committee (FOMC) announcements to measure the effects of U.S. monetary policy on financial markets (e.g., Kuttner, 2001; Gürkaynak, Sack, and Swanson, 2005; Bernanke and Kuttner, 2005; Swanson, 2021). Many other studies have used high-frequency changes in interest rates around FOMC announcements as an "external instrument" (Stock and Watson, 2012) to estimate the effects of monetary policy on lower-frequency macroeconomic variables such as output, unemployment, and inflation (e.g., Cochrane and Piazzesi, 2002; Faust et al., 2003; Faust, Swanson, and Wright, 2004; Gertler and Karadi, 2015; Ramey, 2016; Bauer and Swanson, 2023). In this paper, I argue that previous studies' focus on FOMC announcements has ignored the most important source of changes in U.S. monetary policy: speeches by the Fed Chair. In particular, I show that speeches and Congressional testimony by the Federal Reserve Chair have been more important than FOMC announcements for stocks, bonds, and all but the very shortest-maturity interest rate futures. Intuitively, FOMC decisions are typically communicated to financial markets ahead of time through forward guidance from previous FOMC meetings and speeches by the Fed Chair and other FOMC members. As a result, FOMC announcements themselves are often not a surprise, while significant changes in monetary policy are frequently communicated to the markets beforehand via speeches. The end result is that, for all but the very shortest-maturity assets, Fed Chair speeches are more important than FOMC announcements.

A main reason previous studies have focused on FOMC announcements is that the Fed's conventional monetary policy tool—the federal funds rate—is only changed at FOMC meetings. However, as U.S. monetary policy has become more transparent over time, changes in the federal funds rate have become more predictable (Swanson, 2006), so that increasingly the most important news about monetary policy in an FOMC announcement is the FOMC's forward guidance about the likely future path of the federal funds rate over the next several months rather than the current fed funds rate decision itself (Gürkaynak et al., 2005). This trend increased after 2008, when the FOMC lowered the federal funds rate to zero and began focusing its announcements almost entirely on forward guidance and long-term bond purchases. Thus, many recent empirical studies of FOMC announcement effects have used changes in federal funds futures or Eurodollar futures a few months or quarters ahead rather than the current federal funds rate, to better capture changes in the overall stance of monetary policy (e.g., Gürkaynak et al., 2005; Gertler and Karadi, 2015; Nakamura and Steinsson, 2018; Swanson, 2021). The point of this paper is that restricting attention to FOMC announcements alone as a source of variation in these interest rates misses the most important source of that variation, speeches by the Fed Chair.

There are a few previous studies that have looked beyond FOMC announcements to measure monetary policy changes in the U.S. For example, Gagnon et al. (2011) analyze FOMC announcements from Jan. 2009 to Feb. 2010 and one speech by Fed Chair Bernanke. Wright (2012) considers FOMC announcements from Nov. 2008 to Sept. 2011 and four speeches by Fed Chair Bernanke. Cieslak and Schrimpf (2019) include FOMC announcements and post-FOMC press conferences from Oct. 1997 to Dec. 2017, but no other speeches by the Fed Chair. Kim, Laubach, and Wei (2020) include FOMC announcements and post-FOMC press conferences from July 1991 to Dec. 2015, but just "a few" Federal Reserve speeches. In contrast to these papers, I include all FOMC announcements, post-FOMC press conferences, and speeches and Congressional testimony by the Fed Chair from Jan. 1988 to Dec. 2019, a much more comprehensive and systematic analysis of these different types of announcements.[1]

2. Data

I use data from Swanson and Jayawickrema (2022), who catalog the dates and times of every FOMC announcement, post-FOMC press conference, FOMC meeting minutes release, and speech and Congressional testimony by the Fed Chair and Federal Reserve Board Vice Chair from January 1988 to December 2019. In this paper, I focus on FOMC announcements, post-FOMC press conferences, and speeches and testimony by the Fed Chair. I treat post-FOMC press conferences as a separate category because they represent an intermediate case, being communicated by the Fed Chair but describing the FOMC decision in greater detail.

Dates and times of FOMC announcements from 1988–2019 were collected as in Gürkaynak et al. (2005). Since 1994, FOMC announcements have been made via a press release, so the date and time of the announcement are those of the press release. Prior to 1994, the FOMC effectively announced its federal funds rate decisions through the size and type of open market operation conducted the following morning, so the date and time of the announcement are those of the open market operation.[2] I include both regularly scheduled and unscheduled (or "intermeeting")

[1] A recent paper by Bauer and Swanson (2023) also uses the Swanson and Jayawickrema (2022) dataset, although they do not consider as many of the Fed Chair speeches as I do here and they do not conduct a detailed comparison between Fed Chair speeches, FOMC announcements, and post-FOMC press conferences.

[2] A few of these pre-1994 decisions were instead effectively communicated via a press release that declared a change in the Fed's discount rate, in which case the date and time of the announcement are those of the press release. See Gürkaynak et al. (2005) and Swanson and Jayawickrema (2022).

FOMC announcements, of which there were 322 total over this period.

From 2011–18, the Federal Reserve Chair also held a post-FOMC press conference at 2:15 or 2:30pm after roughly every other scheduled FOMC meeting. Fron 2019 onward, the Fed Chair held a press conference after every scheduled FOMC meeting. There are 40 such post-FOMC press conferences from 2011–19, the dates and times of which are readily available on the Federal Reserve Board's website.

Finally, the Fed Chair often gives public speeches or Congressional testimony that contain significant information about monetary policy. From 1988–2019, the Fed Chair gave 843 speeches or testimony (which I henceforth collectively refer to as "speeches" for brevity), not including the 40 press conferences mentioned above. However, many of these speeches were on topics unrelated to monetary policy—for example, the Fed Chair has often given speeches or Congressional testimony on bank regulation, securities market regulation, fiscal policy, Social Security, the stock market, the exchange rate, and other economic issues of national importance. To identify those speeches that did contain information about monetary policy, I read the market commentary in *The Wall Street Journal* or *The New York Times* following each speech. This resulted in 362 Fed Chair speeches that contained enough information about monetary policy to be mentioned as having possible implications for interest rates in the market commentary. Swanson and Jayawickrema (2022) obtained the dates and times of these speeches from several sources.[3]

I measure asset price changes in a narrow window of time surrounding each of the events above. For FOMC announcements, I use a 30-minute window, as in Gürkaynak et al. (2005), starting 10 minutes before the announcement and ending 20 minutes after. Post-FOMC press conferences last for about one hour, so I use a 90-minute window for these events, beginning 10 minutes before the start of the press conference and ending 80 minutes after. For Fed Chair speeches that are not Congressional testimony, I use a 120-minute window, beginning 15 minutes before the start of the speech and ending 1 hour and 45 minutes after. For Congressional testimony, which often involves 2–3 hours of questions and answers, I use a 3.5-hour window, beginning 15 minutes before the testimony begins and ending 3 hours and 15 minutes after.[4]

Intradaily asset price data is from TickData. I focus on interest rate futures out to a horizon

[3] The dates of speeches and testimony are available from the Federal Reserve Board's public website from 1996 onward, and from the St. Louis Fed's FRASER database prior to 1996. The Federal Reserve Board's website and FRASER also usually have a digital copy of the speech which lists the time the document was released to the public. For thosee dates where the time of the speech is not available from the Board's website or FRASER, Swanson and Jayawickrema (2022) determined the time from a Factiva search of the financial press and newswires.

[4] In some cases, these windows must be adjusted to avoid overlapping with macroeconomic data releases or other major market-moving events, see Swanson and Jayawickrema (2022) for details.

of about 1 year (the current-quarter and 1-, 2-, and 3-quarter-ahead Eurodollar futures), 2-, 5-, 10-, and 30-year Treasury yields measured using Treasury futures, and stock prices measured using S&P500 futures.[5] Note that futures for 2- and 5-year Treasuries only began trading in January 1991 and September 1988, respectively, so I am unable to measure changes in these two yields for the first few months of the sample. See Swanson and Jayawickrema (2022) for details.

3. The Importance of Fed Chair Speeches vs. FOMC Announcements

Table 1 presents three different measures of the importance of Fed Chair speeches. Each row of the table considers one of the three types of announcements discussed above: FOMC announcements, speeches and Congressional testimony by the Fed Chair, and post-FOMC press conferences. Each column considers one of the financial assets described above: the current-quarter and 1-, 2-, and 3-quarter-ahead Eurodollar futures rates (ED1–ED4), the 2-, 5-, 10-, and 30-year Treasury yields, and the S&P500 stock market index.

In panel (A) of Table 1, each entry reports the sum from 1988–2019 of the absolute values of all the asset price changes around the events in the corresponding row for the asset price in the corresponding column. The units for Eurodollar futures are interest rate changes in percentage points, for Treasuries they are yield to maturity changes in percentage points, and for the S&P500 they are 100 times the change in the log index. For almost every asset, the most important of the three events is the Fed Chair's speeches. For the S&P500 and 30-year Treasury, Fed Chair speeches are roughly 50% more important than FOMC announcements, while for 2- and 3-quarter-ahead Eurodollar futures and 2-, 5-, and 10-year Treasuries, Fed Chair speeches are about 10–35% more important, with greater importance at the longer maturities. Only at the very shortest horizons—the current-quarter and 1-quarter-ahead Eurodollar futures—are FOMC announcements more important. Post-FOMC press conferences are much less important than the other two events in panel (A), but this is primarily because there are no post-FOMC press conferences until 2011, and even then they occur only four times per year until 2019.

Panel (B) of Table 1 reports the mean absolute effect per announcement, in basis points, for each announcement type. By this measure, post-FOMC press conferences are much more comparable to FOMC announcements and Fed Chair speeches. The reuslts in panel (B) make it clear that the main reason why press conferences are less important than FOMC announcements

[5] Federal funds futures are not available from TickData until 2010, so I focus on Eurodollar futures instead. Eurodollar futures settle based on the spot 90-day Eurodollar interest rate at maturity, are very liquid, and have predictive power very close to fed funds futures. See Gürkaynak, Sack, and Swanson (2007) for details.

Table 1: Importance of Fed Chair Speeches vs. FOMC Announcements and Post-FOMC Press Conferences for Different Assets

	Eurodollar Futures				Treasury Yields				
	ED1	ED2	ED3	ED4	2yr	5yr	10yr	30yr	S&P500
(A) Sum of Absolute Changes (in pp)									
FOMC Announcmts	9.60	11.18	12.08	12.81	8.91	9.63	7.35	6.19	113.23
Fed Chair Speeches	6.41	10.44	13.38	15.00	10.59	12.13	9.84	9.45	162.53
Press Conferences	0.33	0.55	0.75	0.91	0.91	1.14	0.91	0.76	17.21
(B) Mean Absolute Change per Announcement (in bp)									
FOMC Announcmts	2.98	3.47	3.75	3.98	2.77	2.99	2.28	1.92	35.16
Fed Chair Speeches	1.77	2.88	3.69	4.14	2.93	3.35	2.72	2.61	44.90
Press Conferences	0.83	1.38	1.87	2.28	2.29	2.84	2.27	1.91	43.04
(C) Explanatory R^2 for Monthly Changes									
FOMC Announcmts	.123	.096	.066	.046	.016	.022	.022	.020	.038
Fed Chair Speeches	.037	.071	.078	.081	.064	.066	.051	.051	.073
Press Conferences	.002	.001	.000	.000	.001	.005	.003	.001	.009

Notes: (A) cumulative sum, in percentage points, of the absolute value of the change in interest rates or stock returns around each announcement, speech, or press conference; (B) mean absolute value per announcement, in basis points, of the change in interest rates or stock returns around each type of announcement; (C) R^2 of monthly sum of interest rate changes or stock returns for the total interest rate change or stock return in each month. Sample: Jan 1988–Dec 2019 (Sep 1988–Dec 2019 for 5-year Treasury and Jan 1991–Dec 2019 for 2-year Treasury), including 322 FOMC announcements, 362 speeches and Congressional testimony by the Fed Chair, and 40 post-FOMC press conferences. See text for details.

and Fed Chair speeches overall is simply that there are so few of them. Going forward, now that there is a press conference after every regularly scheduled FOMC meeting, we should expect press conferences to be much closer in importance to FOMC announcements themselves.

Finally, panel (C) of Table 1 reports how important each announcement type is for the total change in interest rates (or stock returns) each month. For example, for Fed Chair speeches and the 10-year Treasury yield, I compute the monthly change in the 10-year yield that is due to Fed Chair speeches by adding up the effects of all of the Chair's speeches on the 10-year yield that month. I then compare that sum to the total change in the 10-year yield each month and report the result as an R^2 statistic.[6] I repeat this analysis for each entry in panel (C). The advantage of this approach over panel (A) is that it penalizes asset price changes around announcements if they do not help explain the total change in the asset price that month. The

[6] Let t index months, y_t denote the end-of-month 10-year Treasury yield, and $\Delta y_t \equiv y_t - y_{t-1}$ denote the change in the 10-year yield over the course of month t. The R^2 statistic is computed as $1 - \text{USS}/\text{TSS}$, where TSS denotes the sum of squared monthly changes $\sum(\Delta y_t)^2$, and USS denotes the sum of squared residuals that remain after subtracting the monthly sum of Fed Chair speech effects on the 10-year yield from the total Δy_t each month.

results in panel (C) confirm those in panel (A), with the results being even stronger for Fed Chair speeches—for example, by this measure, Fed Chair speeches are 2 to 4 times as important as FOMC announcements for stock returns and Treasury yields. This is because, in the early years of the sample, FOMC announcements were noisier and less consistent with the overall change in interest rates each month, which is penalized in panel (C) but not in panel (A).

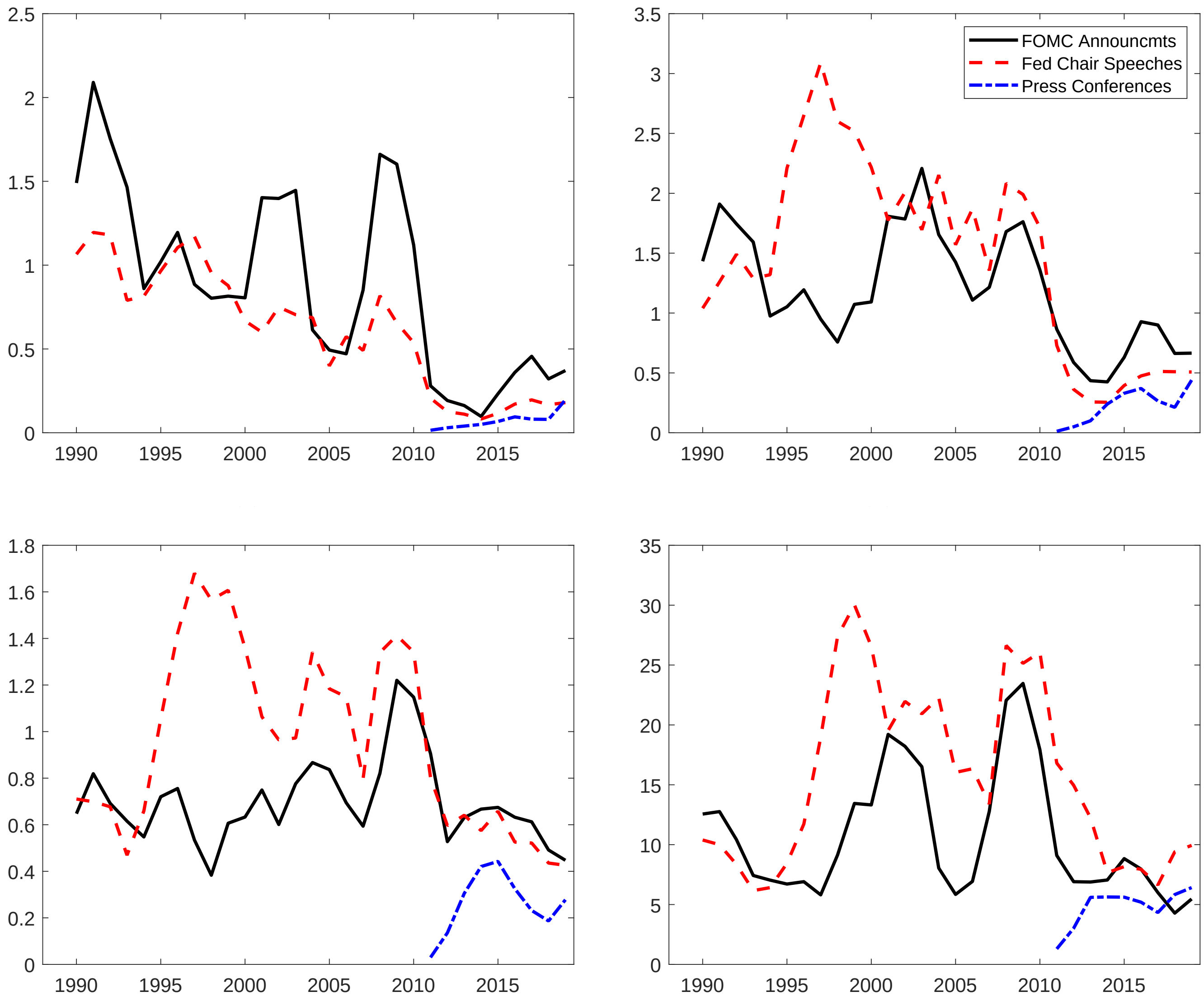
The overall conclusion from Table 1 is that, for all but the very shortest-maturity interest rate futures, Fed Chair speeches are more important than FOMC announcements. One reason the Chair's speeches are more important is simply that they are more numerous—362 vs. 322—but that by itself is an important reason not to ignore them! Moreover, even on a per-announcement basis, Fed Chair speeches have larger effects on stocks and bonds than do FOMC announcements, and post-FOMC press conferences have comparable effects. Empirical studies of high-frequency monetary policy shocks have increasingly used assets with several months to maturity or more to measure those shocks, as discussed above; my results here imply that those studies' exclusive focus on FOMC announcements has missed the most important source of changes in U.S. monetary policy.

4. The Importance of Fed Chair Speeches over Time

Finally, I analyze how the importance of Fed Chair speeches, post-FOMC press conferences, and FOMC announcements have evolved over time. Figure 1 reports results for four representative assets: the current-quarter Eurodollar future rate, the 3-quarter-ahead Eurodollar future rate, the 10-year Treasury yield, and the S&P500. Each panel reports results for the cumulative sum of asset price changes around FOMC announcements (solid black line), Fed Chair speeches (dashed red line), and press conferences (dash-dotted blue line), analogous to panel (A) of Table 1, except over three-year trailing rolling windows instead of over the entire sample.

There are several important points to take away from Figure 1. First, there is a strong downward trend in panel (a) for both FOMC announcements and Fed Chair speeches. That is, both types of announcements have caused smaller moves in the current-quarter Eurodollar future rate over time. Of course, the zero lower bound period in the U.S. from 2009–15 mechanically makes the ED1 changes small during that period, but the trend is clear prior to 2009 as well (see also Swanson, 2006). Intuitively, the Fed has become more transparent over time and has given financial markets increasingly more information about the likely near-term course of the federal funds rate. As a result, FOMC announcements and Fed Chair speeches have proven to be less

Figure 1: Importance of Fed Chair Speeches vs. FOMC Announcements and Post-FOMC Press Conferences over Time



Notes: cumulative sum over trailing 3-year rolling windows, in percentage points, of the absolute value of the change in interest rates or stock returns around each announcement, speech, or press conference. Sample: Jan 1988–Dec 2019, including 322 FOMC announcements, 362 speeches and Congressional testimony by the Fed Chair, and 40 post-FOMC press conferences. See notes to panel (A) of Table 1 and text for details.

and less surprising for very near-term values of the federal funds rate.

Second, for all of the assets in Figure 1, there are clear upward spikes in the importance of FOMC announcements and Fed Chair speeches around 2008–09 and 2001–03. Intuitively, these spikes correspond to periods when monetary policy was very active due to the recessions in 2007–09 and 2001. There is also a spike for FOMC announcements around the recession in 1991–92, but not so much for Fed Chair speeches.

Third, the greater importance of Fed Chair speeches in panels (b), (c), and (d) has not increased or decreased over time, but rather has been present throughout the sample. It is true that the late 1990s were a period when Fed Chair speeches were particularly important, but Fed Chair speeches were also more important than FOMC announcements throughout the 2000s. Similarly, in panel (a), FOMC announcements have been more important than Fed Chair speeches throughout the sample.

Fourth and finally, press conferences have become more important over time and by the end of the sample are roughly as important as FOMC announcements and Fed Chair speeches. Thus, going forward, empirical research should include all three types of events, instead of focusing on FOMC announcements alone.[7]

5. Conclusions

Previous high-frequency studies of monetary policy's effects have missed the most important source of variation in U.S. monetary policy: speeches and Congressional testimony by the Fed Chair. Post-FOMC press conferences have also become increasingly important over time, and now rival FOMC announcements as a source of variation in monetary policy.

Going forward, empirical research should include all three types of events, instead of focusing on FOMC announcements alone. A good example of the beneifts of this approach is provided by Bauer and Swanson (2023), who revisit the high-frequency identification of monetary policy VARs in Gertler and Karadi (2015), Ramey (2016), and others. Bauer and Swanson show that interest rate changes around FOMC announcements alone are a weak instrument for the monetary policy shocks in a VAR, with a first-stage F-statistic of just 1.8, but FOMC announcements together with Fed Chair speeches and post-FOMC press conferences produce a first-stage F-statistic of 12.4, more than six times higher and above the weak instruments cutoff suggested by Stock and Watson (2012).

[7] There is some benefit to including FOMC minutes releases and Fed Vice Chair speeches as well—see Swanson and Jayawickrema (2022).

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