



Effects of explicit FOMC policy rate guidance on interest rate expectations[☆]



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HIGHLIGHTS

- We quantify the impact of explicit FOMC policy rate guidance on interest rate expectations.
- Explicit policy rate guidance announcements significantly reduced implied interest rates.
- Explicit FOMC policy rate guidance led to a significant flattening of the yield curve.

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ABSTRACT

We quantify the impact of explicit FOMC policy rate guidance announcements at the zero lower bound on Eurodollar interest rate futures. We find that they significantly reduced implied interest rates and led to a flattening of the yield curve.

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1. Introduction

In this letter we quantify the impact of explicit FOMC policy rate guidance, used as an unconventional monetary policy tool at the zero lower bound of the policy rate, on near- to medium-term interest rate futures implied by Eurodollar contracts.

With reaching the zero lower bound on policy interest rates in the wake of the global financial crisis, explicit policy rate guidance has become an important unconventional monetary policy tool for the FOMC, both for stimulating the economy while the policy rate is at the zero lower bound, and prospectively for contributing to managing an eventual exit from balance sheet policies (Bernanke, 2011; Woodford, 2012). However, little analysis has been performed of the effects of explicit policy rate guidance by the FOMC. It is

therefore important to quantify the effects of explicit FOMC policy rate guidance. The new remit for the Bank of England's Monetary Policy Committee effective from 20 March 2013 instructs the Monetary Policy Committee to assess in its August 2013 Inflation Report whether it is appropriate to introduce explicit policy rate guidance in the United Kingdom (HM Treasury, 2013).

An overview of the literature on central bank communication is provided in Blinder et al. (2008), and Knütter et al. (2011) provide a recent survey on the effects of central bank communication on financial asset prices. The previous literature on the impact of unconventional monetary policy in the United States has mainly focussed on the effects of asset purchase programmes (see, e.g., D'Amico et al. (2012) and references therein), rather than on the new unconventional monetary policy tool of explicit policy rate guidance.

Central banks in other countries have provided explicit policy rate guidance by publishing quantitative forecasts. The Reserve Bank of New Zealand has published interest rate forecasts since 1997, whose effects Moessner and Nelson (2008) and Detmers and Nautz (2012) analysed. Andersson and Hofmann (2009) studied the effectiveness of quantitative forward guidance for three inflation

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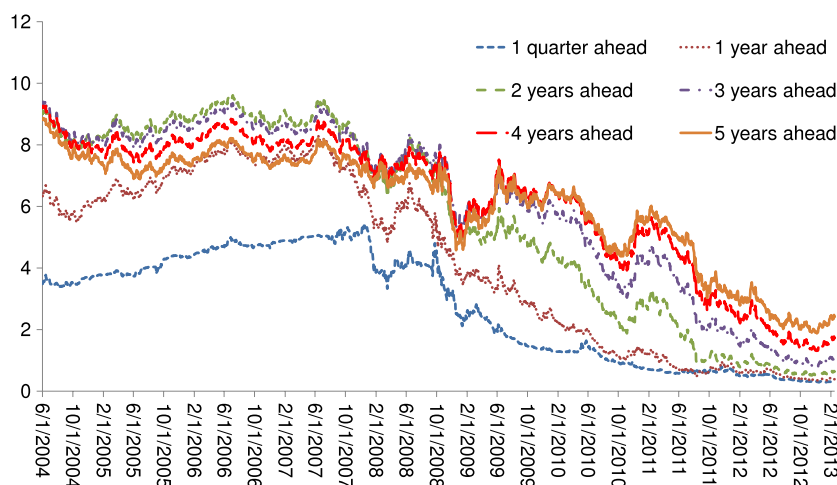


Fig. 1. Eurodollar futures rates (in percent).
Source: Bloomberg.

targeting central banks in Sweden, Norway and New Zealand. Kool and Thornton (2012) studied the effect of forward guidance on market participants' forecasting performance for interest rates in Sweden, Norway, New Zealand and the United States.

Chehal and Trehan (2009) and He (2010) studied the effect of explicit policy rate guidance in Canada. Campbell et al. (2012) analysed the effect of FOMC policy rate guidance more generally (including explicit policy rate guidance), using the method of Gürkaynak et al. (2005) of decomposing news in FOMC statements into news about the target and the path of monetary policy. They found that forward guidance in monetary policy statements has significantly affected US Treasury yields since 2007. Woodford (2012) illustrates the effects of some instances of explicit FOMC policy rate guidance on OIS rates, but provides no quantitative analysis of the statistical significance. Swanson and Williams (2012) study the effect of the zero lower bound on interest rates in the United States by looking at changes in their sensitivity to macroeconomic news, and relate their time profile to the FOMC's policy rate guidance.

The contribution of this letter is to quantify the impact of explicit FOMC policy rate guidance used as an unconventional monetary policy tool at the zero lower bound, by studying its effect on short- to medium-term interest rate futures implied by Eurodollar contracts. To the best of our knowledge this is the first such study which presents formal regression evidence focussing on the effects of explicit FOMC policy rate guidance, rather than on policy rate guidance more generally as in Campbell et al. (2012), who include, for example, statements such as “the downside risks to growth have increased appreciably”, and rather than illustrating the behaviour of interest rates for specific examples of explicit forward guidance as in Woodford (2012).

The outline of the letter is as follows. Section 2 presents the data, and Section 3 presents the method and results. Finally, Section 4 concludes.

2. Data

As measures of short- and medium-term interest rate expectations, we consider 3-month Eurodollar deposit interest rates implied by Eurodollar futures contracts expiring 1–5 years ahead from Bloomberg (Fig. 1). Eurodollar futures are the most heavily traded futures contracts in the world, according to Swanson and Williams (2012).

We also control for the effect of macroeconomic news on interest rate expectations by including surprises in 11 US macroeconomic indicators in the regressions. We use the same macroeconomic indicators as those included in Table 2 of Moessner and

Nelson (2008). The surprises of the real-time macroeconomic data releases are calculated relative to Bloomberg median survey expectations and are normalized by their standard deviation.

The FOMC's use of explicit forward policy rate guidance as an unconventional monetary policy tool at the zero lower bound of the policy rate is, for example, described in Yellen (2013). On 16 December 2008 the FOMC introduced guidance that the federal funds rate would remain at exceptionally low levels “for some time”, which was altered to “for an extended period” on 18 March 2009, to “at least through mid-2013” on 9 August 2011, to “at least through late 2014” on 25 January 2012, and to “at least through mid-2015” on 13 September 2012. This date-based guidance was changed to threshold-based guidance of “at least as long as the unemployment rate remains above 6-1/2%, inflation between one and two years ahead is projected to be no more than a half percentage point above the Committee's 2% longer-run goal” on 12 December 2012.¹ After a new wording of the FOMC's explicit policy rate guidance was introduced, for example that the FOMC “anticipates that economic conditions are likely to warrant exceptionally low levels of the federal funds rate for an extended period”, this or a similar wording was repeated in subsequent FOMC statements until it was changed for a new wording. To capture the surprise components of the statements, we only consider those dates when a new wording was introduced, not those when a previous wording was repeated. We consider new explicit policy rate guidance from the time after the zero lower bound on policy rates had been reached on 16 December 2008.

3. Method and results

We regress daily changes in m -year-ahead Eurodollar futures rates (in percentage points), $y^m(t) - y^m(t-1)$, for short- and medium-term expectations $m = 1-5$ years ahead, on a dummy variable for the announcements of explicit FOMC policy rate guidance, $d_{PRG}(t)$, and on the surprise components of 11 US macroeconomic data releases, $surprise_j(t)$, $j = 1, \dots, 11$, to control for the effects of economic data on interest rate expectations. The regression equation takes the form

$$y^m(t) - y^m(t-1) = c + a * d_{PRG}(t) + \sum_{j=1}^{11} (b_j * surprise_j(t)) + \varepsilon_t \quad (1)$$

¹ See FOMC statements on the dates specified.

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