Some currency trading positions yield increased returns around Fed announcements

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Announcements by the Federal Open Market Committee (FOMC), which occur regularly at pre-specified dates, are one of the most highly anticipated events by investors around the world. Through these announcements, the Federal Reserve communicates monetary policy in the form of setting the target federal funds rate which is the interest rate at which financial institutions lend to each other overnight.

In a recent paper, we study the effect of central bank announcements on the currency market. Given the close link between currency markets and monetary policy, it is only natural to expect that FOMC announcements can have large impacts on exchange rates. Indeed, this was illustrated recently by the announcement on 18 March 2015, when the Australian dollar appreciated more than 2 percent against the U.S. dollar within a few hours in the run-up to the announcement (corresponding to a three standard-deviation daily change), followed by a 1.6 percent depreciation right after the announcement.

The active nature of the currency markets (with a daily turnover of over USD 5 trillion), coupled with high market concentration and the participants' ability to operate with very high leverage ratios, means that even small price movements in this market can translate into economically significant effects. For example, according to the Bank of International Settlements, USD 364 billion are traded daily in the AUD-USD market (compared to USD 30 trillion traded on the NYSE). Therefore as a back of the envelope calculation, a 2 percent appreciation of the Australian Dollar against the U.S. dollar results in a USD 7.28 billion move which, given the high leverage ratios, a 1 percent margin is typical, implies a USD 728 billion movement in investors' balance sheets.

In this paper, we document that announcements by the FOMC have an economically and statistically significant impact on the excess returns of a host of different currencies vis-a-vis the U.S. dollar. More specifically, by relying on high-frequency data, we document that a trading strategy that is short the U.S. dollar and long other currencies exhibits significantly larger excess returns on days with scheduled FOMC announcements relative to non-announcement days. Crucially, the excess returns earned by following such a strategy span the entire

announcement day, consisting of a pre- as well as a post-announcement component. We also document that these excess returns (i) are higher for currencies with higher interest rate differentials vis-a-vis the U.S.; (ii) increase with market participants' uncertainty about monetary policy; and (iii) intensify when the Fed adopts a policy of monetary easing.

We interpret these findings through the lens of a parsimonious model of exchange rate determination, in which constrained financiers with short investment horizons intermediate global demand for currencies. These financiers can actively engage in currency trades, but have a downward-sloping demand for risk taking, which limits their risk-bearing capacity. Such a limit can arise for a variety of reasons, such as limited commitment frictions or value-at-risk constraints. Higher currency returns during announcement days are meant to compensate investors for the uncertainty in monetary policy, hence, even if the Federal Reserve does not take any action or leaves the target federal funds rate as is, investors will earn a premium for holding the currency during these risky days. This is what we label the pre-announcement return. In addition to this effect, however, the actual realization of the monetary policy shock (i.e. whether the Federal Reserve ultimately changes the interest rate) also has an effect, leading to what we call the post-announcement effect. Indeed, we know that an ex post adoption of an expansionary monetary policy (corresponding to an interest rate reduction by the Fed) further increases currency returns.

To empirically study currency risk premia around announcement days, we use 20 years of high-frequency data for the ten most traded currencies. We find that, in line with our theoretical model, a simple trading strategy that is short the U.S. dollar and long the other currencies yields economically significant returns on announcement days compared to non-announcement days. Furthermore, we document that returns earned on the eight announcement day account for a significant fraction of the currencies' yearly excess returns. Crucially, we also find that currencies exhibit excess returns that span the entire announcement day, consisting of a pre- and a post-announcement component, as predicted by our model.

Our explanation for these large returns around announcement days is that they reflect a premium for heightened monetary policy uncertainty or more generally a tightening of financiers' risk-bearing capacity. Using different proxies for monetary policy uncertainty (such as an implied volatility index from Treasury futures options and an uncertainty measure constructed from survey forecasts about the future federal funds rate), we find that an increase in market participants' uncertainty is indeed associated with higher returns around FOMC announcement days.

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Notes:

- *This post is based on the authors' paper Exchange Rates and Monetary Policy Uncertainty (December 2015), LSE's Systemic Risk Centre.*
- *This post gives the views of its authors, not the position of LSE Business Review or the London School of Economics.*
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