



## Comments of “Unconventional Monetary Policy and International Risk Premia”

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Discussion of  
“Unconventional Monetary Policy and International Risk Premia”  
by  
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Discussion by Charles Engel  
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## The Aim of the Paper

This paper addresses the question:

How are various risk premia, especially the foreign exchange risk premium affected by monetary easing under unconventional US monetary policy?

What is the “foreign exchange risk premium”?

It is the short-run, ex ante difference between the expected return on a foreign short-term bond and a U.S. short-term bond:

$$\lambda_t = i_t^* + E_t s_{t+1} - s_t - i_t$$

where the interest rates are on one-period bonds.

## What Does the Paper Find?

The main result of the paper focuses on the effects of expansionary U.S. monetary policy during the period of unconventional monetary policy – October 2008 – March 2015

A monetary policy shock is identified by the surprise in 5-year bond returns in a short (2-hour) window around the time of an FOMC announcement.

The monetary policy shock is uncorrelated with other structural shocks.

The main finding is that a surprise U.S. monetary policy easing lowers the expected excess return on foreign bonds – i.e., lowers the foreign exchange risk premium.

## Questions of Interpretation: 1

What exactly is a monetary policy shock?

It is the shock that causes a jump in the 5-year rate at the time of an FOMC announcement. But why is there a surprise?

Possible reasons:

1. The FOMC randomly shocks monetary policy.
2. Markets learn from the announcement more about how “hawkish” or “dovish” the FOMC is. That is, they learn more about the Fed’s objective.
3. Markets learn more about the Fed’s interpretation of market conditions.

Only (2) and (3) are plausible, but the interpretation of a drop in rates can be very different depending on which one it is. Can we try to understand that better? (Use Fed staff forecasts in the VAR, e.g.)

## Questions of Interpretation: 2

How do we determine if a monetary shock is associated with easing versus tightening?

Monetary easing here is a 25 basis point drop in the 5-year yield. Is that really easing? Perhaps it is a tightening, because the nominal yield declines due to lower inflation expectations.

It looks like these are cases of monetary easing because the dollar depreciates.

But interestingly, almost none of that 25 point drop comes from a drop in the expected sum of short term rates in the U.S. next five years:

$$E_t \sum_{t=1}^{60} i_{t+j}^{US} .$$

That is, it almost all seems to be from a decline in the term premium on U.S. bonds. Can we be confident that this really measures easing?

### Questions of Interpretation: 3

The paper measures market expectations based on expectations calculated from a VAR.

For the zero-lower bound period, the paper uses monthly data from October 2008 – March 2015.

This is a short window, and we might want to worry about the standard attenuation bias (underestimation of persistence) over such a short window. For example, expected short-term rates may be more persistent than the VAR measures.

In any event, does the VAR really measure market expectations? It may make sense to include variables such as stock prices, gold prices, oil prices just because they help to measure how market expectations change.

## Questions of Interpretation: 4

What is the “foreign exchange risk premium” that this paper measures?

I will argue that it may arise because of some unmeasured returns – liquidity returns – that U.S. Treasury bills receive. That is, it is not a foreign exchange risk premium.

I should emphasize that this is a personal view, and would be disputed by many researchers in this field – so treat my comments with skepticism.

The paper finds the foreign exchange risk premium falls with a U.S. monetary easing. This seems to contradict the usual finding of the carry trade literature that when U.S. interest rates are low, the foreign exchange risk premium is high.

(Though the standard result is unconditionally, while this paper conditions on the source of shocks being monetary policy.)



## Foreign exchange risk premium?

Call our two countries the U.S. (home) and Europe (foreign).

If  $\lambda_t = i_t^* + E_t s_{t+1} - s_t - i_t > 0$ , there is a foreign exchange risk premium in holding Euro denominated bonds.

You might think that Americans should get a higher expected return for holding European bonds because of foreign exchange risk, and Europeans should get a higher return for holding U.S. bonds because of foreign exchange risk.

But of course that is not possible. So what does it take for there to be a foreign exchange risk premium?

In some recent models, the sign of the risk premium is determined by which investors are more averse to foreign exchange risk.

## Foreign exchange risk premium?

If Americans are more averse to foreign exchange risk than Europeans, then in equilibrium there may be an expected excess return on European bonds. Conversely, if Europeans are more risk averse, American bonds incorporate the foreign exchange risk premium.

This sounds plausible, but the theory is challenged by the evidence that the foreign exchange risk premium changes sign, and that the sign is correlated to the interest differential.

The models that can account for this change in sign are quite complex, and seem fragile. I doubt they can be the whole explanation.

The literature has found European bonds carry a foreign exchange risk premium only when  $i_t^{EU} > i_t^{US}$ .

When  $i_t^{EU} < i_t^{US}$ , it is the American bonds that are risky.

## Foreign exchange risk premium?

How can this be?

When uncertainty is high for Americans, higher precautionary demand for risk less assets make  $i_t^{US} < i_t^{EU}$ . But Americans are more averse to risk, so the European asset carries the risk premium.

The model requires that relative short term interest rates are determined largely by precautionary demand. This story strike me as somewhat contrived and implausible, at least as a full explanation.

Other contradictory evidence comes from looking at how the level of exchange rates correlate with interest rates (Engel, 2015) The model that accounts for the foreign exchange risk premium requires that when U.S. interest rates fall, the dollar appreciates

Why? Even though U.S. assets pay a lower return, they are more valued because they have less foreign exchange risk.

## Liquidity premium

I think it is possible that short-term U.S. Treasury bonds carry an implicit return because of their liquidity. In particular, I believe that these bonds are valued because during certain times they can substitute for held by banks at the Federal Reserve.

Or, when the repo market is not functioning well and banks cannot use other assets as collateral for short-term loans, Treasuries are a valuable asset to hold because of the certainty of their value and the ease of selling them.

## Monetary easing/contraction and the liquidity return

In models such as Nagel (2015) and Rocheteau, Wright and Xiaolin (2015), the liquidity premium on short-term Treasury bonds falls when monetary policy eases.

Why? Treasuries are a substitute for reserves. When the Fed makes large open-market purchases, liquidity increases, so Treasuries are less needed for liquidity.

I hypothesize that the measured excess return on foreign bonds arises because the measured return on Treasuries does not include their liquidity return:

$$\lambda_t = i_t^* + E_t s_{t+1} - s_t - i_t \quad \text{or,} \quad i_t^* + E_t s_{t+1} - s_t = i_t + \lambda_t$$

That is, returns are equalized when the liquidity return is included.

## Conclusions of my discussion

This paper addresses an interesting area, and the work is the highest quality.

I have argued that we could learn more if we understood:

1. Exactly what a monetary policy shock was.
2. More precisely why a decline in the 5-year yield constitutes a monetary easing (or, why the dollar depreciates.)
3. What causes the ex ante return on foreign short-term deposits to rise when the FOMC “eases” during the period of unconventional monetary policy.