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Currency intervention and the global portfolio balance effect: Japanese lessons☆

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ABSTRACT

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This paper extends the analysis of Bernanke et al. (2004) to show that the official Japanese purchases of foreign exchange in 2003–04 seem to have lowered long-term interest rates not only in the United States, but in a wide range of countries, including Japan. It seems that this decline was triggered by the investment of the intervention proceeds in US bonds and that global portfolio rebalancing spread the resulting decline in US dollar yields to bond markets in other currencies, thus easing global monetary conditions. We also show that the global portfolio balance effect is detectable in the response of yields to large Japanese intervention in data before and after 2003/04, though the effect is weaker. While our findings contribute to a growing body of work that points to common responses across bond markets to official portfolio shifts in the form of large-scale bond purchases ("quantitative easing"), our analysis has the advantage of focusing on a pure portfolio shock.

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1. Introduction

Policy developments can require a rethinking of long-held propositions about policy. So it is with the effects of foreign exchange interventions, changes in official reserve management practices and large-scale asset purchases.

These require us to rethink the proposition dating back to Joan Robinson's 1937 essay (1947) that currency depreciation (or resisting currency appreciation) is a beggar-thy-neighbour policy. This phrase condemns currency depreciation in a world of insufficient effective demand as a case of robbing the foreign Peter to pay the domestic Paul: cheaper exports of the home country increase output and employment at the expense of sales and jobs in competing countries.

However, policy developments mean that this analysis has become incomplete and misleading. Foreign exchange reserve management has shifted its investment focus from gold in the 1930s and Treasury bills in the 1950s to bonds today. We argue in this paper that as a result currency intervention today bears similarities to the large-scale asset (bond) purchases (LSAPs) that have recently become a popular unconventional monetary policy tool.[1]

LSAPs targeted at bonds can ease monetary conditions through either market liquidity effects or portfolio balance effects. In the latter case, if market participants that have sold bonds to the central bank purchase substitutes (or are expected to do so), bond prices broadly go up and yields down (see e.g. Bernanke and Reinhart (2004), Bernanke et al. (2004), Sack (2009), Bernanke (2010) and Bernanke (2012)). Lower bond yields resulting from this portfolio rebalancing can stimulate interest-sensitive investment and raise asset prices, inducing wealth effects.[2] Indeed, Neely (2015) documents a drop in international bond yields in response to the Federal Reserves LSAP in 2008–09, suggesting a global portfolio balance effect. Bauer and Neely (2014) can be read to find that portfolio balance effects rather than lower expected policy interest rates are generally responsible for lower yields. Rogers et al. (2014) use high frequency data to measure the bond market spillovers of unconventional monetary policy.

To our knowledge, just one paper examines the impact of interventions on the government bond yields of the target currency. Bernanke et al. (2004) establish that US government bond yields declined during the period of Japanese foreign exchange intervention in 2003–04.[3] They argue that this happened because the Japanese Ministry of Finance (MoF) invested the freshly purchased US dollars in US government bonds.

We add to their analysis by carefully considering the series of decisions between MoF intervention and investment in US bonds and then by establishing that the same intervention also caused a decline in long-term interest rates around the world. In particular, ten-year government bond yields in other industrialised countries declined, as did ten-year interest rate swap rates in a variety of currencies. We also identify a decline in bond yield of emerging market economies whose bond markets are more globally integrated. This suggests a broadly based portfolio balance effect driven by close substitutability of similar bonds for the particular bonds purchased. Indeed, even Japanese interest rates seem to have decreased in response to the interventions.[4]

[1] One important difference is that currency intervention amounts are not announced beforehand, whereas the eventual size of LSAP or quantitative easing measures often is announced in advance.

[2] This portfolio balance effect should work also at a policy rate well above the zero lower bound. See the argument over the "bills only" doctrine within the Federal Reserve in the 1950s in Ritter (1980).

[3] Also related to our paper are Warnock and Warnock (2009) in their international perspective. They show that a broad range of US interest rates declines when foreigners purchase US government bonds.

[4] In a working paper version of this paper, we also examine the effect of the Swiss interventions of 2009/10 (Gerlach-Kristen et al., 2011). Since no official intervention data are available for Switzerland, that analysis is more tentative. Nevertheless, we also find an effect of interventions there on global bond yields as well.