

“Effects of Fiscal Shocks in a Globalized World”

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*These comments should not be interpreted as reflecting the views of
the Federal Reserve Board.*

Overview of Paper

- From a broad perspective, this paper analyzes key channels through which fiscal policy shocks in the United States affect its foreign trading partners.
- The main focus is on the response of the nominal exchange rate, though the paper also considers the responses of commodity prices, interest rates, inflation expectations, and stock markets.
- Novel feature is the use of high frequency data on government spending to measure the fiscal impulse.
- **The key result** – which seems quite consequential – **is that a rise in U.S. government spending causes the dollar to appreciate**; and the magnitude of appreciation is larger if U.S. monetary policy is not constrained by the zero lower bound.

Challenges in Identifying Government Spending Shocks

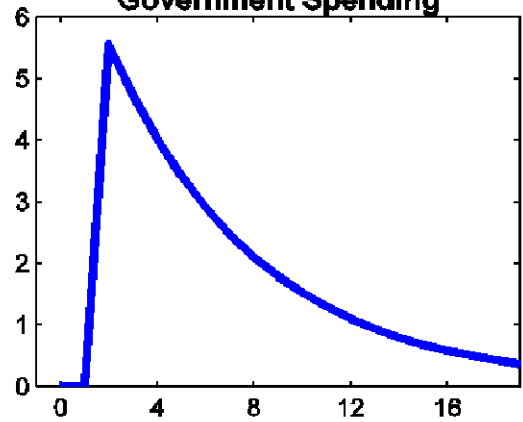
- Models of fiscal transmission typically analyze the effects of an “exogenous” rise in government spending that is unforeseen by financial markets. But two practical challenges:
- **Endogeneity.** Government spending has a substantial endogenous component due to automatic stabilizers and countercyclical policy actions. If government spending rises in response to weak economic conditions, it may appear to cause output to fall, even though the true “partial effect” on output is positive.
- **Timing.** Government spending shocks often have a substantial predictable component. Unexpected changes in government spending may have very different effects than expected changes, especially on financial markets.

More on the Timing Problem

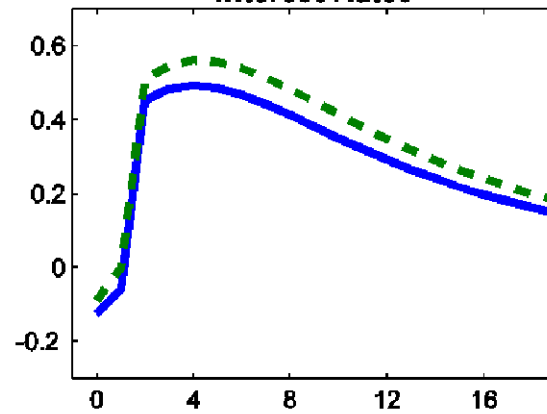
- **Ramey (QJE, 2011)** is critical of approaches – such as SVARs - which identify fiscal shocks based on **actual changes in government spending**, since such approaches may miss effects arising through expectations channels (i.e., the public anticipates spending will be higher or lower).
- Intuitively, the fiscal shock identified by the SVAR “sees” the shock as occurring well after financial markets have already reacted.
- While Ramey highlights how failure to take account of news/anticipation effects can seriously bias inferences about consumption and wages, her critique is at least as applicable to financial market variables such as the exchange rate.

Expected Rise in Government Spending in 2 Quarters

Government Spending



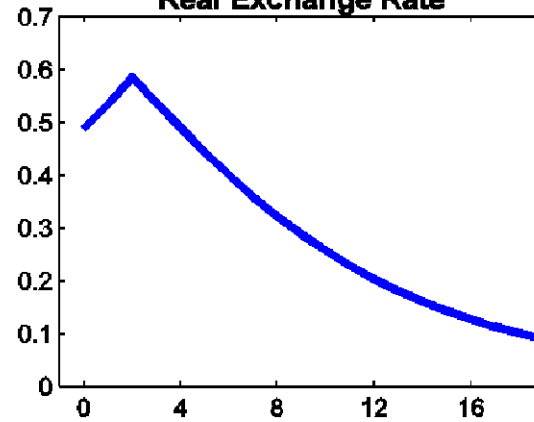
Interest Rates



Private Consumption



Real Exchange Rate



Previous Open Economy Analysis

- **Several previous studies have found that a positive U.S. government spending shock causes the dollar to depreciate (Monacelli and Perotti, EJ 2010; Ravn, Schmitt-Grohe, Uribe JME 2012; Enders, Muller, Scholl JIE 2011). These studies have used an SVAR framework that identifies the shock to government spending using data on actual expenditure.**
- **Similar results obtain for Canada, the United Kingdom, and Australia (home currency depreciates).**
- **By contrast, some studies attempting to account for anticipation effects – using measures of news about spending shocks – do find some evidence of dollar appreciation (Corsetti, Meier, and Muller 2009).**

- **Evidence of dollar depreciation would pose major challenge to existing models which imply higher fiscal spending causes appreciation.**

The Authors' Approach

- The authors essentially try to bridge both strands of the empirical literature by using two alternative sources of daily data on defense spending – one of which focuses on actual payments, the other which attempts to capture anticipation effects.
- **Actual Payments to Defense Contractors (Treasury).** Measures actual outlays, and lines up well with low frequency data when aggregated.
- **Contract Awards (DOD).** Measure of future government spending.
- The comparison is useful for helping assess how using “news” about future spending may affect estimated responses rather than using data on actual payments.

Empirical Approach and Key Results

- **The authors regress the change in the dollar exchange rate relative to some base period (“0”) on the military spending shock measure, as well as on a number of controls (use Jorda’s projection method).**
- **Find that forward-looking DOD measure implies that higher (military) spending tends to boost the dollar significantly; the effects are larger when the ZLB doesn’t bind.**
- **By contrast, measure based on current spending implies that the exchange rate depreciates – consistent with most previous literature that has used similar measures using quarterly or annual government spending data.**

Economic Significance of Results

- **Despite many shortcomings of daily data – which the authors are transparent in acknowledging – their results provide support for the transmission channels embedded in conventional models.**
- **Major strength of the paper is in using the two measures to help pinpoint what accounts for divergent results in the literature. Consistent with Ramey, accounting for anticipation effects seems to matter a lot – and this seems especially true when considering asset prices.**

Transmission through Interest Rates

- **Changes in the dollar due to U.S. fiscal shocks presumably depends importantly on the conditional response of both U.S. and foreign interest rates.**
- **The paper does consider how fiscal shocks affect U.S. interest rates and inflation, as well as some additional financial variables – a very informative feature of the paper.**
- **Even so, the analysis doesn't provide a compelling account of why the dollar seems to appreciate substantially: in particular, U.S. interest rates at a horizon of beyond a year are essentially unchanged.**

- **In this vein, it would be useful to assess how the U.S. interest rate response differs between periods in which monetary policy is constrained by the ZLB vs. not (similar to exchange rates); or with the business cycle. Moreover, it would be useful – though a formidable task – to investigate how foreign interest rates respond.**

The Exchange Rate and Output Spillovers Abroad

- This paper mainly analyzes how government spending shocks affect the exchange rate.
- However, the spillover effects of U.S. fiscal actions to foreign output depend not only on the exchange rate response, but also on how domestic and foreign **real** interest rates respond.
- While it's tempting to regard spillovers abroad as likely to rise with dollar appreciation -- since the partial effect on foreign net exports is clearly positive -- a highly accommodative U.S. monetary policy **may** yield comparatively larger spillovers than a tighter policy stance, even if the dollar appreciates by less.
- The paper is a bit vague about whether the smaller dollar appreciation under the ZLB means more or less stimulus for U.S. trading partners.

Spillovers from (U.S.) Fiscal Stimulus in Normal Times

- **During normal times for U.S. monetary policy, we'd expect that “floaters” -- countries with independent monetary policy – would be more likely to get more positive fiscal spillovers than “peggers” – countries that tried to keep their exchange rate relatively stable.**
- **The “peggers” would get relatively little NX stimulus from relative price channels, and would be forced to raise interest rates roughly in line with U.S. rates. Hence, their GDP would be likely to contract. By contrast, floaters would raise interest rates by much less, and their NX would benefit from a comparatively larger appreciation.**
- **For cross-section of countries, those countries experiencing more depreciation vs. dollar would get more positive spillovers; in this vein, interesting for authors to look at exchange rate responses of AFEs vs. EMEs.**

Spillovers from (U.S.) Fiscal Stimulus at ZLB

- **Authors find that if U.S. monetary policy constrained, U.S. fiscal expansion elicits relatively small appreciation of dollar compared with normal times.**
- **Nevertheless, despite the small appreciation under the more accommodative U.S. monetary policy, fiscal spillovers may well be larger than in normal times!**
- **In particular, while foreign NX would be reduced by the smaller dollar depreciation, foreign NX would benefit from a larger expansion of U.S. domestic demand as fiscal stimulus reduced U.S. real interest rates. The latter effect could well dominate, as in the SIGMA model.**

- **It's important to qualify that fiscal stimulus could have smaller spillover effects when U.S. monetary policy was constrained if the exchange rate “mattered” more for foreign net exports than did the response of U.S. domestic demand (see Cook and Devereux 2011).**
- **But the key conceptual point is that it's crucial to take of more than the exchange rate in assessing the spillovers of fiscal (or monetary) actions.**
- **From a policy perspective, this is important because it means that fiscal stimulus in the euro area or Japan could potentially have positive spillovers abroad even if the exchange value of the euro or yen doesn't appreciate much (or depreciates).**

- **In recent work with Blanchard and Linde, we show how fiscal spillovers associated with an expansion of government spending in core euro area countries may have large positive spillovers to periphery economies given the prolonged liquidity trap faced by the ECB.**
- **In our model, inflation rates rise in core and periphery, lowering real yields and providing substantial stimulus, even though real exchange rates show quite modest adjustment. These results also underscore that large exchange rate appreciation is not a prerequisite for achieving substantial positive spillovers.**

Conclusion

- **Excellent paper: very useful and clear. Key result is that accounting for anticipation effects can have enormous implications for how the exchange rate and other asset prices respond to fiscal shocks.**
- **It would be useful to incorporate additional analysis of how home and foreign interest rates (and inflation) respond to fiscal actions to enhance understanding of the exchange rate response, and to help gauge likely spillovers.**
- **Some work on assessing exchange rate responses at a more disaggregated level (EMEs vs. AFEs) would also seem useful.**