How does financial liberalisation affect the influence of monetary policy on the current account?

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ABSTRACT

Does the current account improve or deteriorate following a monetary policy expansion? We examine this issue theoretically and empirically. We show that a standard open economy DSGE model predicts that the current account response to a monetary policy shock depends on the degree of financial regulation. In particular, financial liberalisation makes it more likely that the current account deteriorates following a monetary expansion. We test this theoretical prediction with a varying coefficient Bayesian panel VAR model, where the coefficients are allowed to vary as a function of the degree of financial, product and labour market regulation on data from 1976Q1-2006Q4 for 19 OECD countries. Our empirical results support the theory. We therefore conclude that following a monetary policy expansion, the current account is more likely to go into deficit in countries with more liberalised financial markets.

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1. Introduction

Does the current account improve or deteriorate following a monetary expansion? Neither theory nor empirical analysis offers a clear answer to this question, which is at the heart of the current debate about the international monetary system.[1] Papers which focus on the US such as Kim (2001a) or Barnett and Straub (2008) find that a US monetary loosening weakens the current account, while papers which consider a set of countries such as Kim (2001b) or Lee and Chinn (2006) find that an expansion of monetary policy tends to be followed by an improvement in the current account. This paper reconciles those findings by showing that the impact of monetary policy on the current account is likely to differ across countries and over time depending on certain economic features. In particular, our results suggest that the sign of the current account response following a monetary policy expansion depends on the degree of regulation in financial markets.

First, we show that the impact of monetary policy on the current account in an open economy DSGE model depends on the structural features of the economy, specifically the degree of regulation in financial markets. We examine how the channels through which monetary policy is transmitted to the current account are affected by regulation in financial markets. The

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[1] For example, King (2009) suggests that global imbalances were an important factor behind the global financial crisis of 2008/2009 and could have been addressed through global coordination of monetary policy.

model delivers predictions about the impact of liberalisation in financial markets on the current account response to monetary policy. We then use a Bayesian panel VAR to test those predictions. The coefficients in the VAR are allowed to vary stochastically as a function of the degree of regulation in different markets including financial markets, making it possible to estimate empirically the impact of financial regulation on the current account response to a monetary policy shock.

Our work expands on previous work analysing the effect of economic liberalisation on the monetary policy transmission mechanism by focusing on the open economy consequences of economic liberalisation and in particular on the implications for the current account. Work so far has not considered the effect of financial liberalisation on current account dynamics following monetary policy shocks but focused on domestic variables, see e.g. Iacoviello and Minetti (2003).

The DSGE model shows a number of routes by which monetary policy is transmitted to the current account. First, given prices, a temporary monetary expansion induces people to bring forward consumption of imported as well as domestically produced goods (the import absorption channel). This leads to a deterioration of the current account by reducing net exports. Secondly, the consequent exchange rate depreciation makes domestic goods cheap relative to foreign goods and thus induces a rise in the consumption of the former relative to the latter (the expenditure switching channel). The resulting rise in net exports contributes to improving the current account. But the exchange rate depreciation also increases the cost of a given consumption basket and thus has a negative income effect which limits the increase in consumption of imported as well as domestic goods and thus contributes positively to the current account (the purchasing power channel). Finally, to the extent international financial markets lead to some degree of consumption risk sharing across countries, and thus to portfolio diversification, the domestic monetary shock will also affect the rest of the world, leading to some increase in consumption abroad. A current account improvement will result (the portfolio diversification channel). The model shows that which of those channels dominate, and therefore whether the current account improves or deteriorates following a monetary expansion, depends on the structure of the economy considered (characterised *inter alia* by the degree of regulation in financial markets).

We investigate how the degree of financial market liberalisation affects the transmission of monetary policy to the current account within the DSGE model, by comparing economies which are tightly regulated with those which are lightly regulated. In our model, the degree of financial regulation is captured by the proportion of households without access to financial markets, consistent with empirical evidence suggesting that financial liberalisation reduces the fraction of liquidity-constrained consumers in an economy. We vary this measure of regulation and consider the impact on the impulse responses following a monetary policy shock.

The DSGE model predicts that financial liberalisation affects the monetary policy transmission and its consequences for the current account. It amplifies the import absorption channel, so that financial liberalisation means that the current account is more likely to deteriorate after a monetary expansion. This result holds for a wide range of plausible structural parameter values.

We use VAR analysis to test the prediction of our theoretical model regarding the impact of financial regulation on the transmission of monetary policy. In particular, we use a varying coefficient panel VAR model in which we allow the coefficients to vary with the degree of regulation in different markets including in financial markets. We carefully match the statistical measure for financial regulation to our measure in the theoretical model.

In principle we could test the predictions country by country. A number of authors have used VAR frameworks to look at the implications of economic liberalisation by only exploiting time-series variation. An alternative approach has been to look at cross-sectional variation. If there are countries with similar characteristics, pooling by characteristic may offer a means of determining the structure within those countries better. But if the regulatory changes in question can be quantified in the form of a country-specific and time-varying index, it may appear desirable to estimate a model in which account is taken of both types of variation. Wieladek (2016) proposes a Bayesian shrinkage approach to estimate panel VAR models where the coefficients are a stochastic function of several exogenous variables. The structure resulting from Bayesian shrinkage permits random parameter variation both across countries and over time. Since this approach allows for both stochastic variation and multiple structural characteristics, this is the econometric approach that we choose to follow. It delivers a random effects estimator.

The advantage of this econometric approach is that we can formally test the implications of our theoretical model by comparing the distributions of impulse responses in the presence of high and low degrees of regulation in financial markets, while controlling for changes in the degree of regulation in other markets, thereby reducing omitted variable bias. That makes it easy to understand whether and how financial liberalisation has affected the monetary policy transmission to the current account over time. Monetary policy shocks are identified with sign restrictions (see Canova and De Nicolo, 2002; Uhlig, 2005; Faust and Rogers, 2003), derived from our DSGE model. To ensure robustness to the type of identification, we also examine monetary policy shocks identified with lower-triangular zero restrictions, with consumption and the consumer price index ordered before the short-term interest rate (as in Christiano et al., 1999).

To our knowledge we are the first to test formally the open economy consequences of a rich body of monetary theory which implies that the reaction of variables to a monetary policy shock should depend on the structural characteristics of the economy considered. By the standards of previous work that studies how changes to structural characteristics affect the transmission mechanism, our econometric methodology allows us to account for a larger number of structural characteristics. As these variables are likely to be correlated, this should reduce the scope for omitted variable bias to produce misleading results.

Our empirical results confirm the DSGE model predictions of the impact of financial liberalisation: the magnitude of the current account response is highly dependent on the financial market regime. Financial liberalisation leads to a greater cur-