Available online at www.sciencedirect.com

ScienceDirect

Journal of Economic Theory 151 (2014) 342–380

JOURNAL OF Economic Theory

www.elsevier.com/locate/jet

Asset liquidity and international portfolio choice

Athanasios Geromichalos [a,*,1], Ina Simonovska [a,b,1]

[a] *University of California, One Shields Avenue, Davis, CA 95616, United States*
[b] *NBER, United States*

Received 15 April 2013; final version received 15 November 2013; accepted 22 January 2014

Available online 15 February 2014

Abstract

We study optimal portfolio choice in a two-country model where assets represent claims on future consumption and facilitate trade in markets with imperfect credit. Assuming that foreign assets trade at a cost, agents hold relatively more domestic assets. Consequently, agents have larger claims to domestic over foreign consumption. Moreover, foreign assets turn over faster than domestic assets because the former have desirable liquidity properties, but represent inferior saving tools. Our mechanism offers an answer to a long-standing puzzle in international finance: a positive relationship between consumption and asset home bias coupled with higher turnover rates of foreign over domestic assets.

JEL classification: E44; F15; F36; G11

Keywords: Search models; Liquidity; Asset home bias; Consumption home bias; Asset turnover

1. Introduction

Agents' international portfolio choices have been a major topic of research in macroeconomics over the past two decades. The vast majority of papers emphasize the role that foreign assets play in helping agents diversify domestic income risk. While the role of assets in hedging

* Corresponding author.
E-mail addresses: ageromich@ucdavis.edu (A. Geromichalos), inasimonovska@ucdavis.edu (I. Simonovska).
[1] Fax: +1 530 752 9382.

http://dx.doi.org/10.1016/j.jet.2014.01.004
0022-0531/

risk is admittedly crucial, an equally important characteristic of assets, their liquidity, has been overlooked by the literature. In this paper, we develop a multi-country model that features a precise notion of asset liquidity, and we use it to reconcile a long-standing puzzle in international finance as described in [29] and [22]: a positive relationship between consumption and asset home bias coupled with higher turnover rates of foreign over domestic assets. More precisely, developed countries obey three empirical regularities. First, in the average OECD country, agents' portfolios are heavily biased toward domestic assets. Second, economies that exhibit higher asset home bias also consume more domestic goods. Third, turnover rates of foreign assets are significantly higher than those of domestic assets.

To provide a concrete concept of asset liquidity, we employ a model in the tradition of monetary-search theory, extended to include real assets and trade between countries. Agents have access to alternating rounds of centralized, or Walrasian, markets and decentralized markets, where trade occurs in a bilateral fashion and credit is imperfect. In each country's Walrasian market, domestic and foreign agents can buy assets of that country at the ongoing market price. More interestingly, agents can bring a portfolio of assets to each country's decentralized market and trade it for locally-produced goods. Hence, assets serve a double function. First, they are claims to future consumption, as is standard in finance. Second, they serve as media of exchange, as is standard in monetary theory. It is precisely this second function that captures the notion of asset liquidity.

Within this framework, we characterize equilibria in which different assets arise as media of exchange in different types of bilateral meetings. Assuming that the net dividend from foreign assets is lower (e.g. due to a higher cross-border relative to domestic dividend income tax), domestic assets represent superior stores of value. Hence, in any exchange that involves only domestic agents, local assets serve as means of payment. An interesting tradeoff arises when agents choose which assets to bring to the foreign decentralized market to acquire consumption goods. Foreign assets have greater purchasing power in that market (because they are local to the producer), but market participation is not guaranteed. If agents' trading opportunities abroad are sufficiently frequent, then assets circulate as media of exchange locally; i.e. domestic assets facilitate trade at home and foreign assets facilitate trade abroad, thus endogenizing the common "currency area" assumption in international macroeconomics. At the other extreme, if trading opportunities abroad are scarce, agents use their domestic assets to acquire consumption goods both at home and abroad. Finally, in an intermediate case, either type of equilibrium described above can arise, depending on other parameters that govern asset returns.

To understand why our model can account for the three stylized facts, consider the empirically relevant "currency area" regime. Since domestic assets yield a higher dividend, as long as trading opportunities abroad are not much more frequent than at home, agents hold more domestic over foreign assets. Hence, portfolios exhibit home bias. In turn, agents have larger claims to domestic over foreign consumption goods. Hence, our suggested mechanism positively links asset and consumption home bias. Finally, agents hold foreign assets in order to acquire consumption abroad, but they offload them at the first given opportunity. Hence, foreign assets turn over faster than domestic assets. This result is very particular to our mechanism. In the absence of the liquidity channel, the dividend differential between domestic and foreign assets (or a similar per unit trading cost), which is necessary to generate consumption and asset home bias, would yield lower turnover of foreign relative to domestic assets. Therefore, the unique aspect of our model is the ability to capture the three stylized facts simultaneously.

We use the tight link between consumption and asset home bias to assess the model's quantitative ability to explain equity holding and turnover rate patterns observed in the data. We calibrate