International Currency Competition

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Abstract

We study how countries compete to become an international safe asset provider. Governments in our model issue debt to a common set of investors, resulting in competition as issuance by one country raises required yields for all countries. Governments are tempted ex post to engage in expropriation or capital controls, and can build reputation as a safe asset provider by resisting temptation to do so. We show how increased competition deters countries from building reputation, leaving more countries stuck at low reputation levels and unable to supply safe assets. We derive a model-implied measure of country reputation. We estimate this reputation measure using micro-data on investor portfolio holdings, and use it to track the evolution of countries' reputation over time. We study how an incumbent safe asset provider, like the U.S., uses its issuance strategy to deter the emergence of competitors.

Keywords: International Currency, Reserve Currency Competition, Exorbitant Privilege, Safe Assets, Reputation.
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1 Introduction

The internationalization of the Chinese Renminbi (RMB) in global bond markets has raised the possibility of a multipolar world for international currencies. Nevertheless, the existing dominance of the US dollar provides a long-established safe asset. In contrast, foreign holdings of Chinese bonds are both small and still come with questions about their safety, including risk of the Chinese government imposing outflow controls or otherwise making it difficult to repatriate investment. To understand how a multipolar world might or might not develop, it is important to understand how competition affects the incentives of a country to build credibility as a safe asset provider, and to measure in real time where different countries stand in terms of their reputation.

We provide a tractable model of competition between countries seeking to establish their reputations as international safe asset providers. We show how greater competition reduces the benefits of building reputation by diminishing the exorbitant privilege from doing so, leading existing lower-reputation countries to be less willing to bear the costs of foregoing use of capital controls or forms of expropriation in order to improve their reputation for investability. We show that our model generates a measure of reputation of all countries that can be estimated using micro data on investor portfolio holdings in real time. We estimate this measure to provide a time series index of the reputation of different countries. Finally, we show how an established high-reputation safe asset provider, like the U.S., can deter the emergence of a lower-reputation competitor by increasing competition through its issuance strategy. In doing so, the U.S. sacrifices some of its exorbitant privilege in order to prevent even greater losses that would emerge from the establishment of an alternative provider.

Our model builds upon the single-country reputation model of Clayton, Dos Santos, Maggiori and Schreger (2024a), henceforth CDMS, by allowing for a continuum of countries that compete with one another in international debt markets. Governments borrow from a common pool of investors. Competition arises because greater borrowing by one government worsens the residual demand curve for the bonds issued by all other countries. Within this competitive environment, each country can build up its reputation as a safe asset provider. In particular, at each date, governments borrow from international investors on behalf of their domestic economy. Governments cannot commit not to impose a tax on investors ex post, for example a capital control to manage a capital flight during a crisis. We assume governments are one of two types: a committed type that never imposes the tax by assumption, or an opportunistic government that strategically chooses whether to impose the tax. Investors do not know any particular government's true type, but update beliefs about the type from their observation of the government's behavior. By choosing not to impose the tax, opportunistic governments can build reputation for being safe bond issuers, which increases investor demand for their debt and lowers future borrowing costs. Opportunistic governments trade off the flow benefit of imposing the tax against the continuation value of building reputation when deciding whether to impose the tax.

Our model admits a tractable aggregation whereby competition is summarized by how sensitive

investors' demand for a given country's debt is to the price of that debt. This sensitivity increases in how much debt other countries are issuing, which directly fuels competition. Moreover, it also increases when other countries have on average higher reputations: higher-reputation countries take advantage of favorable borrowing terms by issuing more, pushing up how much investors have to lend and raising borrowing costs for all countries. Competition is therefore shaped by the full distribution of reputations among all countries in the world.

After proving existence of a steady state of our competition model, we show how our model gives rise to an interesting two-way interaction between the extent of competition and the incentives for a country to build reputation. All else equal, as competition becomes more fierce, the incentives of an individual country to build reputation diminish. Intuitively, as its borrowing terms become less favorable in a more competitive environment, the benefits it gets from building reputation and increasing its future debt issuance fall. This leads opportunistic governments to be less willing to resist the temptation to impose the tax, and more governments impose the tax even at low levels of reputation. This leads to a pile up of countries at low reputation levels in the steady state stationary distribution. It is a low reputation trap in which countries are stuck issuing debt that the market perceives as unsafe, and their ex-post policy confirm the debt is indeed not safe. In more extreme cases of competition, we show that the possibility that some governments are committed is alone enough to lead all opportunistic governments to become permanently stuck at the lowest reputation level.

Measuring reputation in the data is a notoriously difficult problem. Based on the model, we derive a sufficient statistic to track countries' reputation over time and estimate it in nearly real-time using micro data on foreign investors' portfolios. Intuitively, for each country, say China, we track whether foreign investment funds that own Chinese bonds are specialists in investing in developed or emerging market bonds. Formally, we estimate at each point in time the correlation among investment funds between the share of the foreign portfolio invested in RMB bonds and the remaining share invested in a reference set of safe developed countries government bonds. We construct this measure of reputation for all countries. Based on the model, a higher correlation indicates that a country's reputation is closer to that of the reference set of countries with the highest reputation. We find high positive and stable correlations (reputations) for countries such as the U.S. and Eurozone, and negative stable correlations (reputations) for countries such as Brazil and South Africa. Interestingly, we find that China's reputation is in between emerging markets and developed countries. Consistent with the model's prediction that reputation builds after a country resists temptation to impose a tax, we show that China's measured reputation increased following its restraint in imposing restrictions on foreign investors during the 2015-16 capital flight (see also CDMS).

The model is tractable and can help make sense of players at both early (e.g., China) and late (e.g., the US) stages of reputation building. We study the strategic incentives of an established high-reputation dominant country to manipulate the incentives for lower-reputation competitors to