Economic Modelling 66 (2017) 146–155

Contents lists available at ScienceDirect

Economic Modelling

journal homepage: www.elsevier.com/locate/econmod

Do domestic bond markets participation help reduce financial dollarization in developing countries?

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ARTICLE INFO

JEL Classifications:
E4
E6
G1
G2

Keywords:
Domestic bond markets
Financial dollarization

ABSTRACT

In this paper, I analyze the effect of domestic sovereign bond market (BM) participation on financial dollarization using a large panel of 114 developing countries over the period 1984–2009. Building on entropy balancing, my results reveal strong evidence that domestic BM participation significantly reduces financial dollarization in domestic BM countries compared to their non-domestic BM peers. Moreover, I find that the favorable impact of domestic BM on financial dollarization (i) is larger for inflation targeting countries compared to non-inflation targeting countries, (ii) is apparent exclusively in a non-pegged exchange rate regime, (iii) and is larger when there are fiscal rules that constrain the discretion of fiscal policy makers. Finally, I show that the induced drop in inflation rate and its variability, nominal exchange rate variability, and seigniorage revenue are potential transmission mechanisms through which the presence of domestic BM reduces financial dollarization in domestic BM countries.

1. Introduction

One of the distinctive features of financial development in many developing and emerging countries is the importance of financial dollarization, that is, the use of foreign currencies as an alternative to local currency in the three functions of money—as a medium of exchange, as a store of value, and as a unit of account (Ize and Yeyati, 2003; Corrales et al., 2016). Previous research on the consequences of dollarization shows that it has damaging effects both on economic outcomes and stability as well as policy effectiveness. On the one hand, dollarization can significantly increase growth volatility and weaken the balance sheet of borrowers by creating an important currency mismatch (Gulde-Wolf et al., 2004; Levy Yeyati, 2006). On the other hand, it can sharply raise the elasticity of substitution between local and foreign currencies, particularly in cases of a floating exchange rate regime, thereby severely impeding the effectiveness of national independent monetary policy or counter-cyclical fiscal policy (Miles, 1978; Brillenbourg and Schadler, 1980; Girton and Roper, 1981). These damaging consequences have led many researchers and policymakers to the examination of the causes of dollarization.

Early studies on this phenomenon point out the role of currency substitution according to which dollarization is mainly the result of fear of inflation (Sahay and Vegh, 1995; Savastano, 1996). The direct policy implication of this initial literature is that inflation stabilization is an effective policy for fighting against dollarization. However, this currency substitution view failed to explain the persistence of dollarization in the 1990s in many developing countries and, in particular, in Latin America, despite a significant control of inflation, leading to renewed interest on the causes of dollarization (Edwards and Magendzo, 2003). The new emerging literature, starting from Levy Yeyati (2006) can be subdivided into three main views: *the portfolio view*, *the market development view*, and *the institutional view*. *The portfolio view* perceives dollarization as an optimal portfolio choice, resulting from the comparison between the real return in local and foreign currency (Ize and Yeyati, 2003). *The market development view* attributes dollarization to market failures, for instance, the absence of investment opportunities in domestic currency (Olalekan, 2009). Finally, *the institutional view* considers dollarization to be a result of institutional failures, namely the existence of a high level of corruption or political instability that directly affects the credibility and the effectiveness of fiscal, monetary, or exchange rate policies (De Nicolo et al., 2005).

The present paper contributes to this literature by analyzing the effect of participation in the domestic bond market (BM) on financial dollarization in developing countries.[1] Fig. 1 presents the average ratio

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[1] Alternatively, the recent paper of Balima et al. (2016) studies the effect of BM participation (including domestic and foreign markets) on tax revenue mobilization in developing countries.

http://dx.doi.org/10.1016/j.econmod.2017.06.008
Received 23 January 2017; Received in revised form 30 April 2017; Accepted 15 June 2017
Available online 22 June 2017

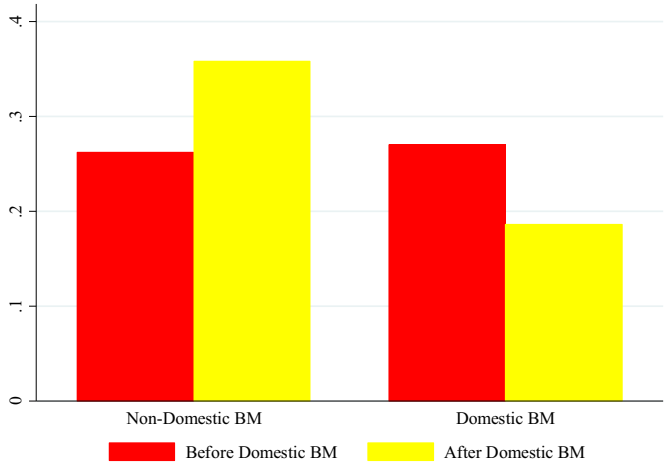

Fig. 1. The evolution of the average financial dollarization in (non-) domestic BM countries. Note: This figure presents the evolution of the average rate of financial dollarization (*in the vertical axis*) in domestic and non-domestic BM countries, before and after domestic BM introduction.

of financial dollarization in domestic and non-domestic BM countries before and after the introduction of domestic BM.[2] Indeed, the simple stylized facts in Fig. 1 show that, contrary to non-domestic BM countries, domestic BM countries experienced a decrease in financial dollarization following domestic BM introduction.

Building on this simple illustration, the paper provides a first answer to the link between domestic BM participation and financial dollarization using a large sample of 114 developing countries over the period 1985–2009. My identification strategy is based on the entropy balancing approach, an innovative method developed by Hainmueller (2012) and recently used by Neuenkirch and Neumeier (2016) to study the impact of US sanctions on poverty. More specifically, I compare the degree of financial dollarization in domestic BM countries and non-domestic BM countries that are as similar as possible with regard to different macroeconomic characteristics, after controlling for the specific characteristics of domestic and non-domestic BM countries and time-specific factors. The findings are as follows.

First, I show that the presence of domestic BM significantly reduces financial dollarization in developing countries. The magnitude of the estimated effect is economically meaningful. On average, domestic BM participation reduces the level of financial dollarization by 7.1 percentage points (hereafter pp.) in domestic BM countries compared to non-domestic BM countries.This finding is widely robust to different specifications of the entropy balancing method and the use of alternative estimation techniques including propensity scores matching, bias-corrected matching, and standard panel fixed effects.

Second, I reveal that the impact of domestic BM on financial dollarization (i) is larger for inflation targeting countries compared to non-inflation targeting countries, (ii) is apparent exclusively in a non-pegged exchange rate regime, and (iii) is larger when there are fiscal rules that constrain the discretion of fiscal policymakers.

Lastly, I provide evidence that the induced drop in inflation rate and its variability, nominal exchange rate variability, and seigniorage revenue are potential transmission mechanisms through which the presence of domestic BM reduces financial dollarization in domestic BM countries.

The rest of this paper is organized as follows. Section 2 discusses theoretical considerations motivating a potential effect of domestic BM participation on financial dollarization. Section 3 presents the empirical methodology. Section 4 describes the data. Section 5 reports the baseline results and their robustness. Section 6 presents the sensitivity of the results. Section 7 describes potential transmission channels. I conclude in Section 8.

2. Theoretical considerations

Several theoretical considerations support the idea that domestic BM participation can have an impact on financial dollarization in domestic BM countries. To begin with, in a recent research, Rose and Spiegel (2015) present a theoretical framework that considers the implication of local currency BM for price level and stability. The two authors consider a one-period model where the government finances expenditures through debt issuance, and debt service through taxes and inflation. They also consider households that participate in lobbying activities for lower and stable inflation. The authors show that inflation realization is decreasing with the presence of domestic BM though the lobbying activities of wealthy bondholders on their governments for lower and stable inflation. They also test empirically this theoretical prediction and find that countries with domestic BM experience a lower inflation than those without BM. Since domestic bondholders can have a significant impact on domestic price level and stability through lobbying activities, I should expect a decrease in financial dollarization following domestic BM introduction, as predicted by the *currency substitution view*.

Second, the presence of domestic BM provides a saving option in the local currency for local residents. This is all the more important given that many developing countries, including African nations, are net capital exporters to the rest of the world (International Monetary Fund, 2012). Consequently, I expect domestic BM to decrease financial dollarization, as predicted by the *market development view*.

Third, a well-developed domestic BM can increase economic stability. Indeed, as stressed by Mu et al. (2013), domestic BM can help reduce the country's exposure to interest rate, currency, or others financial risks, and provide valuable resources for financing fiscal stimuli during economic downturns. This assessment is supported by the recent experience of Asian countries, where progress towards deeper domestic BM developments have allowed them to cope with the 2007 financial crisis. In the same vein, by providing an avenue for domestic funding of fiscal deficits, domestic BM may reduce the need for damaging monetary financing of government funding requirement and thus improve the transmission and implementation of monetary policy, including the realization of lower and stable inflation (World Bank, 2001). Therefore, by improving economic stability and the effectiveness of monetary policy, domestic BM may also improve private agents' confidence in the local currency, thus decreasing financial dollarization as predicted by the *institutional view*.

Fourth, at the microeconomic level, the development of domestic BM can improve the structure of the financial system through greater competition between the capital market and commercial banks (World Bank, 2001). This competition can, for instance, force commercial banks to develop new financial products denominated in local currency, leading to the interest rate parity, and thereby increasing the willingness of economic agents to hold the local currency. Consequently, the presence of domestic BM may reduce financial dollarization, as predicted by *the portfolio view*.

However, the presence of domestic sovereign BM can also increase the degree of financial dollarization. Indeed, the presence of domestic BM provides the government a nice way to reduce their domestic debt obligations outstanding through inflation. Such actions could significantly jeopardize citizens' confidence in the local currency and thereby increase financial dollarization. Given this theoretical conflictual linkage, the question of whether the presence of domestic BM has a positive or negative impact on financial dollarization is an empirical one.

[2] Regarding non-domestic BM countries, I borrow the approach used by Mishkin and Schmidt-Hebbel (2007) in the inflation targeting literature and define the cut-off date as the mid-year of the period running from the first introduction of domestic BM to the sample year end.