Book Title: Other People's Money: Debt Denomination and Financial Instability in Emerging Market Economies

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The topic of capital flows to emerging markets (henceforth EM) poses several questions. There is the question of why capital flows to EM's are so little, as in Lucas (1990), just as there is the concern that capital flows might be 'too much' as in Reinhart and Rogoff (2004). The precise costs and benefits to EM's in terms of international risk sharing, volatility of real variables, productivity spillovers, among others, are also points of debate (Aguiar and Gopinath (2005), Jeanne and Gourinchas (2005)). This book, takes the level of capital flows as given and explores another important set of questions regarding the currency composition and maturity composition of borrowing by EM's – namely, why do EM's borrow mainly in a foreign currency and at short maturities. This book proposes an intriguing answer and an impressive amount of evidence. However, just as with the other questions, the debate remains unsettled and urges the need for further research.

Emerging markets issue debt mainly in a foreign currency, while their revenues are in local currency. This can generate a currency mismatch in their balance sheets. A realignment of the country's currency can therefore have potentially large effects on their balance sheet and in the presence of financial market imperfections this can impact real variables in the economy. The recent episodes of financial crisis in EM's have indeed witnessed such balance sheet and output collapses. If indeed borrowing in a foreign currency has such costly real effects, the question that arises is why do these countries borrow in a foreign currency and at short maturities? This book proposes an answer, titled 'Original Sin' (henceforth OS). They argue that the main reason countries borrow in a foreign currency is not because of the weaknesses of their own policies and institutions but is an outcome of the structure of the international financial system.

Consequently, the source of the problem does not so much arise at home but is an outcome of insufficient reform of the international financial system. As the editors point out, “It is as if emerging markets suffer from an inherited burden, almost irrespective of the policies of their governments”. This is referred to as original sin.

This book is an impressive collection of essays on the currency composition of foreign borrowing and OS. While there is some discussion of the maturity structure of debt, the focus is on currency composition. The question is approached very methodically and the chapters are very lucid and a pleasure to read. I will review this book in two steps. First, I will explore the contributions of the various chapters. Next, I will raise potential concerns regarding the hypothesis of original sin and the evidence the authors present.

The first step in examining the hypothesis is to provide an empirical measure of original sin that captures the notion of currency mismatch that the authors are concerned about and the extent to which it reflects international factors. Chapter 1 does this and sets the foundation for the empirical and theoretical discussion of the hypothesis.

Chapter 1 provides several empirical measures of original sin. These measures mainly summarize the fraction of a country’s debt that is issued in a foreign currency. The calculations are made using unpublished data from the Bank for International settlements on securities and bank claims. It is therefore a very valuable source of facts for those interested in international borrowing patterns. The authors calculate the proportion of total debt issued in a currency relative to the debt issued by residents of the country (whose currency it is). They find that the percentage for major financial centers (US, Japan, UK and Switzerland) is 150.7%, for Euroland it is 91.35%, for other developed countries it is 18.8% and for the developing group it is 10.9% during the period 1999-2001. These numbers point to the fact that OS is a global phenomenon, since with the exception of a handful of countries most countries in the world have their debt issued in a foreign currency. While developing countries appear very different from the major financial centers in terms of the currency structure of their debt, they do not appear remarkably different from the 'other developed countries' group.

Given that EM's suffer most from OS, the next step in the analysis is to determine if OS has significant effects on the macro economy. The second half of Chapter 1 and Chapters 2-4 address this question. The empirical evidence for this is fairly limited. The authors find a positive correlation between OS and the volatility of growth of output and of capital flows. As the authors point out, it is hard to establish causation in this analysis.

Chapters 2-4 examine the macro economic consequences of currency denomination of debt in a theoretical framework. The starting point in all these chapters is to take the currency composition as given and therefore exogenous. Chapter 2 considers a framework where balance sheet effects matter because financial market imperfections limit borrowing to be a function of net worth. The effect of a currency (real) devaluation is then contractionary. However, it can also be expansionary through the standard expenditure switching channel. The effect of external shocks is shown to be magnified when the economy has high financial vulnerability. Chapter 3 presents a fiscal perspective on currency crisis and original sin. The authors analyze how monetary and fiscal policy interact with both the currency composition and maturity structure of debt to determine the effect of exogenous shocks that cause a fiscal imbalance. Chapter 4 provides a general framework to analyze the effects of currency and maturity mismatch. Crisis can arise in a self-fulfilling manner as in bank runs and alternatively through self-fulfilling credit crunches and investment declines. Depending on the nature of the crisis, the role for international lending can take the form of involving a lender of last resort, or in loosening credit constraints. The analysis points out the limits to monetary and fiscal policy in preventing or rectifying crisis.

Chapters 2-4 are very useful reviews and extensions of the channels through which currency composition can matter. The analysis also points out that besides currency composition, other features of debt and the economy matter- namely, financial imperfections, the degree of openness of the economy, maturity structure of debt etc all matter.

The next step in the analysis is to understand why is it that countries have ended up issuing mainly foreign currency debt. Further, how is it that some countries do not have original sin, in the sense that their currency debt is widely held? Chapter 5 and 6 presents historical case studies of countries that have escaped OS. Chapter 5 focuses on the overseas regions of British settlement-the US, Canada, Australia, New-Zealand and South Africa. Chapter 6 focuses on continental Europe. The chapters contain valuable tables on debt issues and specie clauses for the different countries, with data going back to 1789. With the exception of the US, till well into the 20th century several countries that are now free of OS had debt denominated in foreign currency. The authors conclude that while domestic institutions matter to some extent, large external shocks like the two world wars that spurred domestic financial development played an important role. In continental Europe, a country's involvement in international trade and finance also mattered. They argue that there is a tremendous degree of path dependence with the legacy of commercial and financial factors mattering and given how widely held these currencies now are and the network externalities associated with it, there seems little room for an easy entry of current EM currencies. The country case studies contain very valuable information just as they point to how difficult it is to surmise why and how countries were able to move out of OS. Another conclusion that emerges is that while several of the currently developed countries had previously suffered from OS, it did not have the deleterious effects on the economy that some would argue OS now has on EM's.

The theoretical question of what explains why countries borrow as they do is taken up in Chapters 7 and 8. Chapter 7 explains currency composition on the basis of a lack of credibility of domestic monetary policy. Firms that are optimally hedging against the risk of defaulting on their debt can choose to issue dollar debt. Take the case of a fixed exchange rate regime where there is a positive probability of discrete devaluation. Foreign lenders lending in local currency will raise the ex ante interest rate in expectation of this probability of default. Consequently, as the credibility of the peg declines, the cost of borrowing in domestic currency rises. Dollar debt also is risky because if there is a large devaluation it will bankrupt the firm. There is a trade-off and it can be that firms will borrow optimally in foreign currency as the fixed pegs credibility declines because the interest cost of domestic currency debt is too high.

Chapter 8 presents another explanation. Assume that debt in domestic currency cannot be contracted at long maturities and at fixed rates. The absence of a domestic long-term market may then prevent the ability to borrow in local currency. The idea is that suppose there is a shock to the expected future exchange rate. The government can try to stabilize the interest rate or the exchange rate. If debt is dollarized and the government wants to prevent bankruptcy then it will stabilize the exchange rate. If it is local currency debt then it will try to stabilize the short term interest rate. This can give rise to self-fulfilling multiple equilibria. If a borrower expects all others to borrow in dollars (local currency) then he will find it optimal to borrow in dollars (local currency) given the expected response of the government, a response that is ex post fulfilled.

The chapters briefly point to other theoretical explanations for the currency composition of debt in the literature. What remains is to perform a horse race between the different theories. Chapter 9 performs this analysis, by regressing the original sin measures from chapter 1 on monetary, fiscal, institutional and other variables that capture the various theories. They find that a country group dummy is important and this is related to various measures of economic development. As regards to what explains the within country group variation, the authors conclude that country size as measured by log of total GDP, log of total domestic credit (valued in US dollars), log of total trade is the single most robust explanatory variable. Country size they argue might capture the economies of scale or network externalities that are important to having a vehicle currency.

There are clearly limits to what can be done in comparing different hypothesis using regression analysis. Firstly, since this is a country level analysis, the number of observations is small. The endogeneity issues are also very important. While this is dealt with to some extent it is not conclusive.

Chapter 10 then discusses the road to redemption for countries plagued by original sin. The solution presented involves the intervention of the international community to develop a debt market in a basket of developing country currencies.

I will now briefly discuss some potential concerns with the OS hypothesis and its analysis. Firstly, the currency composition of debt issued by EM's, is without a doubt an outcome of the international financial architecture just as it is of domestic policies and domestic institutions. The much harder question is what is the importance of the different explanations? The measures of OS in this book capture only the equilibrium outcome of the different factors. Secondly, it does not measure the extent of currency 'mismatch'. That is, countries differ significantly in the extent to which their revenues are denominated in a foreign currency. An example would be a commodity exporting country such as Venezuela that earns mainly oil revenue which is priced in dollars. The currency mismatch for such a country may not be as severe as a country that earns very little in terms of dollar income. This distinction is not captured in the different measures. In this sense these are not so much measures of OS, as it is simply a measure of the currency composition of borrowing by EM's.

A second set of issues relates to the negative repercussions of the currency composition on the macro economy. Even as an empirical fact this is unclear. As Chapters 1, 5 and 6 point out, OS is a global phenomenon. Several developed countries have mainly foreign currency debt. However, these economies have not suffered the negative effects of OS as developing countries have. This suggests that other domestic policies or institutions play a very important role, in which case, how much does currency composition matter?

The theoretical analysis of the negative consequences of currency mismatch is also incomplete. Chapters 2-4 present mechanisms through which investment and labor are affected. An aspect of the analysis that is missing is a mechanism through which the currency mismatch can impact the Solow residual. This is important since the large declines in output observed during crisis periods in EM's is almost always accompanied by a sharp decline in the Solow residual (Aguiar-Gopinath (2004)), Chari et al (2004)). What is needed is a channel through which financial imperfections can affect productivity, or otherwise the role of currency composition in explaining quantitatively the output decline in EM crises is severely limited.

Overall, this book is an important read for anyone who is interested in the issues of capital flows to emerging markets. It presents an extremely valuable set of facts, both current and historical, on the currency composition of EM debt and puts forth an intriguing hypothesis to explain the facts. While there is still plenty of room to debate the hypothesis, the book successfully urges researchers to consider the deeper issues of currency composition of debt and to look beyond only domestic policies and institutions in search of a solution.

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