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A foreign currency effect in the syndicated loan market of emerging economies [☆]

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ABSTRACT

This paper documents and explains the empirical finding that syndicated loans denominated in a foreign currency are charged a lower loan spread relative to those denominated in the local currency in many emerging economies (henceforth referred to as the “foreign currency effect”). This finding is both economically and statistically significant, and remains even upon controlling for various fixed effects, the endogenous choice of currency, the adjustment of the forward exchange rate to the loan spreads, and lending relationships. We show that the foreign currency effect tends to be stronger when banks from advanced economies are lending in their home currency, loans are syndicated in more mature markets, the capital account openness of the borrower's country is lower, and financial institutions within the borrower's country are not well capitalized. In addition, the foreign currency effect was more pronounced during the financial crisis and its aftermath, likely a result from the spillover effect of accommodative monetary measures and higher counterparty risk. In terms of policy implication, although cheaper foreign currency syndicated loans allow corporations in emerging economies to access credit at a desirable cost, over-borrowing in foreign currency nonetheless increases the overall financial fragility of these countries.

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1. Introduction

Syndicated loans have become an increasingly important source of financing to borrowers in emerging economies. The market size is now comparable to corporate bond markets but much larger than stock markets (Nini, 2004; Sufi, 2007; Godlewski and Weill, 2008). In the third quarter of 2007, the market volume of syndicated lending reached the peak of \$150 billion in emerging economies (Chui et al., 2010).

A striking feature of emerging markets is the fact that foreign currency loans prevail in syndicated lending. Several empirical studies confirm that a substantially large fraction of syndicated loans are denominated in a foreign currency.¹ This naturally begs the research question at hand: what (if any) is the impact of currency denomination on loan pricing? More specifically, are foreign currency loans priced differently from local currency loans in emerging economies?

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¹ For instance, Brown et al. (2011) and Mora et al. (2013) document the large share of foreign currency borrowing in transition economies and Lebanon, respectively. According to the BIS Quarterly Review, in 2006 almost 80% of the syndicated loans issued in China were denominated in foreign currencies, mainly US dollars (Chui et al., 2010).

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In theory, when interest rate parity (IRP) holds, the debt yields are identical for assets that are similar in all respects except for the currency of denomination (Levich, 2013). If so, the currency in which a loan is denominated should not be material for loan pricing, otherwise arbitrage exists. Though IRP has long been a crucial assumption in the theory of international finance, the empirical evidence remains mixed. Early studies show few deviations from covered interest parity (CIP) (see Frenkel and Levich, 1975, 1977; Taylor, 1987). When certain frictions, such as taxes, capital control, and default risk, are accounted for, CIP often does not hold (Levi, 1977; Adler and Dumas, 1977; Dooley and Isard, 1980). Given that most of the abovementioned studies examine bond markets, papers on syndicated loans are rare. More importantly, currency denomination in practice could matter for loan pricing due to financial frictions or loan market-specific features, especially in the setting of emerging economies. And currency impact on loan pricing can become more salient during financial crisis and post-crisis periods due to heightened liquidity and counterparty risks.

In this study we collect a large sample of syndicated loans taken out by firms domiciled in 10 emerging economies from Thomson Reuters' Dealscan over the period from 1989 to 2015 in an effort to isolate the impact of currency denominations on loan pricing in emerging economies. In particular, in terms of the number of loans, 85.5% of the syndicated loans in our sample are denominated in a foreign currency and 84.8% are contracted in US dollars. By comparing the pricing of syndicated loans denominated in a foreign currency (FC) vis-à-vis the local currency (LC), we identify a "foreign currency effect" that FC syndicated loans on average enjoy lower loan spreads relative LC ones even after controlling for a large set of loan characteristics, year dummies, borrower industry dummies, and borrower country dummies. The baseline results confirm that currency denomination indeed matters for the cost of borrowing in syndicated lending.

To address the caveat of imperfect control of borrowers' risk in our baseline regression, as we lack data on firm characteristics, we perform robustness checks by adding various fixed effects to various specifications, including the interaction of the borrower country and year fixed effects (which capture borrower country-specific time-varying shocks), borrower fixed effects (which capture borrower-specific time-invariant factors), and the interaction of borrower and year fixed effects (which capture borrower-specific time-varying factors), following Giannetti and Laeven (2012a,b). Our results are robust throughout these alternative specifications.

In addition, the reliability of our results depends on the crucial assumption that the currency choice is exogenous. In reality the currency choice is likely to be determined endogenously. To correct for this, we follow Santos and Winton (2008) and adopt a two-stage procedure. In the first stage, we estimate the choice of currency (FC versus LC) using a probit model with the standard set of controls and a vector of macroeconomic variables that determine the choice of currency. In the second stage, we substitute the predicted value of the FC dummy into our loan spread regression. Our estimates are largely invariant.

Our results are remains robust upon using the absolute borrowing cost (measured by the absolute interest rates of the loans) instead of spreads over LIBOR. In addition, we adjust the loan spreads (interest rates) in various currencies into dollar-equivalent spreads (interest rates) using forward exchange rates. This adjustment ensures that cash flows from all currencies are converted into a comparable base. If CIP holds, the FC effect will vanish after the adjustment. We find that the dollar-equivalent spreads (interest rates) of FC loans remain significantly lower than those of LC loans.

Furthermore, lending relationships between firms and banks are also controlled. Upon dividing loans into first-time lending and relationship lending (meaning returning borrower), FC effect is evident in both groups without significant intergroup difference.

We hypothesize that the FC effect might be explained by factors such as advantage of lending in the home currency, the location of the syndication market, degree of capital control, and the quality of the local financial institutions. First, for banks from advanced economies that enjoyed abundant policy-driven liquidity post the financial crisis, lending in the same currency not only allows them to take advantage of cheap funding, but also reduces exchange rate risk. Therefore, we expect lending in the home currency for these advance-economy-based banks to enhance the FC effect. Second, syndicated loan markets in emerging economies are underdeveloped, but when borrowers enter foreign markets that are presumably more complete and suffer less from financial friction, the pricing differentials between FC loans and LC loans should be narrower. Hence, we expect a weaker FC effect when loans are syndicated in a more advanced foreign market. Third, we expect that a higher level of capital account openness mitigates the FC effect because it would be easier to arbitrage away the FC effect via the usage of forward contracts when CIP is robust. Last, the quality of local financial institutions may exert an impact on the loan pricing differentials. The banking literature suggests that thinly capitalized banks tend to extract rents. As a result, we expect to see lower spreads on LC loans in countries of higher bank capitalization and hence a weakened FC effect. Empirical findings are consistent with the above hypotheses.

Given that the international syndicated lending markets collapsed during the global financial crisis, we split our sample into two pre-crisis and crisis-and-aftermath sub-groups for estimation purposes. Empirical results suggest no evidence for the FC effect in the normal period prior to the crisis but significant effect during the crisis and its aftermath. This may reflect the global capital flow after the crisis, when advanced economies implemented an accommodative monetary policy involving several rounds of quantitative easing (QE). The low interest rates and ample funding of Western banks expanded to emerging economies and funded cheap FC loans, which minimized their exposure to exchange rate risk. This is also in line with the literature reporting that CIP failed in the crisis when counterparty risk was high and hence limited arbitrage led to deviations from CIP.

Our findings have policy implications. The low interest rate of FC loans reduces the cost of borrowing for local firms and hence has real effects on corporations and the real economy in emerging economies. In particular, borrowers may strategi-

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