



ELSEVIER

Contents lists available at SciVerse ScienceDirect

Journal of International Money and Finance

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



CrossMark

Combined use of foreign debt and currency derivatives under the threat of currency crises: The case of Latin American firms

Georgios Gatopoulos^{a,*,1}, Henri Loubergé^b

^a University of Geneva, HEC and Department of Economics, Uni Mail, 40 bd du Pont d'Arve, CH 1211 Geneva, Switzerland

^b University of Geneva, Department of Economics, GFRI and Swiss Finance Institute, Uni Mail, 40 bd du Pont d'Arve, CH 1211 Geneva, Switzerland

A B S T R A C T

JEL classifications:

F31

F49

G39

Keywords:

Foreign debt

Currency derivatives

Currency crises

We investigate the determinants of firms' use of foreign currency derivatives in emerging markets exposed to currency crises. We develop a model where a firm with international orientation chooses its optimal foreign debt and hedging ratio. In the context of highly volatile exchange rate periods in five Latin American countries, we calibrate the model on ADRs. We find theoretical and empirical evidence that country specific factors (i.e. aggregate exposure of a country to a crisis) explain significantly part of our firms' foreign debt and hedging policy, as opposed to literature on firms in developed markets. We claim that derivative markets have been effective tools for firms in these countries, at least in the post-crisis era.

© 2013 Elsevier Ltd. All rights reserved.

1. Introduction

This work examines how and why foreign currency derivatives are used by large non-financial corporations which are both based in emerging markets and cross-listed in foreign developed markets. In

* Corresponding author. Present address: IMF Resident Representative Office in Greece, 3 Amerikis Street, 10250 Athens, Greece. Tel.: +30 210 320 5203; fax: +30 210 320 5424.

E-mail addresses: ggatopoulos@imf.org (G. Gatopoulos), Henri.Louberge@unige.ch (H. Loubergé).

URL: <http://www.unige.ch/ses/dsec/staff/faculty/Louberge-Henri.html>

¹ The largest share of this project has been completed while the author was pursuing his PhD at the University of Geneva. It is thus unrelated to his work for the IMF and the views expressed are exclusively those of the author.

general, firms use financial derivatives for hedging and speculative purposes. This should not be different in emerging markets. But firms based in these markets are attractive to investigate for two reasons at least. Firstly, the domestic currencies exhibit highly positive currency risk premia, with an impact on the cost of foreign exchange operations. Secondly, it is well-known that these firms use important proportions of foreign currency debt to finance their operations, with obvious implications on their decision to use currency derivatives for hedging and speculative purposes. These characteristics motivate our research. Given their fundamental choice to use foreign debt for their operations, and taking into account a framework where both firm and country specific variables can have a strong impact on results, how do firms in emerging markets use currency derivatives? Do they ignore these instruments? Do they use them steadily or selectively? And, in this latter case, what elements influence the decisions?

To approach these questions, we first develop a theoretical model where a firm with international orientation chooses its optimal foreign debt and currency derivatives ratios sequentially. We link the first optimal choice to a long-term horizon and the second optimal choice to short-term motivations. This approach is in line with the observed average maturities of products available in the two markets. We consider that, apart from firm specific factors frequently invoked by the theory of hedging as it applies to developed markets, there are country specific factors such as the currency risk premia that will have an impact on firms' decisions when emerging economies are considered. The impact may be different when long-term financing needs are addressed and when short-term hedging and speculative motivations are taken into account. The model predicts that foreign debt will be used, instead of domestic debt, as well for long-term speculation, as for long-term hedging purposes. Currency derivatives will be used for adjusting the firms' long-term optimal exposure to short-term conditions. They will not be used for short-term speculation or short term hedging per se (independently of the long-term net exposure). It appears also that country-specific variables, such as the currency risk premia observed in the long-term and short-term segments of the financial market, will probably have an impact on the decisions. These predictions are tested using data from five Latin American countries during the turbulent period 2000–2002. This short time span encompasses three major currency crises and allows us to draw conclusions about the usefulness of foreign currency derivative markets for firms operating in such a volatile environment.²

There is extensive literature about why do firms use financial instruments for hedging.³ Among the benefits of using derivative contracts at a firm's level, one may emphasize the following: they permit firms to achieve payoffs they could otherwise attain only at a higher cost; they minimize accounting earnings volatility; and under certain conditions may increase firm value.⁴ More precisely, financial theory indicates that risk management increases firm value when there exist capital market imperfections. Examples can be bankruptcy costs and convex tax schedules as in [Smith and Stulz \(1985\)](#), underinvestment as in [Bessembinder \(1991\)](#) and [Froot et al. \(1993\)](#), either underinvestment or overinvestment as in [Morellec and Smith \(2002\)](#), agency conflicts as in [Brown \(2001\)](#), or managerial compensation as in [DeMarzo and Duffie \(1995\)](#). The intuition behind creation of firm value is that financial risk management can increase shareholder value when capital market imperfections provoke deadweight costs borne by shareholders. Additional theoretical motivations for hedging are presented by [Mello and Parsons \(2000\)](#) who evoke a liquidity impact on the hedging decision and [Fehle and Tsyplov \(2005\)](#) and [Purnanandam \(2008\)](#) who link optimal hedging to proxies of financial distress, such as leverage.

Most empirical studies about the motivations to use financial instruments focus on U.S. non-financial firms. They reveal that hedging is a primary motivation and they find out that it is

² Section 3 describes three depreciation episodes greater than 25% on a semestrial basis, in particular the currency crises in Argentina (end of 2001), Brazil (summer of 2002) and Venezuela (end of 2002).

³ We define as hedging the acquisition of financial assets that reduce the variability of firms' payoffs. Admittedly, a measure related to downside risk could be more appropriate for foreign exchange hedging. The variance in such case would be replaced by the VaR. However, evidence shows that Mean-VaR models do not unambiguously improve on mean-variance models for portfolio selection ([Alexander and Baptista, 2002](#)). In addition, firms in our sample use mainly forward and swap contracts, instead of options, and the former instruments have an impact on variability, not specifically on the likelihood of lower-tail outcomes.

⁴ For an illustrative review of the benefits of using these tools, see [Stulz \(2004\)](#). [Graham and Rogers \(2002\)](#) relate the use with tax incentives, [Allayannis and Weston \(2001\)](#) and [Bartram et al. \(2004\)](#), with firm performance.

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات