J. of Multi. Fin. Manag. 39 (2017) 39–59

Contents lists available at ScienceDirect

Journal of Multinational Financial Management

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

Multinationals and the impact of corruption on financial derivatives use and firm value: Evidence from East Asia

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ARTICLE INFO

Article history:
Received 14 September 2016
Accepted 12 February 2017
Available online 15 February 2017

JEL classifications:
G30
D21
G32

Keywords:
Derivatives use
Firm value
MNCs
Corruption
Financial crisis

ABSTRACT

This paper scrutinizes the value effect of financial derivatives on domestic firms, domestic Multinational Corporations (MNCs), and foreign affiliates of foreign MNCs from different aspects of an environment of corruption in both home and host countries by using a novel and hand-collected data set. Our sample includes 881 non-financial firms across eight countries in East Asia from 2003 to 2013. Using Tobin's Q as a proxy for firm value, we find that low corruption levels induce the use of derivatives, and reward domestic firms and domestic MNCs with higher value; this finding holds after controlling for endogeneity and self-selection bias. The hedging behavior of domestic MNCs outperforms domestic firms and foreign MNC affiliates in terms of firm value. Derivative use is a value-enhancing activity for domestic firms and domestic MNCs, but it has an insignificant effect on foreign MNC affiliates. During the 2007- 2008 financial crisis, the effect of low levels of corruption on alleviating negative impacts on derivatives use is very modest. Yet low corruption levels in the home country are positively associated with the hedging premiums of domestic firms and domestic MNCs in the post-crisis period.

1. Introduction

The Modigliani and Miller (1958) theorem with perfect capital markets shows that risk management is irrelevant to firm value; hedging with derivatives thus does not add value to a firm. However, numerous studies (e.g., Nance et al., 1993; Froot et al., 1993; Smith and Stulz, 1985; Mayers and Smith, 1990; Mayers and Smith, 1982; Bessembinder, 1991) suggest that the use of derivatives can serve as a value-increasing strategy for a firm by reducing costs brought about by market imperfections. Many empirical studies in this area have focused on the relation between derivatives use and firm characteristics to investigate hedging theory and explain why firms use derivatives. Only recently there has been another strand of research exploring the impact of derivatives use on firm value.

Most of these studies have concentrated on unconditional effects of derivatives use on firm value (e.g., Allayannis and Weston, 2001; Guay and Kothari, 2003; Bartram et al., 2011). A few recent researchers have developed tests to investigate value implications of derivatives use conditional on corporate governance or agency problems (e.g., Fauver and Naranjo,

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http://dx.doi.org/10.1016/j.mulfin.2017.02.001
1042-444X/

2010; Allayannis et al., 2012). However, the existing literature provides inconsistent views about the effect of derivatives use on firm value. Therefore, the value effects of derivatives use remain an open question.

Filling this gap in the literature, we explore the unique value effect of derivatives use for a sample of 881 non-financial firms in eight East Asian countries over the period 2003–2013 with a new hand-collected dataset for derivatives use. We make the following contributions:

First, we focus on the value implication of derivatives use under the influence of an environment of corruption. Extant studies address the drivers of value implication, focusing on the structural characteristics of firm-specific resources and capabilities. However, all firms are embedded in institutional environments, i.e., the "rules of the game" (North, 1990, 1994). A key factor in such environments is corruption. Despite the efforts of government, non-governmental, and multilateral institutions to reduce corruption levels, corruption is a widespread phenomenon worldwide, – which induces firms to engage in non-market strategies (Doh et al., 2012) such as bribery (Beets, 2005). In East Asian countries, corruption is a serious problem. In 2013, 64 percent of these countries scored below 50 out of 100 in perceived levels of public corruption.[1] Also, while a great number of studies examine the correlation between corruption and economic growth, the effects of corruption on the value effect of derivatives use are little known.

Theoretically, corruption on the one hand can act as a "grabbing hand" by increasing uncertainty and transaction costs (e.g., Bardhan, 1997; Quazi, 2014), which impedes firms' operations. On the other hand, corruption acts as a "helping hand" by greasing the wheels of commerce and raising economic growth in the presence of weak legal and regulatory frameworks (Bardhan, 1997; Houston, 2007), which should improve firms' performance. These contradictory effects may derive from the varying degree of ambiguity associated with corrupt transactions in different countries (Petrou, 2014). Thus, without directly taking into account a corrupt environment, it would be difficult to determine whether the use of derivatives is a value-enhancing activity. Undertaking this research, we raise important questions that have received little or no attention: How does corruption influence the value effect of derivatives use? In light of a corrupt environment, does the use of derivative increase firm value?

Second, over the past two decades, scholars have examined and provided important insights into the effects of derivatives use on the value of non-financial firms. Yet important questions remain: In what type of firm is the effect greater (or less), and what factors determine this difference? In this study, we shed new light on this gap by examining how the value effects of derivatives use may vary across foreign-owned firms (i.e., foreign MNC affiliates) and domestic-owned firms in light of an environment of corruption. We break down the subset of domestic-owned firms into domestic firms and multinational corporations (henceforth MNCs). Although research in international business (IB) has long recognized that by virtue of multinationality, MNCs have distinctive advantages in business operations vis-à-vis domestic firms (e.g., Hymer, 1976; Castellani and Zanfei, 2006; Allayannis and Weston, 2001), neither IB nor finance researchers provide a comprehensive analysis of whether the use of financial derivatives rewards MNCs with higher value than domestic firms.

On the other hand, according to Castellani and Zanfei (2006), foreign affiliates of an MNC are firms with parent companies abroad, while domestic MNCs are either headquarters or national affiliates. This implies that advantages and costs incurred by domestic MNCs and foreign MNC affiliates derive primarily from their different origins. In particular, in a given country, foreign MNC affiliates might be in a better position than local counterparts due to ownership advantages such as their parent companies' expansive financial resources, access to equity and capital markets, or knowledge-based capabilities (Chang et al., 2013; Nguyen and Rugman, 2015). However, there also exists well-supported empirical evidence that foreign MNC affiliates tend to be at a disadvantage compared to their local counterparts, as they often suffer from various costs of doing business abroad owing to "liability of foreignness"[2]; (e.g., Hymer, 1976; Zaheer, 2002; Castellani and Zanfei, 2006; Higón and Antolín, 2012). As foreign MNC affiliates' advantages may or may not offset those costs, it remains unknown whether, under the influence of corruption, foreign affiliates with derivatives activities are more valuable than domestic counterparts.

Third, we investigate how the value implication of derivatives use in a corrupt environment differed across domestic firms, domestic MNCs, and foreign MNC affiliates when they faced exogenous shocks brought about by the global financial crisis of 2007–2008. The crisis caused severe harms to the world economy, and increased volatility, but the magnitude of the effects of the crisis was different across various countries and firms. Although there are numerous studies on its effects, little has been done to analyze its impacts on derivatives use. We thus chose the period 2003–2013, which provides a natural experiment of financial risks and risk management, to examine the relationship dynamic between derivatives use and firm value before, during, and after the crisis. Our study does not merely investigate consequences of the global financial crisis for the value implication of derivatives use, but also concentrates on the role of corruption levels in mitigating adverse consequences.

The main findings of our study are as follows. Results of OLS estimation, after controlling for endogeneity and self-selection bias, consistently reveal that low corruption levels induce the use of financial derivatives and reward domestic firms and domestic MNCs with higher value. In particular, derivatives use is a value-enhancing activity for domestic firms

[1] Transparency International, 2013, Corruption Perception Index (CPI) is issued by the Transparency International. This index is inversely ranked from 0 to 100, where a higher number indicates a lower level of corruption.

[2] Liability of foreignness in a host country are defined as "all additional costs a firm operating in a market overseas incurs that a local firm would not incur" (Zaheer, 1995, p. 343). These costs are directly related to institutional distance and foreign affiliates' weak links to the local institutional setting (Zaheer, 2002; Bell et al., 2012; Higón and Antolín, 2012).