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Banking liberalization and firms' debt structure: International evidence

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ABSTRACT

This paper analyzes the effect of banking liberalization on debt structure in a sample of firms in 37 developed and developing countries. Banking liberalization increases on average debt availability and reduces its maturity. Debt availability increases in countries with stronger supervision and lower protection of creditor and property rights. The reduction in debt maturity is greater in developed countries. The effect of banking liberalization also varies across firm size. Small firms in developed countries and large firms in developing countries benefit least from banking liberalization.

1. Introduction

The progressive liberalization of financial activity over the last two decades has attracted the attention of the financial literature. Its advocates emphasize the positive effects it has on economic growth by increasing credit availability and improving investment allocation (Bekaert, Harvey, & Lundblad, 2005; Galindo, Schiantarelli, & Weis, 2007; Gehringer, 2013). Its opponents highlight that financial liberalization increases risks and, therefore, financial fragility (Kaminsky & Reinhart, 1999). The current financial crisis makes it especially relevant to gain a better understanding of the benefits and costs associated with financial liberalization. This paper offers new empirical evidence on the potential benefits of banking liberalization on the credit channel. We focus on how banking liberalization modifies firms' debt structure (availability and maturity) and on how bank supervision, investor protection, and firm size shape the influence of banking liberalization and give rise to differences between developed and developing countries.

The theoretical and empirical literature on financial liberalization does not provide unambiguous predictions and results. The empirical evidence, moreover, has focused on different aspects of financial liberalization in developing countries.[2] Empirical literature focuses on developing countries because financial liberalization can help develop the domestic financial system in these

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[2] Basically, there have been three aspects of financial liberalization that have attracted interest: the effects of capital account openness (see Eichengreen, 2001 for a survey), equity market liberalization (see, for example, Bekaert, Harvey & Lundblad, 2001, 2005, 2006), and banking liberalization (Laeven, 2003).

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countries and facilitate the access of firms to mature financial markets. These benefits would be lower in developed countries (Schmukler & Vesperoni, 2006).

However, there are also theoretical reasons for expecting a more negative effect of banking liberalization in developing countries and different effects on long and short-term debt. The literature on banking competition suggests that the influence of banking liberalization on firms' access to credit through changes in market competition critically depends on the relevance of informational asymmetries. In perfect credit markets, higher competition increases the amount of credit and reduces its cost (Klein, 1971). However, models that incorporate asymmetric information between lenders and borrowers show that increases in credit market competition reduce lending (Petersen & Rajan, 1994, 1995). This is because, in markets with asymmetric information, increased competition reduces the benefits for banks of holding close lending relationships with their borrowers thus reducing the ability of relationship banking to facilitate firms' access to debt.

The Law and Finance literature provides substantial empirical evidence indicating that financial development helps firms to grow faster by supplying more external funds and that a country's financial development is related to its legal and institutional framework (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1997, 1998; Levine, 1997; Rajan & Zingales, 1998). Poor institutions and information disclosure characterize developing countries and may increase the intensity of information asymmetries (Claessens & Laeven, 2003; Levine, Loayza, & Beck, 2000). The presence of higher informational asymmetries in developing countries may mean that banking liberalization has more negative consequences on credit access for these countries because lending relationships are destroyed. Moreover, the literature on capital structure suggests that informational asymmetries are more relevant in long-term than in short-term debt and in small than in large firms (Fama & French, 2002; Flannery & Rangan, 2006; Frank & Goyal, 2003; Gaud, Jani, Hoesli, & Bender, 2005; Rajan & Zingales, 1995).

Combining the above three strands of literature, we analyze if banking liberalization affects short and long-term debt differently, and how countries' supervision, investor protection, and firm size motivate different effects between developed and developing countries. We use an international panel database of a maximum of 9,822 firms in 37 developing and developed countries over the 1995–2004 period.

Our paper makes several contributions. First, we analyze the effect of banking liberalization not only on debt availability but also on its maturity. As problems of moral hazard and adverse selection are specially relevant in long-term debt, we can expect a more negative or less positive impact of banking liberalization on long-term debt. Schmukler and Vesperoni (2006) have analyzed effects both on debt availability and maturity. However, they analyze seven emerging countries and use measures of stock market liberalization and financial globalization but do not focus on banking liberalization.

Second, we analyze the interaction of banking liberalization with official and private bank supervision, and with investor protection in a country. International institutions, such as the Bank for International Settlements, the International Monetary Fund, and the World Bank, are encouraging countries to strengthen both official and private bank supervision. These recommendations are frequently discussed in the context of increasing bank stability but, as far as we know, there are no studies analyzing the effects of the interaction between banking liberalization and supervisory policy on the credit supply.

The literature on firms' capital structure has used international databases to analyze the influence of investor protection and institutions. Empirical studies show that better protection of creditors increases both the availability and maturity of firms' debt by reducing the adverse selection and moral hazard problems of debt (Antoniou, Guney, & Paudyal, 2008; Bae & Goyal, 2009; Demirgüç-Kunt & Maksimovic, 1999; Giannetti, 2003; Levine, 1999). Stronger protection of property rights, however, favors increased use of equity over debt (González & González, 2008; Jiraporn, Kim, Kim, & Kitsabunnarat, 2012). As equity is subject to more problems of adverse selection and moral hazard than debt, better protection of rights encourages the issue of equity and is, therefore, negatively related to firm leverage. To our knowledge, previous papers do not analyze how the protection of property and creditor rights modifies the effects of banking liberalization on firms' debt structure and explains potential differences between developed and developing countries.

Third, we analyze if banking liberalization affects small and large firms differently depending on a country's development. If informational asymmetries are relevant for explaining the effects of banking liberalization on firms' debt structure, the greater informational asymmetries in small firms may lead to different results depending on firm size. Empirical evidence reports mixed results depending on a country's development. Laeven (2003) finds, in firms from 13 developing countries, that financial liberalization relaxes external financing constraints for small firms but increases them for large firms. Petersen and Rajan (1994, 1995) and Zarutskie (2006) suggest the opposite for US firms. They find that more competition among creditors damages availability of debt for small and young firms. We use our international database of developed and developing countries to analyze if a country's development shapes the differential effect of banking liberalization between small and large firms.

Finally, we account for dynamic processes in firm leverage using the generalized-method-of-moments (GMM) estimators developed by Arellano and Bond (1991) for dynamic panel data. GMM models are designed to handle autoregressive properties in the dependent variable (firm leverage) and control for the endogeneity of the explanatory variables and unobserved firm-specific characteristics. We also include country, industry, and time dummies to prevent the coefficients of supervisory and institutional variables from being biased by incorporating confusing effects of other omitted country variables. Galindo et al. (2007) use the GMM method to analyze the effect of financial liberalization on investment efficiency but, to our knowledge, this has not been used to analyze the effect on the credit channel.

In a closely related paper, Agca, De Nicoló, and Detragiache (2008) assess the impact of both financial globalization and credit market deregulation on corporate leverage. They examine data from a large panel of publicly-traded non-financial firms in 38 countries over the period 1994–2002 and find that credit market globalization results in higher leverage, particularly in emerging markets. In contrast, they find that deregulation in domestic credit markets brings about a decline in leverage in emerging market