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Financial liberalization and bank risk-taking: International evidence

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ABSTRACT

This paper analyzes the channels through which financial liberalization affects bank risk-taking in an international sample of 4333 banks in 83 countries. Our results indicate that financial liberalization increases bank risk-taking in both developed and developing countries but through different channels. Financial liberalization promotes stronger bank competition that increases risk-taking incentives in developed countries, whereas in developing countries it increases bank risk by expanding opportunities to take risk. Capital requirements help reduce the negative impact of financial liberalization on financial stability in both developed and developing countries. However, official supervision and financial transparency are only effective in developing countries.

1. Introduction

The literature on financial liberalization and growth generally concludes that liberalization strengthens financial development and contributes to higher long-run growth (Henry, 2000; Bekaert et al., 2005).[1] But the main debate on financial liberalization focuses on its potential negative effects on financial stability. Financial liberalization has been considered one of the main causes of the increased frequency and intensity of banking crises over the last three decades (Demirgüç-Kunt and Detragiache, 1999; Kaminsky and Reinhart, 1999).

However, the precise channels through which financial liberalization affects bank stability are not well understood empirically and, to our knowledge, there is no direct evidence on the channels through which financial liberalization may affect financial stability. Moreover, empirical evidence on the effects of financial liberalization on financial stability is inconclusive for several reasons. First, although most theoretical studies explain a potential negative influence of financial liberalization on stability through increases in bank competition, there is a current debate on the empirical relation between bank competition and financial stability (Berger et al., 2009). The traditional "competition-fragility" view suggests that higher bank competition following liberalization erodes banks' charter value and reduces their incentives to behave prudently (Keeley, 1990; Hellmann et al., 2000; Repullo, 2004). However, the traditional positive association between competition and financial fragility has recently been challenged by a "competition-stability view". Under this view, more bank competition may reduce bank risk if banks charge lower interest rates to borrowers and diminish their incentives to shift into riskier projects (Boyd and De Nicolò, 2005). According to this view, increases in bank competition would be a channel through which liberalization may even increase financial stability.

Second, financial liberalization might affect financial stability through different channels apart from changes in bank competition. For instance, financial liberalization may encourage bank risk-taking by expanding opportunities to take risk in foreign markets or in non-traditional activities. So, even if competition and banks' incentives to take risk do not change, banks might take greater risks by getting involved in new activities (Barth et al., 2004).

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[1] This positive effect is caused through both an improvement in capital allocation and an increase in the quantity of resources mobilized by improving risk-sharing. A positive effect on growth is found for both stock market liberalization and bank industry deregulation. Mixed results only are found by research focusing on capital account openness (see Eichengreen, 2001 for a survey).

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Third, differences in bank regulation, supervision, and institutions across countries may affect potential changes in bank competition or the ease of taking higher risks following financial liberalization. These differences across countries may affect not only the relative importance of each channel but also the final impact of financial liberalization on bank stability, leading to cross-country heterogeneity. Beck et al. (2013) document a large cross-country variation in the relationship between bank competition and bank stability. However, to our knowledge, there are no studies analyzing the channels through which financial liberalization affects financial stability or cross-country heterogeneity regarding the relative importance of each channel depending on legal and institutional characteristics.

We aim to throw some light on these aspects, and specifically address three main questions in our empirical analysis: (i) the importance of changes in bank competition versus other channels for explaining the effect of financial liberalization on bank risk-taking; (ii) the relevance of institutions and development in the country for determining the relative importance of changes in competition as the channel through which financial liberalization affects bank risk; and (iii) the effectiveness of capital requirements, official supervision, and accounting transparency for counteracting bank risk-taking promoted by financial liberalization. We use an international sample of a maximum of 4333 banks from 83 developed and developing countries over 1991–2007 and a comprehensive dataset of proxies for financial liberalization.

We make several contributions. First, we separate the effects of financial liberalization on bank risk through changes in bank competition from those taking place through other alternative channels. We focus on changes in bank competition and do not specifically analyze empirically what the alternative channels are. We refer to them in general terms as the expansion of opportunities to take risk.

An empirical test of bank competition as a channel through which financial liberalization affects bank risk would require considering bank competition as an explanatory variable of bank risk while controlling for its potential endogeneity and dependence on financial liberalization. To the best of our knowledge, previous studies do not control for the simultaneous impact of financial liberalization on both bank competition and risk. We estimate a model of two simultaneous equations where bank competition and risk are the dependent variables, and financial liberalization is an explanatory variable in both equations. This procedure allows us to control for simultaneity and reverse causality between bank competition and risk, their potential endogeneity, and a potential joint influence of financial liberalization on both variables. Moreover, we control for the potential endogeneity of financial liberalization and apply the generalized-method-of-moments (GMM) dynamic panel estimators in each stage of the simultaneous equations model. The GMM estimators allow us to control for the endogeneity of the bank-level variables, bank omitted variables, and to account for dynamic processes in our dependent variables.

Second, we analyze how the effect of financial liberalization and the channel through which it operates may differ across countries depending on their economic development and institutional quality. Because a better institutional environment favors well-functioning markets and strengthens market discipline, the effect of financial liberalization on bank risk might be smaller under these conditions. Demirgüç-Kunt and Detragiache (1999) provide consistent evidence in a sample of 53 countries. However, they do not analyze the relative importance of channels affecting bank stability across countries. Distinguishing the channels through which financial liberalization influences bank risk may also be an important issue. For instance, if good-quality institutions are necessary to promote banking competition, they might also increase the importance of this channel in developed countries.

Third, we analyze the effectiveness of capital regulation, official supervision, and accounting transparency as instruments for controlling bank risk-taking following financial liberalization. Moreover, we analyze if the effectiveness of these mechanisms depends on the channel through which financial liberalization influences bank stability. Since Basel II, regulators and international institutions, such as the Bank for International Settlements, the International Monetary Fund, and the World Bank, highlight the importance of capital regulation, bank supervision, and market discipline as tools for increasing bank stability. The current financial crisis has reactivated the debate about the design of these instruments in a scenario of increasing coordination among countries. As far as we know, there are no studies analyzing how the effectiveness of these instruments for counteracting bank risk associated with financial liberalization varies across countries. Such knowledge might provide guidelines for future international regulation, with policy implications, in terms of cross-country heterogeneity, for optimal, coordinated international bank regulation.

Finally, we analyze more countries and use more extensive datasets on financial liberalization than previous studies. We analyze a sample of a maximum of 4333 banks in 83 countries over 1991–2007, compared to 53 countries in Demirgüç-Kunt and Detragiache (1999) and 20 countries in Kaminsky and Reinhart (1999), and compared to studies that only consider developing countries (Díaz-Alejandro, 1985; Prasad et al., 2003), or focus on a specific developed country (Stiroh and Strahan, 2003; Bertrand et al., 2007). We can thus provide information on a greater range of institutional differences to give us a deeper understanding on how the effect of financial liberalization on bank stability depends on legal, supervisory, and institutional variables. Moreover, a limitation in empirical studies on financial liberalization has been the lack of a comprehensive dataset documenting actual policy changes (Abiad et al., 2008). We check the robustness of the results using three comprehensive data sets on financial liberalization: the index of financial reforms constructed by Abiad et al. (2008), the index of financial freedom published by the Heritage Foundation, and the capital account openness index developed by Chinn and Ito (2008). All these measures vary annually. We close our analysis before the onset of the global financial crisis in 2007 in order to consider whether financial liberalization in previous years contributed to the current financial crisis. Moreover, proxies for financial liberalization during the global financial crisis might entail more problems of endogeneity and capture better the intervention policies adopted to solve and contain the crisis than an exogenous measure of financial liberalization. In the robustness section we analyze the extension of the analysis period up to 2011 to include the recent global financial crisis.

Our results indicate that financial liberalization increases bank risk-taking in both developed and developing countries. However, financial liberalization influences bank risk through different channels in both groups of countries. Increased bank competition is the main channel in developed countries, but we do not find increases in bank risk associated with increased bank competition in developing countries. It is the expansion of bank opportunities for taking risks, rather than increases in competition, that explains the positive relation between financial liberalization and bank risk in developing countries.

Our findings also indicate a different effectiveness of capital regulation, official supervision, and financial transparency for limiting bank risk-taking across countries. Capital requirements have helped reduce the negative impact of financial liberalization in both developed and developing countries. However, official supervision and financial transparency have been effective in developing,