Available online at www.sciencedirect.com

Borsa İstanbul Review

Borsa İstanbul Review 15-2 (2015) 61–75
http://www.elsevier.com/journals/borsa-istanbul-review/2214-8450

Financial reforms, financial openness, and corporate debt maturity: International evidence☆

Şenay Ağca [a,*], Gianni De Nicolò [b,1], Enrica Detragiache [b,2]

[a] School of Business, George Washington University, 2201 G street NW, Funger Hall 505, Washington, DC 20052, USA
[b] International Monetary Fund, 700 19th Street, N.W., Washington, DC 20431, USA

Received 1 May 2014; revised 9 December 2014; accepted 9 December 2014
Available online 31 December 2014

Abstract

We study how credit market deregulation and financial openness have changed corporate debt maturity. The evidence comes from a large panel of publicly traded firms in 38 countries in the post 1994 period. Reforms are measured with a comprehensive index that tracks six separate dimensions. We find that these transformations have lengthened debt maturity in advanced economies as expected, suggesting that in these countries corporate credit markets have become deeper. In emerging economies, the picture is more mixed: more international openness has led to shorter debt maturity. The effects of financial sector reforms on debt maturity differ depending on the type of reform.

JEL classification: G15; G20; G32

Keywords: Corporate debt maturity; Financial reforms; Financial openness; International financial markets

1. Introduction

In the past two decades, the financial sector has undergone large transformations in most countries around the world. First, deregulation has increased the scope for financial markets in general and credit markets in particular to operate within each country. Second, increased international financial openness — in part the result of the dismantling of capital controls and in part the effect of technological innovations — has expanded firm financing options and increased competition among intermediaries. Have these transformation changed corporate borrowing? In this paper, we address this question using evidence from a large panel of non-financial firms in 38 countries in the past 1994 period. More specifically, we study how corporate debt maturity change as domestic credit markets are reformed and access to international markets improves.

The effect of financial reforms on debt maturity is an important question in corporate finance. As response to the financial reforms, banks can shorten the maturity of loans while lending in order to increase monitoring of firms or if the implemented reforms increase the risk in the bank portfolio. On the other hand, banks can extend longer maturity loans if banking sector became more efficient with the reforms in reaching corporations that demand longer maturity financing. Here, we focus on these questions. The literature suggests that financial developments have an impact on bank lending behavior. For example, Schmukler and Vesperoni (2006) look at financial liberalization; Benmelech and Dvir (2013) focuses on domestic financial distress; Elekdağ and Wu (2013)

☆ We would like to thank Tsung-Ta Chiang, Radu A. Paun and Mark Parrett for research assistance. The views expressed in this paper are those of the authors and do not necessarily represent those of the International Monetary Fund.
* Corresponding author. Tel.: +1 202 994 9209.
E-mail addresses: sagca@gwu.edu (Ş. Ağca), gdenicolo@imf.org (G. De Nicolò), edetragiache@imf.org (E. Detragiache).
Peer review under responsibility of Borsa İstanbul Anonim Sirketi.
[1] Tel.: +1 202 623 8200.
[2] Tel.: +1 202 623 6376.

http://dx.doi.org/10.1016/j.bir.2014.12.002

examine credit booms, Guillén, Rengifo and Ozsoz (2014) consider capital inflows, and Gunay, Gunay and Gunay (2013) analyze bank regulatory environment. In this paper, we mainly focus on details of domestic financial reforms and their effects on debt maturity.

To measure domestic financial reforms aimed at improving the functioning of domestic credit markets we use a new index constructed by Abiad, Detragiche and Tressel (2008), which tracks policy changes in several areas. This index permits us to disentangle the effects of specific reforms, such as those aimed at liberalizing interest rates, eliminating credit controls, improving bank competition, and others. To gauge progress in international financial openness we adopt a measure of *de facto* reliance on international credit markets, the stock of private sector debt liabilities to foreign residents (scaled by GDP). Kose, Prasad, Rogoff and Wei (2009) argues that *de facto* measures better capture financial openness than *de jure* measure of capital account liberalization.

In our empirical tests, debt maturity is regressed on reform indicators, financial openness, a set of firm-level characteristics suggested by corporate finance theory, macroeconomic control variables, and industry and time fixed effects.[3] Thus, we identify the effects of interest only based on within country, time-series variation, while cross-country differences in unobservable, time-invariant country characteristics do not bias the coefficients of our reform variables. Although our focus is on financial reforms and financial openness, a by-product of our analysis is detailed international evidence on the overall determinants of firms' debt maturity which, as stressed by Myers (2002), may be useful in further refining theories of debt maturity choices.

With regard to international financial openness, we find that the effects on debt maturity differ for firms in advanced and emerging countries: more openness is associated with a *lengthening* of debt maturity in advanced countries, but with a *shortening* of debt maturity in emerging economies. This result suggests that firms operating in countries where the financial infrastructure is less developed, and where short-term debt may be used more intensively as a disciplining device in the sense of Diamond (2004), may be able to access international credit markets primarily at short maturities. It is also possible that increased competition from foreign financial intermediaries and markets may lead domestic lenders to shorten debt maturity as existing relationship lending may be broken as arms-length finance becomes more prominent.

Turning to domestic credit market sector reforms, we find that these reforms resulted in longer debt maturity in advanced countries. In emerging economies, different types of domestic reforms affect debt maturity differently: bank privatization is associated with a decline in corporate debt maturity, policies to develop securities markets (including government bond markets) increase debt maturity, while other reforms have no significant effect.

The differential impact of openness and liberalization on the debt maturity of firms in advanced and emerging market countries also emerges when we distinguish between firms that are potentially financially constrained and firms that are not. The impact of financial reforms on debt maturity is not different for constrained and unconstrained firms in advanced economies. In emerging economies, on the other hand, bank entry and liberalization of interest rates reduce debt maturity mainly for constrained firms.

Our paper is complements Schmukler and Vesperoni (2006) (SV henceforth) and Ağca and Celasun (2012). While Ağca and Celasun (2012) look at the effect of banking reforms on bank loan spreads, SV study the impact of financial reforms on corporate borrowing using a sample of firms from seven emerging markets during the 1980–1998.[4] SV consider three reforms, each measured through a zero-one dummy variables: one for whether foreigners are allowed to invest in the local stock market (Bekaert and Harvey, 2000); one for the liberalization of the domestic financial sector, and one for the liberalization of controls on foreign capital flows (Kaminsky & Schmukler, 2003). Their main findings are that (i) liberalization does not have a significant impact on debt maturity of firms that actively access global markets; (ii) liberalization leads to shorter debt maturity in firms that do not access global markets (although the effect of foreign capital flows liberalization is not significant). The authors conclude that the effects of financial liberalization are asymmetric in emerging economies, since firms that are not able to integrate in world capital markets appear unable to obtain long-maturity debt.

In our analysis, we look at both advanced as well as emerging economies, by controlling for global trends and for changes in the macroeconomic environment, and utilizing comprehensive measures of financial reforms and financial openness. We also gauge the consistency of our findings by examining the impact of financial reforms and financial openness for financially constrained and unconstrained firms separately. We observe asymmetric effects of credit market reforms and financial openness in emerging and advanced economies.

The remainder of the paper is composed of five sections. Section 2 briefly reviews the literature. Section 3 describes the data, and the construction of our measures of domestic financial reforms and financial openness. Section 4 details the specification of the statistical model of debt maturity. Section 5 contains the results, and Section 6 concludes.

2. Literature review

The set of related studies that focused on debt maturity and its relationship with country characteristics have results that differ for different samples and time periods. Using data from the 1980s for a sample of 30 developed and developing countries, Demirgüç-Kunt and Maksimovic (1999) find that a

[3] See Korajczyk and Levy (2003) and Harkbarth, Miao and Morrellec (2006).

[4] SV look at both corporate leverage and debt maturity, whereas we focus on debt maturity.