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Corporate Debt Maturity in Developing Countries

Sources of Long- and Short-Termism

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Abstract

This paper documents to what extent firms from developing countries borrow short versus long term, using data on corporate bond and syndicated loan markets. Contrary to claims in the literature based on firm balance sheets, firms from developing countries borrow through bonds and syndicated loans at maturities similar to those obtained by developed country firms. The composition and use of financing matters. Firms from developing countries borrow shorter term in domestic bond markets, but the differences in international issuances (accounting for most of the proceeds) are significantly smaller. Developing country firms borrow longer term in syndicated loan markets, which they partially use for infrastructure projects. However, only large firms from developing countries (similar in size to those from developed ones) issue bonds and syndicated loans. The short-termism in developing countries is partly explained by a lower proportion of firms using these markets, with more firms relying on other shorter-term instruments.

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Corporate Debt Maturity in Developing Countries: Sources of Long- and Short-Termism

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1. Introduction

The perceived lack of long-term finance for firms in developing countries is a major concern for academics and policy makers (G20, 2013; Beck, 2016; World Bank, 2016). Long-term debt allows firms to pursue costly investments that take time to mature. Moreover, the relative short-term liability structure, or "short-termism," in corporate balance sheets can lead to costly financial crises if short-term debt becomes difficult to roll over.[1] However, little evidence exists on the actual maturity of firms' liabilities. Most of the empirical evidence is based on the so-called "short- and long-term debt" (below and above one year) gathered from firm-level balance sheet information. Using this type of evidence, studies find that the ratio of long-term debt (maturity greater than one year) to total liabilities is typically lower in developing countries than in developed ones (Mayer, 1990; Caprio and Demirgüç-Kunt, 1998; Demirgüç-Kunt and Maksimovic, 1999; Giannetti, 2003; Fan et al., 2012; Demirgüç-Kunt et al., 2015). Similar evidence has been shown using bank-level balance sheet data, which focuses on total bank credit granted to corporations, aggregated in broad maturity buckets (World Bank, 2016).

In this paper, we aim to complement this literature by examining with more granularity the maturity at which firms from developing countries borrow in primary debt markets, and by systematically analyzing where there might be significant differences in the debt maturity at issuance between developing and developed countries. Hence, we are able to assess the extent to which firms borrow at the short end (maturities closer to one year) vs. the long end (maturities closer to ten years or longer) of the maturity spectrum. Moreover, we analyze the debt issued by developing and developed country firms when using different instruments and market locations, when borrowing for different purposes, and when firms vary by size. We also contrast the evidence on maturity from primary debt markets with that from firm balance sheets.

[1] For a broader discussion on short-termism in developing countries including the sovereign sector, see Eichengreen and Hausmann (1999), Rodrik and Velasco (2000), Tirole (2003), Borensztein et al. (2005), Brunnermeier (2009), Jeanne (2009), Raddatz (2010), Broner et al. (2013), and Opazo et al. (2015), among others.

To conduct the analysis, we study corporate bond and syndicated loan markets, which have become key sources of new external finance for corporations in both developing and developed countries. These markets have rapidly expanded over the last decades, achieving a hefty size.[2] For instance, the annual amount of debt financing raised in these markets increased more than 6-fold from 1991 to 2014, when it reached $5.1 trillion or about 7 percent of world gross domestic product (GDP). We work with transaction-level data on publicly and privately placed corporate bonds and syndicated loans issued in both domestic and international markets during 1991-2014. Issuers of bonds and syndicated loans encompass both listed and unlisted firms domiciled in developed and developing countries. The data set includes 266,539 individual debt issuances conducted by 57,513 firms from 82 countries (39 developed and 43 developing).

Our analysis shows that, on aggregate, firms from developing countries raise capital through corporate bonds and syndicated loans at maturities slightly longer than those issued by firms from developed countries. In particular, the (value) weighted average maturity of the debt issued by firms from developing and developed countries is 7.3 and 6.2 years, respectively. In fact, the average maturity of debt at issuance is, if anything, shorter in countries with higher GDP per capita and higher private credit-to-GDP ratios. The differences in debt maturity at issuance between developed and developing countries become statistically insignificant once we control for industry-year effects. Developing countries with larger debt markets do not drive these patterns. In sum, contrary to what one might expect, firms from developing countries do not borrow shorter term in these markets.

The pattern in aggregate debt maturity across firms from developing and developed countries masks substantial differences in bond and syndicated loan markets, domestic and foreign markets, and

[2] The development of regulated secondary loan markets and independently rated loan issuances have made syndicated loan and corporate bond markets converge as two different, but complementary sources of financing for firms (Altunbas et al., 2010). Some studies estimate that syndicated loans account for roughly one-third of the total outstanding loans, and their relative importance has increased over time. Moreover, syndicated loans also tend to be larger than other types of loans (Godlewski and Weill, 2008; Ivashina and Scharfstein, 2010; Huang, 2010; Cerutti et al., 2015).

the use of proceeds. The maturities of bonds issued domestically in developing countries are, on average, 2.6 years shorter than those issued domestically in developed countries. However, domestic bond markets are less important in developing countries. Firms issue substantially larger amounts of bonds abroad, at significantly longer maturities, than in domestic markets. In fact, the differences in maturity between developing and developed countries are much smaller for international bond issuances (about 7 months shorter in developing countries). Furthermore, the maturities of syndicated loans issued by developing countries are, on average, 2.6 years longer than those in developed countries. Underlying this pattern, firms from developing countries borrow more heavily for infrastructure projects (project finance), which entail rather long maturities (more than 11 years on average). But even within syndicated loans for project financing (as well as for all other uses of proceeds), developing country firms issue loans that are about 6 months longer than those issued by developed country firms. The remaining differences in maturities come mostly from the use of domestic syndicated loan markets, which provide longer-term financing in developing countries, even after controlling for the use of proceeds, industry-year fixed effects, currency, and type of rate (fixed vs. floating). Syndicated loans issued internationally show similar maturities in developed and developing countries after controlling for those factors.

Importantly, the patterns mentioned above apply mostly to a select group of large corporations. In fact, developing country firms accessing bond and syndicated loan markets are of size similar to those from developed countries, even though smaller firms typically operate in developing countries (Hsieh and Klenow, 2014; Poschke, 2014; Bento and Restuccia, 2017). Among the bottom quantiles of the firm size distribution (FSD) of debt issuers (comprised largely of domestic issuers), firms from developing countries are even larger than those from developed ones. Moreover, the debt maturity patterns documented above hold across the FSD of debt issuers. That is, firms from developing countries access debt markets at maturities similar to (and sometimes even longer than)

those from developed ones across the entire FSD of debt issuers. Within country groups, the largest firms capture the bulk of the debt financing through both bonds and syndicated loans and typically borrow at longer terms than smaller corporations.

The short-termism in developing countries' debt observed in firm balance sheets is partly explained by a lower proportion of firms using bond and syndicated loan markets, which are longer term than other debt instruments not analyzed here. We arrive to this conclusion by matching the transaction-level data on bond and syndicated loan issuances with balance sheet data for publicly listed firms. Balance sheet data show that the median firm from developing countries holds a lower ratio of long-term debt to total liabilities than firms from developed countries (15 percent and 19 percent, respectively). However, when considering only firms that use bond or syndicated loan markets, the ratio of long-term debt to total liabilities goes up and becomes similar across developing and developed countries (30 and 31 percent, respectively). These patterns are consistent with the findings in this paper using transaction-level data, but contrast with the evidence in the existing literature based on balance sheets from firms (or banks) that argues that developing country firms borrow shorter term than developed country ones. Moreover, when focusing on firms that do not use bond or syndicated loan markets, the ratio of long-term debt to total liabilities drops to 12 and 14 percent for developing and developed countries, respectively. This indicates that other debt instruments (not explicitly analyzed here) are relatively shorter term. Additional evidence suggests that the ratio of listed firms using bond and syndicated loan markets to all listed firms correlates positively with the level of GDP per capita, reinforcing the idea that a greater proportion of firms from developing countries use these shorter-term instruments.

Overall, our results suggest that debt short-termism in developing countries is rooted in certain areas. One source is domestic bonds, which firms from developing countries issue at shorter maturity than firms from developed countries. Another one lies in more traditional bank loans or other types

of debt. These other debt instruments seem to be shorter term for both developing and developed countries, as reflected in the balance sheet evidence. Developing country firms appear to use these other markets more heavily. A third source can be smaller firms (outside of our sample) that might borrow shorter term than larger ones, to the extent that the patterns shown in this paper hold for them. Thus, the composition of instruments and firms matters when comparing the overall maturity structure across countries and when trying to understand its determinants.

Our findings are related to three other strands of the literature. First, this paper is related to recent research examining several debt instruments at once based on issuance data (as opposed to the vast number of papers focused on a single instrument). For example, a few studies analyze syndicated loan-bond substitutions during credit crises (Adrian et al., 2013; Becker and Ivashina, 2014; Cortina et al., 2016). By examining two widely used instruments across domestic and international markets, this paper provides new evidence on the firms' aggregate debt maturity that contrasts with the evidence based on firm or bank balance sheets. We are able to characterize where the long-term debt financing comes from for firms from developing countries. Moreover, by distinguishing the use of domestic versus international bond markets, we provide evidence suggesting that firms from developing countries might consider these markets as complements, using international bond markets for longer-term financing and domestic bond markets for shorter-term financing.

Second, several policy reports and academic papers discuss the perils associated with the recent debt expansion in emerging markets (Shin, 2013; Acharya et al., 2015; IMF, 2015; McCauley et al., 2015; Sobrun and Turner, 2015; The Economist, 2015, 2016). These studies argue that the rise in foreign currency debt has increased corporate vulnerability to the extent that debt burdens would get exacerbated in the event of capital flights or sudden currency depreciations. Moreover, part of the literature argues that a large proportion of the foreign borrowing by developing countries has been held in cash, implying an increase in risk taking by firms that use that cash to lend to other corporations

(Bruno and Shin, 2017). However, little attention has been devoted to the maturity structure of this new debt. We provide evidence that much of the corporate debt that developing countries raised recently is at the longer end of the maturity spectrum, possibly diminishing the risks associated with foreign currency financing. As benchmark, we use the borrowing patterns of firms from developed countries.

Third, another strand of the literature focuses on the firm-level determinants of debt maturity. Existing theories are based on underlying hypotheses of agency costs, asymmetric information, liquidation risks, and differentiated tax treatments.[3] In particular, to the extent that larger firms are relatively less opaque, size and maturity will be positively correlated. Our results are consistent with this prediction as they show that larger firms issue bonds and syndicated loans at longer maturities than smaller firms. Hence, should smaller firms gain access to debt markets in a certain country over time, the aggregate maturity structure of that country would naturally decline (Custodio et al., 2012).

The remainder of the paper is organized as follows. Section 2 describes the data. Section 3 examines differences in aggregate maturity by developed and developing country firms. Section 4 analyzes how compositional factors can affect the maturity of debt issued, focusing on where and which types of firms obtain long-term finance. Section 5 uses balance sheet information to compare the type of debt issued by publicly listed firms across countries. Section 6 concludes.

2. Data

To assess the debt maturity at issuance for firms from developing and developed countries, we assemble a comprehensive transaction-level data set covering capital raising activity in corporate bonds

[3] Myers (1977), Diamond (1991), and Rey and Stiglitz (1993) provide theoretical foundations on why firm-specific factors can influence the maturity structure of liabilities. Several papers provide evidence consistent with these theories for individual (mostly developed) countries. See, for example, Barclay and Smith (1995), Guedes and Opler (1996), Berger et al. (2005), and Highfield (2008).

and syndicated loans around the world from 1991 through 2014. Our data on firm debt issuances come from the Thomson Reuters Security Data Corporation (SDC) Platinum database (June 2015 version), which provides information on new issuances of publicly and privately placed bonds and syndicated loans with an original maturity of more than one year.[4] Given that the SDC Platinum database does not collect data on debt issuances with maturities shorter than one year, the data set does not cover commercial paper. We exclude all financial sector issuances and focus our analysis on financing to the non-financial sector. We also exclude all public sector issuances, comprising securities issued by national, local, and regional governments, government agencies, regional agencies, and multilateral organizations. The data set includes 57,513 (listed and unlisted) firms and 266,539 capital raising issuances: 105,734 bond issuances and 160,805 syndicated loan issuances.[5]

One source of variation in debt maturity studied in the paper is the market location, namely, domestic and international markets. For corporate bonds, we compare the market location in which bonds are issued to the issuing firm's nationality to classify the capital raising issuances as domestic or international. For offerings that take place simultaneously in more than one market, we consider tranches in each market as separate issuances. The data set includes 80,162 bond issuances in domestic markets and 25,572 bond issuances in international markets. For syndicated loans, we compare the nationality of the banks that participate in the deal with the issuing firm's nationality to distinguish between domestic or cross-border bank lending. Domestic loans are those in which only domestic banks participate in the syndication, whereas international loans entail the participation of at least one foreign bank.[6] The data set includes 77,712 domestic syndicated loans and 83,093 international syndicated loans.

[4] The data set does not include mortgage-backed securities or any other asset-backed securities.
[5] Unlisted firms issued about 45 and 36 percent of the bonds and syndicated loans, respectively, in the sample.
[6] For robustness, we consider two alternative definitions of international syndicated lending: when only foreign banks participate in the deal; or when more than half of the banks that participate in the deal are foreign. The results are qualitatively similar to the ones reported here.

To examine balance sheet data and the comparative use of debt markets across countries, we match the data set on security issuances from SDC Platinum with firm-level balance sheet information from the Bureau van Dijk's Orbis database from 2003 to 2011. The latter covers publicly listed companies, providing a rather homogeneous sample of firms. By omitting unlisted firms from the analysis using the matched data, the sample excludes firms that are (1) relatively small and sometimes informal, (2) likely to have different accounting standards, and (3) less likely to issue in capital markets. After matching the data sets, we are left with a sample of 56,615 listed firms with 77,458 debt issuances for this part of the analysis.

To study how firm size relates to the use of debt markets, we proxy firm size by the average size of its issuances over the entire sample period. For robustness, we explore two alternative measures of firm size. First, we examine the firms' total assets at the time of issuance, which is available in the SDC data set. However, this information has limited coverage: 48 percent of the corporate bond issuances and 34 percent of the syndicated loan issuances. Second, we restrict the analysis to listed firms and study the total assets reported in their balance sheets (from Bureau Van Dijk's Orbis database). The results are quantitatively and qualitatively similar to the ones reported in the paper.

We classify the sample of countries in the paper as either developing or developed, following the World Bank classification as of 2012. Developed countries are those with a gross national income (GNI) per capita in 2011 above $12,476. All other countries are classified as developing countries. The final data set comprises 82 countries, 39 of them are developed and 43 developing.[7] All reported statistics are in U.S. dollars at 2011 constant prices. Appendix Table 1 reports the number of issuances and issuers of corporate bonds and syndicated loans per country, splitting between developed and developing countries. The results are robust to two alternative definitions of developing countries.

[7] Strictly speaking, and as noted in Appendix Table 1, a couple of the countries we analyze are economies rather than self-standing countries. But for ease of exposition, we use the generic term "countries."

Specifically, we consider as developing countries those outside the G20 group of countries and non-OECD countries. The results in the paper also hold when excluding the two largest developing countries by population: China and India.

3. Cross-country Comparison of Debt Maturity at Issuance

The capital raising activity through corporate bonds and syndicated loans has rapidly expanded worldwide since the early 1990s. In developing countries, the total amount of debt issued in 2014 was about $0.5 trillion, 13 times larger than in 1991. In developed countries, there was about a 6-fold increase over the same period, with total issuance reaching about $4.6 trillion in 2014. Despite the rapid growth, these debt markets (measured by the total amount raised over GDP) remained smaller in developing countries (at 2.1 percent) than in developed countries (at 10 percent) in 2014.

Notwithstanding these differences in relative market size, the aggregate maturity at issuance in these primary debt markets is slightly longer in developing countries than in developed ones. In particular, the weighted average maturity of all bonds and syndicated loans issued per year by firms from developing countries is 7.3 years during 1991-2014 (Table 1). Surprisingly, the maturity for the debt issued by firms from developed countries is shorter, averaging 6.2 years over the same period. Debt issuances with maturity beyond 10 years capture 22 percent of the total in developing countries and 15 percent of the total in developed ones. Moreover, the weighted average maturity remains fairly stable over the sample period, especially during the 2000s, for both developing and developed countries (Figure 1).[8]

To assess whether these differences in debt maturity at issuance between developed and developing countries are statistically significant, we regress the maturity of bond and syndicated loan

[8] Cortina et al. (2016) show that the stability in overall debt maturity around the global financial crisis of 2008-09 can be traced back to firms actively switching from relatively shorter-term markets toward longer-term ones.

issuances on a dummy variable indicating whether the issuance is from a firm from a developing country. The results in Table 2 (columns a and b) show that firms from both sets of countries borrow debt at similar maturities after industry-year effects are considered. Moreover, countries with larger financial systems do not drive these debt maturity patterns. In fact, there is a negative correlation between the average debt maturity at issuance per country and both the ratio of GDP per capita and private credit to GDP (Figure 2, Panel A).[9]

4. Debt Composition and Maturity

Next, we examine whether the similarity in debt maturity between firms from developing and developed countries that issue corporate bonds and syndicated loans holds across several dimensions. In particular, we analyze if there is some compositional heterogeneity between developing and developed countries across types of debt instruments, use of proceeds, market location, and firm size.

4.1. Type of Instrument

Although the weighted average maturity of all debt issued by developing and developed countries is similar, the split between bonds and syndicated loans unveils significant differences in debt maturity across countries. Corporate bonds are on average shorter term in developing countries, whereas the opposite occurs for syndicated loans (Table 1). The weighted average maturity of bonds issued by firms from developing and developed countries is 7.9 years and 9.8 years, respectively, a difference of almost 2 years. In contrast, syndicated loans for firms from developing countries have an average maturity of 7.1 years, about 2.6 years longer than the average 4.5 years obtained by firms from developed countries.

[9] Appendix Figure 1 presents more detailed information on the weighted average maturity of debt at issuance per country during 1991-2014. It shows that there is no clear pattern of which types of countries issue longer-term debt.

The sectorial composition of issuing firms does not explain these differences in borrowing maturities between developing and developed countries. Whereas there are differences in the amount raised across firms from different sectors, corporate bonds issued by firms across all major sectors (but for construction) typically have shorter average maturities in developing countries than in developed ones (Figure 3, Panel A). An analogous pattern in the opposite direction holds for syndicated loan markets. That is, syndicated loans to firms from developing countries have longer average maturities than those to firms from developed countries across all major sectors (but for retail trade).

To formally test these differences across bonds and syndicated loans, we regress separately the maturity of bond and syndicated loan issuances on a developing country dummy, controlling in some specifications for time-varying industry-specific factors (Table 2, columns c-f). The estimated differences in maturity in bond and syndicated loan markets between developing and developed countries are large and significant. Differences across industries for issuing firms have little effect on the estimates. For example, the estimates indicate that debt issuances by firms from developing countries are around 2 years shorter in bond markets, but around 1.6 years longer in syndicated loan markets when compared to issuances by firms from developed countries. In line with these results, the negative correlation at the country level between the average debt maturity at issuance and both the level of GDP per capita and private credit to GDP becomes steeper when focusing only on syndicated loans, but turns positive when focusing on corporate bond issuances (Figure 2, Panels B and C).[10]

[10] In unreported results, we find very similar results when using other measures of financial market development, such as the level of private bond market capitalization to GDP.

4.2. Use of Proceeds

The transaction-level data on capital raising activity contain detailed information on the use of proceeds from syndicated loan issuances.[11] There is significant heterogeneity across countries in the amount raised for different purposes. Such a heterogeneity is arguably an important factor underlying the relatively longer maturity terms for syndicated loans from developing countries in comparison to those from developed countries.

Specifically, developing country firms use the proceeds from syndicated loans more intensively for project finance than firms from the developed world, about 35 percent of all syndicated loans contracted by developing countries versus about 5 percent of those by developed countries (Figure 3, Panel B). Importantly, syndicated loans for project finance, which consists primarily of infrastructure projects, have the longest average maturity (about 11 years) across syndicated loans for all types of purposes.[12]

Panel regressions on the transaction-level issuance data confirm the relevance of the differences in the use of proceeds for the maturity of syndicated loans. We regress the maturity of the issuances on four dummy variables that capture broad categories of how firms use the funds raised through syndicated loans: general corporate purposes, project finance, refinancing and capital structure management, and others. Acquisition financing and leveraged buyout operations is the omitted category, and thus the reference group in the estimations. The specification also includes industry-year dummies. The results, reported in column a of Table 3, are consistent with the summary statistics. They show that the maturity of syndicated loan issuances significantly varies across the types

[11] For corporate bond market issuances, the data on the use of proceeds is much less informative. More than 60 percent of the issuances are categorized as general corporate purposes. Nonetheless, the differences in maturity at issuance between developing and developed countries is consistent across bond issuances within a given use of proceeds. Bond issuances are typically shorter in the former than in the latter countries.

[12] In fact, most of the financing for infrastructure projects comes from syndicated loans. Engel et al. (2014) provide evidence that in the United States and other developed countries the ratio of bonds to syndicated loans for infrastructure financing is 1:5 and 1:6, respectively. The ratio in Asia (excluding China) is 1:8 and in Latin America 1:3.

of projects funded. Project finance is the one with the longest average maturity, even after controlling for industry-year effects. Project finance syndicated loans are almost 5 years longer than syndicated loans financing acquisitions and leveraged buyout operations. Nonetheless, firms from developing countries issue syndicated loans at longer maturities within any given use of proceeds (but for acquisition financing and leverage buyout or LBO) than firms from developed countries (Figure 3, Panel B).

We then evaluate the extent to which these differences in syndicated loan maturity across the different uses of proceeds explain the differences in aggregate maturity at issuance between developing and developed countries. To do so, we regress the maturity of syndicated loan issuances on a developing country dummy and dummies for the different use of proceeds raised, controlling for time-varying industry-specific effects. Because debt transactions contracted at floating rates might be more prominent for some types of countries and have different maturity terms than those contracted at fixed rates, we also include a floating rate dummy in some specifications. These regressions are estimated using either all syndicated loan issuances, only project finance syndicated loans, or only non-project finance syndicated loans. The results are reported in columns b-e of Table 3.

The estimated differences in syndicated loan maturities between developing and developed countries become smaller after controlling for the use of proceeds, about 6 months (down from 1.6 years). This result is not surprising to the extent that, as discussed earlier, there is more syndicated loan financing for project finance in developing countries than in developed ones. However, there are still significant differences in maturity not explained by the use of proceeds. In other words, even within syndicated loan issuances for project financing, the estimations show that developing country firms issue loans about 6 months longer than those issued by developed country firms. Similar differences in syndicated loan maturities are observed for non-project finance syndicated loans.

4.3. Market Location

In an era of globalization and market integration, the distinction between domestic and international debt markets is important. This is especially the case for firms from developing countries to the extent that international markets, which tend to be located in the world's most developed financial centers, might offer these firms access to financing that is not available domestically.

International markets account for a significant share of debt financing. They account for over 80 percent of the total amount raised in the median country in the sample.[13] International markets represent more than 50 percent of the total capital raising activity through bonds in 66 of the 82 countries analyzed (Figure 4).

International markets also play a key role in the provision of long-term bond financing for developing countries. Indeed, firms from developing countries issue bonds abroad at longer maturities than at home markets.[14] Bond issuances by firms from developing countries have an average maturity of 9.6 years when issued abroad, contrasting with an average maturity of 6.6 years when issued domestically. On the other hand, firms from developed countries issue domestic and international bonds at similar maturities.

These patterns suggest that the reported difference in the average maturity of bond financing between developing and developed countries comes, to a significant extent, from the capital raising activity in domestic bond markets. Figure 5 clearly displays this point. The cumulative distribution function (CDF) for international bonds issued by firms from developing countries lies to the right of the CDF for domestic bond issuances, indicating that shorter terms are obtained in local markets. Moreover, the distribution of international issuances by developing countries closely resembles the

[13] In aggregate terms, the total amount of debt issued abroad accounts for about 40 percent of the total amount raised by firms from both developing and developed countries. Most of the international debt issuances are conducted in a few developed countries. International bond issuances take place mostly in the Euro area (61 percent), the United States (16 percent), and the United Kingdom (8 percent).

[14] Consistent with this finding, Schmukler and Vesperoni (2006) show that firms in developing countries with access to international markets lengthen the maturity structure of their balance sheets during periods of financial liberalization.

CDF of bond issuances by developed countries, suggesting that capital is raised abroad at similar maturities.

To test whether the differences in the maturity between domestic and international bonds across countries are statistically significant, we regress the maturity of issuances on a developing country dummy. In an alternative specification, we also include a dummy variable indicating whether the bonds are issued in international markets and an interaction between the international market and the developing country dummies. All the specifications include industry-year fixed effects as well dummies for the use of proceeds. We also want to ensure that the finding that developing country firms issue abroad at relatively longer maturity does not simply reflect differences in other well-known factors. For instance, issuances abroad are typically denominated in foreign currency, and bonds denominated in hard currencies such as the U.S. dollar tend to have longer maturities. Hence, we include in the regressions a dummy for bond issuances denominated in foreign currency and another dummy for floating rate bonds.

Overall, the results reported in Table 4 show that firms from developing countries not only lengthen the maturity of their debt issuances by going abroad, but also do so relative to developed countries. The estimates show that bond issuances by firms from developing countries are about 2 years shorter than those by firms from developed countries when controlling for industry-year effects, use of proceeds, type of rate, and currency of denomination. Once the sample is restricted to international bond issuances, the differences in maturity at issuance decrease to about 7 months, implying a greater difference in bond maturity between developed and developing countries in local markets. Indeed, the estimations in column c of Table 4 show that domestic issuances by firms from developing countries are about 2.6 years shorter than domestic issuances by firms from developed countries (as captured by the developing country dummy). This specification also shows that in developed countries there are no significant differences in maturity between domestic and

international bond issuances (captured by the international dummy), but international issuances are significantly longer term (about 2 years) than domestic ones in developing countries.

Akin to the patterns in corporate bonds markets, for which international markets are sizeable, a large share of loans is syndicated with the participation of foreign banks. For instance, syndicated loans with at least one foreign bank account for 78 percent and 72 percent of the total lending to developing and developed countries. The value of syndicated loans comprising only domestic banks is in fact very low in many countries. The largest values of syndicated lending are originated within a few economies, mainly the United States and the economies of Western Europe.[15] India and China are the only developing economies whose domestic markets capture more than 50 percent of the total syndicated loan financing (Appendix Figure 2).

In terms of maturity, the patterns for syndicated loans stand in sharp contrast to those for bonds. The regression estimates in Table 4 show that domestic syndicated loans in developing countries are linked to longer maturities relative to both developed countries and international syndicated loans. For instance, the results in column d show that syndicated loan issuances by firms from developing countries are about 4 months longer than those by firms from developed countries when controlling for industry-year effects, use of proceeds, type of rate, and currency of denomination. This difference becomes insignificant once only international syndicated loan issuances are considered. Taken jointly, these two estimates indicate that, relative to firms from developed countries, firms from developing countries borrow at greater maturities in domestic markets. Indeed, the results in column f show that domestic issuances by developing countries are estimated to be 1.6 years longer than domestic issuances by developed countries (as captured by the developing country dummy). This last specification also shows opposing patterns for domestic vs. international borrowing

[15] Banks in the United States and Western Europe originate around 31 percent and 36 percent of the syndicated loans to developing countries.

through syndicated loans for developing and developed countries. Whereas firms from developing countries tend to borrow at shorter terms (by 1.3 years) in foreign markets than in local markets, firms from developed countries borrow at longer terms (6 months) abroad.

4.4. Firm Size

Next, we examine the type of firms (in terms of size) that access debt markets in developing and developed countries. Moreover, we study whether there is a positive correlation between firm size and debt maturity (as some studies suggest) in the markets of bonds and syndicated loans, and whether the patterns previously described hold across the FSD for debt issuers.[16]

A noteworthy pattern emerges from the comparison of the FSD across countries: debt issuers from developing countries are not smaller in size than those from developed countries (Figure 6). In fact, the FSD for developing countries is to the right of that for developed countries in the bottom quantiles, indicating that the smallest firms tapping the debt markets considered in this paper are relatively larger in developing countries than in developed ones. In other words, the smallest borrowers in bond and syndicated loan markets are predominantly from developed countries. This contrasts with the evidence in the existing literature showing a positive correlation between the average firm size and the country income level, using the universe of firms operating across countries.

Panel regressions provide evidence consistent with the rightward-shifted FSD for developing countries within the lower quantiles. The estimates show that domestic issuers, which are typically smaller firms than those with access to international markets, are significantly larger in developing countries, even after controlling for the industry fixed effects (Table 5). Specifically, the regression in

[16] The analysis in this sub-section is conducted with data at the firm level, focusing on the weighted average maturity of all issuances for each firm, calculated over the entire sample period. An analogous analysis conducted with data at the transaction level provides results qualitatively similar to the ones reported here.

column a shows that issuers from developing countries are on average 22 percent larger than those from developed countries.[17] This pattern holds for both bond and syndicated loan issuers (columns d and g). However, the estimates for international issuers only, defined as those firms with at least one issuance abroad over the sample period, yield a different pattern. International debt issuers from developing countries are as large as those from developed countries in bond markets, but smaller in syndicated loan markets (columns e and h).

The results imply that the larger size of the average issuer from developing countries is explained by differences in the type of firms accessing domestic markets. Domestic bond and syndicated loan issuers from developing countries are around 40 and 80 percent larger than those from developed countries (columns f and i). This last set of regressions also shows that domestic bond and syndicated loan issuers are smaller than international ones in both sets of countries, but the differences in developing countries are smaller.[18]

The value and maturity of debt issuances by firms from developing countries increase with firm size. For instance, firms at the top decile of the FSD for developing country issuers capture about 51 percent of the total value of the debt issued with an average maturity of 8.7 years, whereas firms at the bottom decile raise less than 1 percent of the total amount issued with an average maturity of 4.5 years (Figure 7, Panel A). This pattern for developing country firms is observed in both bond and syndicated loan markets. Firms at the 10th decile raise 48 (54) percent of the bond (syndicated loan) debt issued at an average maturity of 7.3 (9) years; firms at the 1st decile capture less than 1 percent of the total value raised at an average maturity of 4.2 (5.2) years (Figure 7, Panels B and C). In bond

[17] Because the dependent variable (firm size) is in logs, the regression coefficients in Table 5 show an approximation of the percent change. They need to be transformed using the exponential form to obtain the actual percent change reported in the text.

[18] The larger size of international issuers vis-à-vis domestic issuers could be explained, at least in part, by the higher costs associated with the use of international markets. For instance, to meet the liquidity and size demanded by international buyers, the minimum deal size is typically much larger than in domestic markets (Zervos, 2004; Gozzi et al., 2015). Debt issuances abroad could also be associated with higher legal costs to meet international regulations and international rating fees.

markets, the higher maturity obtained by the largest firms is partially related to their use of international markets as the share of bonds issued in international markets increases with firm size. For instance, the amount raised abroad accounts for 5 percent and 40 percent of the total amount raised for firms at the 1st and 10th decile, respectively, of the FSD in developing countries. Still, the size-maturity correlation in bond markets also takes place within domestic and international markets. Thus, the largest firms that capture most of the financing in bond and syndicated loan markets are key for the aggregate maturity patterns based on weighted averages at the country level.[19]

Importantly, relative to developed countries, the maturity of debt at issuance for developing country firms is similar (if not longer) across the entire FSD (Figure 7, Panel A). However, consistent with the findings in the previous sections, there are differences between bond and syndicated loan markets. Across all deciles of the FSD, firms from developing countries typically go shorter in bond markets but longer in syndicated loan markets when compared to their counterparts from developed countries (Figure 7, Panels B and C). For example, bond issuing firms at the 10th and 5th deciles of the FSD for developing countries raise capital with an average maturity of 7.3 and 5.1 years, respectively, both shorter (by about 2.5 years) than the maturity of bonds issued by firms at the same deciles of the FSD for developed countries. In syndicated loan markets, firms at the top decile of the FSD for developing countries borrow at maturities of about 9 years, 3.7 years longer than their counterparts in developed countries.

We then assess more formally whether the differences in debt maturity between developing and developed countries documented throughout this paper hold across the FSD, as indicated by the statistics in Figure 7. We pool all firms together and split them into five equal-sized groups based on their size. For each of these quintiles, we estimate firm-level regressions of the average debt maturity

[19] These largest firms do not capture the bulk of the number of debt transactions. In fact, the distribution of the number of capital raising issuances is evenly split across firms of different sizes. Hence, these largest firms do not drive the estimates conducted at the transaction level.

across all issuances on a developing country dummy. We also estimate these regressions separately for bond and syndicated loan issuers.

The estimates in Table 6 confirm the robustness of our findings across the FSD. They show that firms from developing countries access debt markets at maturities similar to (and sometimes even longer than) those from developed ones across the entire FSD for debt issuers. The regressions also show that bond financing is shorter term in developing countries for firms of all sizes, except for those at the bottom quintile. The differences in bond maturity are relatively similar across the top three quintiles at around 2.6 years. In syndicated loan markets, the estimates show that firms from developing countries borrow longer term than those from developed countries across all quintiles of the FSD (except for bottom one). Moreover, the differences in maturity at issuance for syndicated loans increase with firm size. Whereas firms from developing countries at the 2nd quintile borrow with maturities 1 year longer than those from developed countries, firms at the 5th quintile obtain syndicated loans that are almost 3 years longer in maturity.[20]

5. Long-term Debt in Balance Sheet Data

The results documented thus far based on transaction-level data stand in contrast with the short-termism of debt in developing countries documented in the literature, which uses firm or bank balance sheet data. Our results imply at least two possible reasons for the relatively shorter-term liability structure of firms from developing countries. One is that other debt markets, such as non-syndicated bank financing and commercial paper, are shorter term in developing countries. A second (not mutually exclusive) possibility is that bond and syndicated loan markets (that are probably longer term) represent a smaller share of the total external finance to firms from the developing world.

[20] The results also hold when including industry fixed effects in the estimations.

Although we do not directly observe the maturity in the markets outside those analyzed in this paper, we shed light on the short-termism in developing countries by merging the transaction-level data on debt issuances with balance sheet information for publicly listed firms for the period 2003-11. We then compare the ratio of long-term debt to total liabilities between developed and developing countries for all firms, for debt issuers (defined as firms tapping bond or syndicated loan markets at least once during the sample period), and for other debt issuers (those using neither bonds nor syndicated loans, so all the debt they hold in their balance sheets comes from other sources).[21]

The evidence based on balance sheet data shows that debt issuers hold more long-term debt in their balance sheets than the other listed firms (Figure 8, Panel A). Moreover, the ratio of long-term debt in developing countries is lower than in developed ones when considering the whole sample of firms, but similar when considering debt issuers only. The median ratio of long-term debt over total liabilities is 15 and 19 percent for developing and developed countries, respectively. This ratio is much higher, at 30 and 31 percent, for debt issuers from developing and developed countries. For other debt issuers, this ratio drops to 12 percent and 14 percent, respectively. Furthermore, the evidence shows that there is a positive correlation between the share of listed firms using debt markets and the country level of GDP per capita (Figure 8, Panel B).[22] We find a similar correlation when using measures of financial market development, such as private credit or bond market capitalization to GDP.

These findings are important for reconciling our results with those in the literature and for determining the drivers of short-termism in developing countries across firms. Consistent with the existing literature are the patterns that the ratio of long-term debt is lower in developing countries

[21] We follow the literature and define long-term debt as all firms' liabilities with maturity longer than one year.
[22] This finding is not driven by a better matching of the data for countries with higher levels of GDP per capita. Around 34 percent of the firms in the SDC database (which contains information for all debt issuers, including unlisted firms) are found in Orbis. Although this percentage varies by country, it is not correlated with GDP per capita or financial market development.

when considering the whole sample of listed firms. But the fact that this ratio (even when coming from balance sheet data) is similar for debt issuers across countries is consistent with our novel results using transaction-level data. Furthermore, the smaller ratio of long-term debt to total liabilities held by other debt issuers (relative to debt issuers in bond or syndicated loan markets) indicates that the debt instruments not analyzed in this paper are relatively shorter term.

These patterns emerging from the balance sheet data also indicate that the greater proportion of firms from developing countries using other shorter-term instruments is an important source of short-termism in debt for these countries. Specifically, the difference in the ratio of long-term debt to total liabilities between developing and developing countries is 1 percentage point for debt issuers (bond and syndicated loan issuers) and 2 percentage points for other debt issuers. But the difference for all firms is larger, 4 percentage points. Hence, the differences in debt maturity across firms in developing and developed countries do not seem to come from large differences in maturity within shorter- and longer-term markets, rather from differences in their relative use of longer-term bond and syndicated loan markets versus other debt markets.

To the extent that the proportion of publicly listed firms is smaller in developing countries than in developed ones, these results could be extended to the universe of firms. That is, one would find a lower ratio of long-term debt to total liabilities and a shorter-term liability structure in developing countries when analyzing all firms. This notion is reinforced by the existing evidence showing that, within developing countries, smaller firms make up a larger percentage of total firms, whereas the size of those using bond and syndicated loan markets is similar across both sets of countries (as shown in the previous section).

6. Conclusions

Developing countries have actively participated in the expansion of debt markets that took place since the 1990s. We use their activity over this relevant period to tackle an old debate in economics: whether developing country firms borrow short term and, if so, what is the source of the short-termism. Despite the importance of this question and the attention devoted in the literature, little evidence exists on the actual maturity at which firms from developing countries borrow. To fill this void in the literature, we use a large data set of transaction-level capital raising activity in domestic and international primary bond and syndicated loan markets. Developed countries are used as the benchmark for these comparisons.

The evidence in this paper shows that firms from developing countries access corporate bond and syndicated loan markets at maturities similar to those from developed countries. Thus, overall, these markets cannot be considered a source of short-term borrowing for developing countries. However, there is a substantial heterogeneity across several dimensions, such as instruments, market location, use of proceeds, and firm size, indicating that composition matters. In corporate bond markets, international issuances are particularly important in the provision of long-term financing to developing countries as most of the proceeds are raised abroad and at longer maturities than in domestic markets. Syndicated loan markets are also important for the long-term funding of developing countries, whose firms borrow in these markets at longer-term maturities than firms from developed countries. Firms from developing countries use syndicated loans in part to fund infrastructure projects, which have relatively longer maturities.

But not all firms borrow in these relatively long-term markets. Large corporations from developing countries are those that issue bonds and syndicated loans. Among this group of large firms, the largest ones typically issue debt at the longest maturities, and have better access to international

markets. Therefore, the long-term financing these markets provide is constrained to a selected group of firms from developing countries.

The evidence also shows that a lower proportion of firms from developing countries relative to developed countries use long-term debt markets, explaining at least part of the differences in the liability structure in firm balance sheets. Thus, a larger percentage of smaller firms from developing countries have fewer alternatives when they need long-term external finance to realize investment opportunities. Consequently, they would have to rely, at least for a while, on shorter-term instruments such as traditional bank loans or commercial paper.

A first order issue to understand in future research is whether firms are unable or unwilling to tap longer-term financing in developing countries. If long-term finance is indeed not available for deserving firms (a problem in the supply-side of funds), policy makers could focus on trying to broaden access to long-term capital markets to firms beyond the selected group of large corporations that already tap those markets. In fact, our results show a shorter-term maturity profile and a larger average firm size for issuing firms in domestic bond markets in developing countries compared with their counterparts in developed economies, suggesting that local bond markets might indeed be relatively underdeveloped in the former set of countries. Policies aimed at reducing the transaction costs associated with the issuance process could expand the number of firms able to access capital markets, with positive spillover effects on secondary markets. However, to the extent that these markets are already competitive in some countries, reducing the costs through government interventions could prove difficult. Another way to facilitate smaller, lower-rated firms to issue securities in capital markets could be to develop capital markets specialized in SMEs, innovative instruments (such as minibonds), and securitization (Borensztein et al., 2008; Giovannini et al., 2015). But those solutions still need to be tested.

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Figure 1. Debt Maturity over Time

This figure shows the evolution of the (value) weighted average maturity of issuances of corporate bonds and syndicated loans by developing and developed countries. The size of the bubbles represents the share of the total amount raised by each set of countries over their GDP.

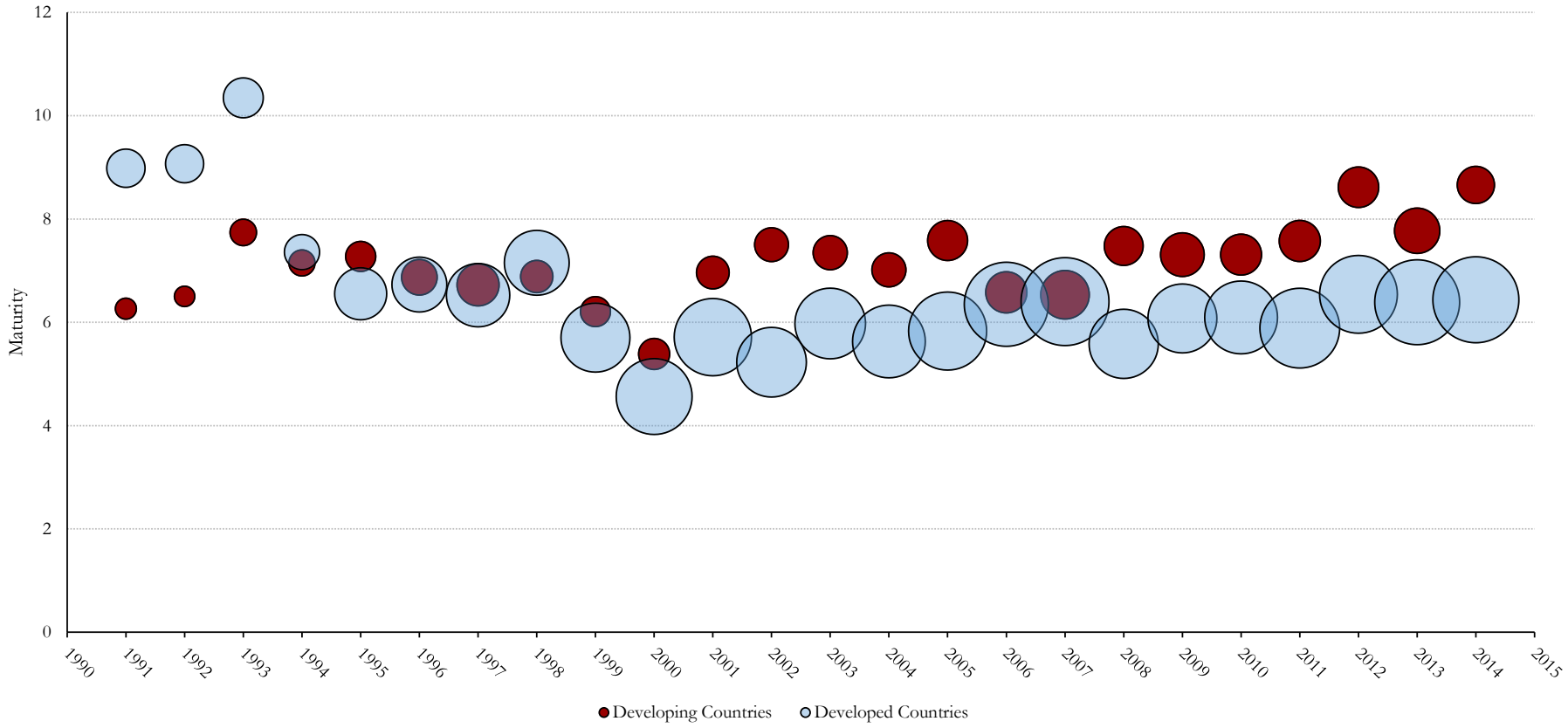


Figure 2. Debt Maturity and Financial Development

This figure shows for every country in the sample, the (value) weighted average maturity of total debt, bonds, and syndicated loans issued during the 1991-2014 period plotted against the average level of GDP per capita (left side panels) and private credit over GDP (right side panels).

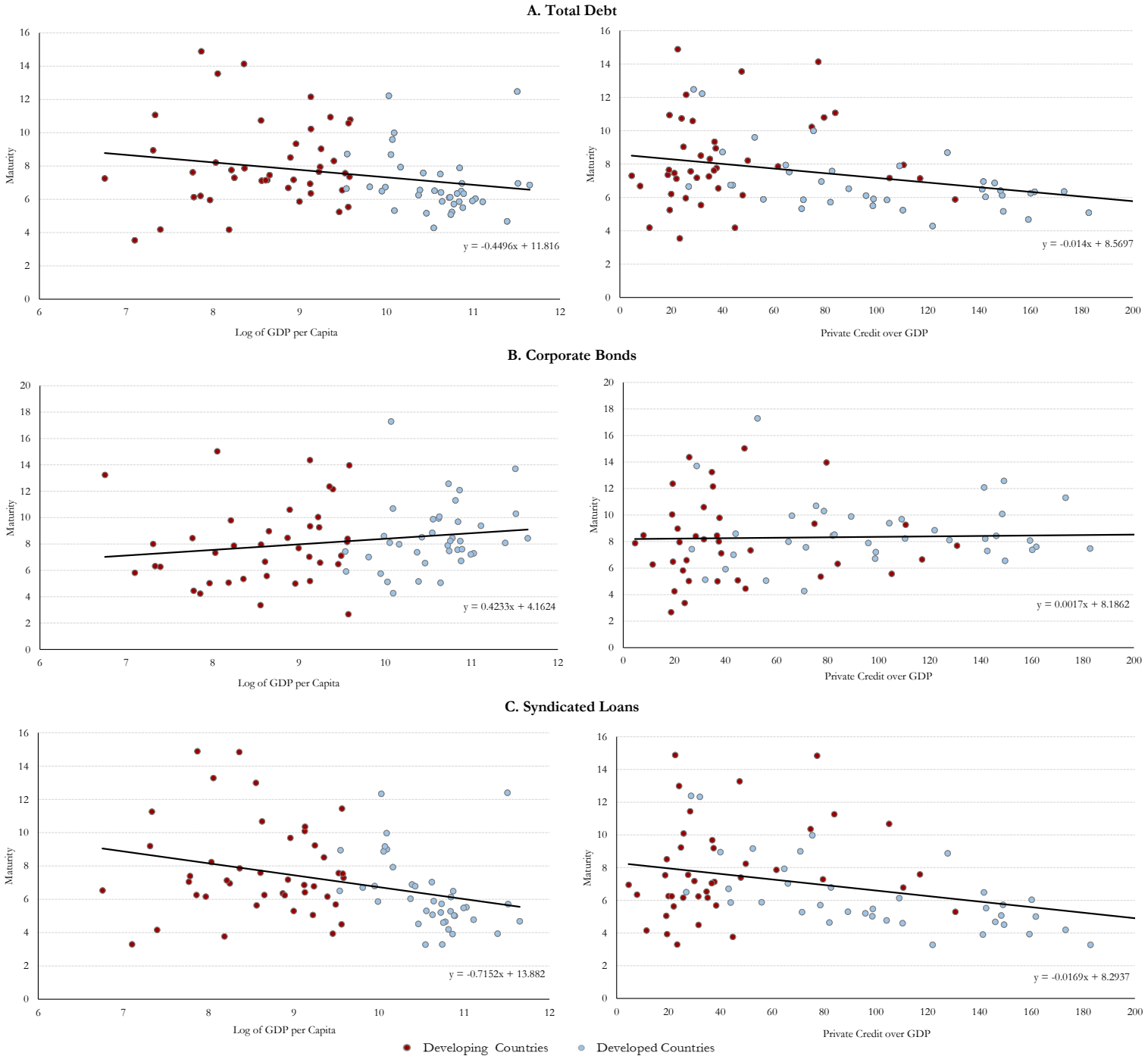


Figure 3. Share and Maturity of Debt by Sector and Use of Proceeds

Panels A and B show the share of the total amount raised and the (value) weighted average maturity of all debt issued by firms from each (non-financial) sector in corporate bond markets and syndicated loan markets, respectively. Panel C shows the share of the total amount raised and the weighted average maturity for each category of the primary use of the proceeds raised. The statistics are shown separately for developing and developed countries. The sample period is 1991-2014.

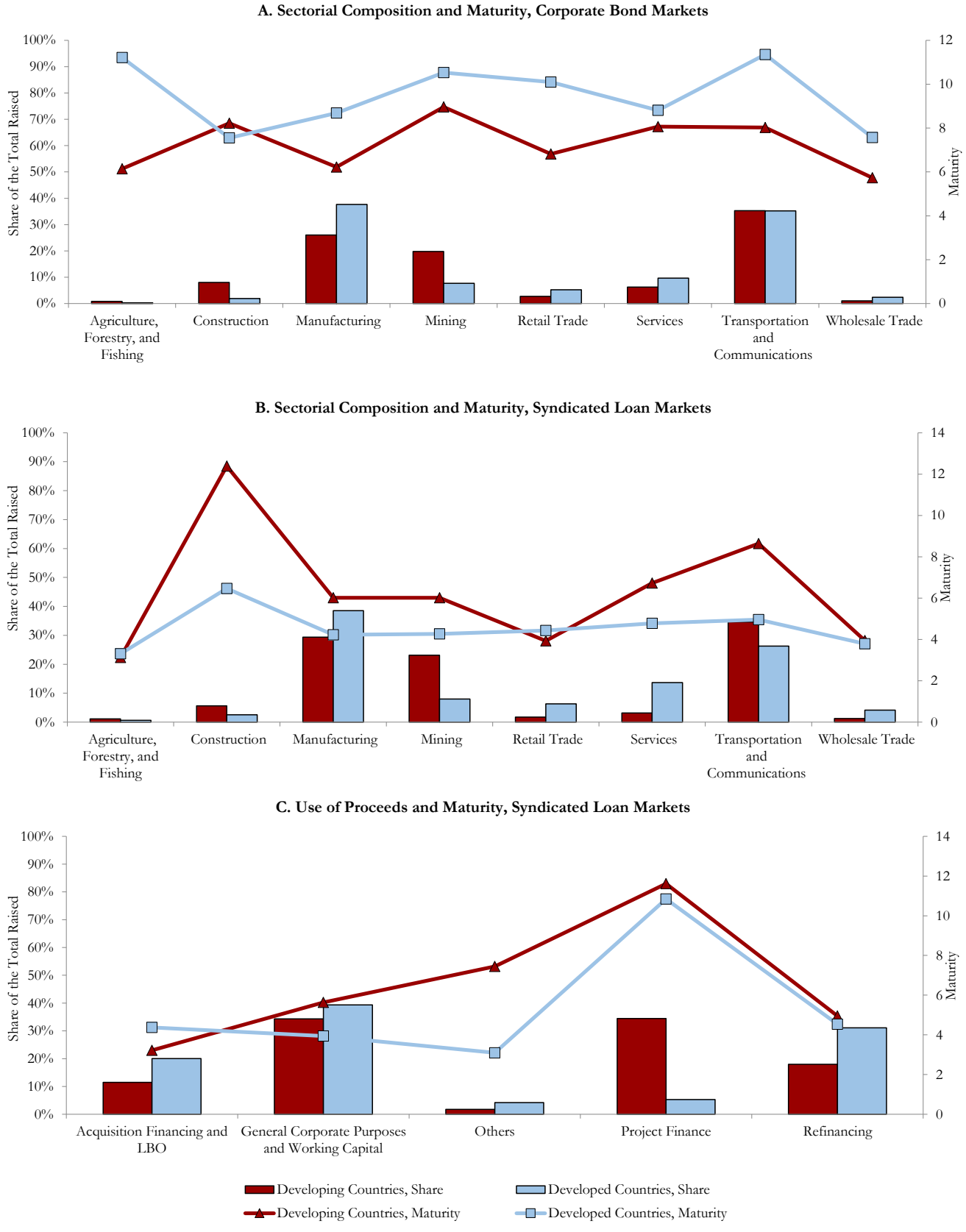


Figure 4. Share of the Amount Raised in International Bond Markets by Country

This figure shows the fraction of the bond proceeds raised in international markets for each country in the sample. The shares are calculated over the entire sample period, 1991-2014.

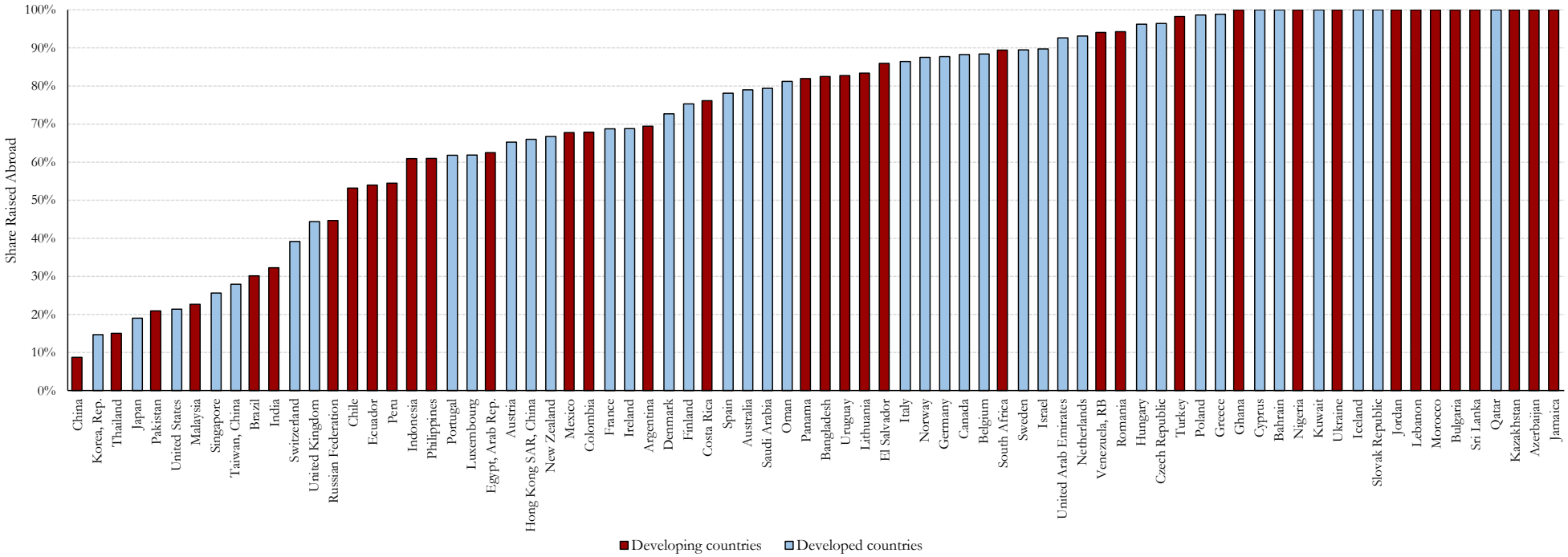


Figure 5. Cumulative Distribution Functions of Debt Maturities in Bond Markets

This figure shows the cumulative distribution functions (CDFs) of the maturity of newly issued bonds during the 1991-2014 period. For developing countries, the figure shows separately the CDFs for domestic and international issuances.

Figure 6. Size Distribution of Issuing Firms

This figure shows the firm size distribution of debt issuers from developing and developed countries. The size is reported in logs of millions of 2011 U.S. dollars. Densities are estimated using the Epanechnikov kernel function.

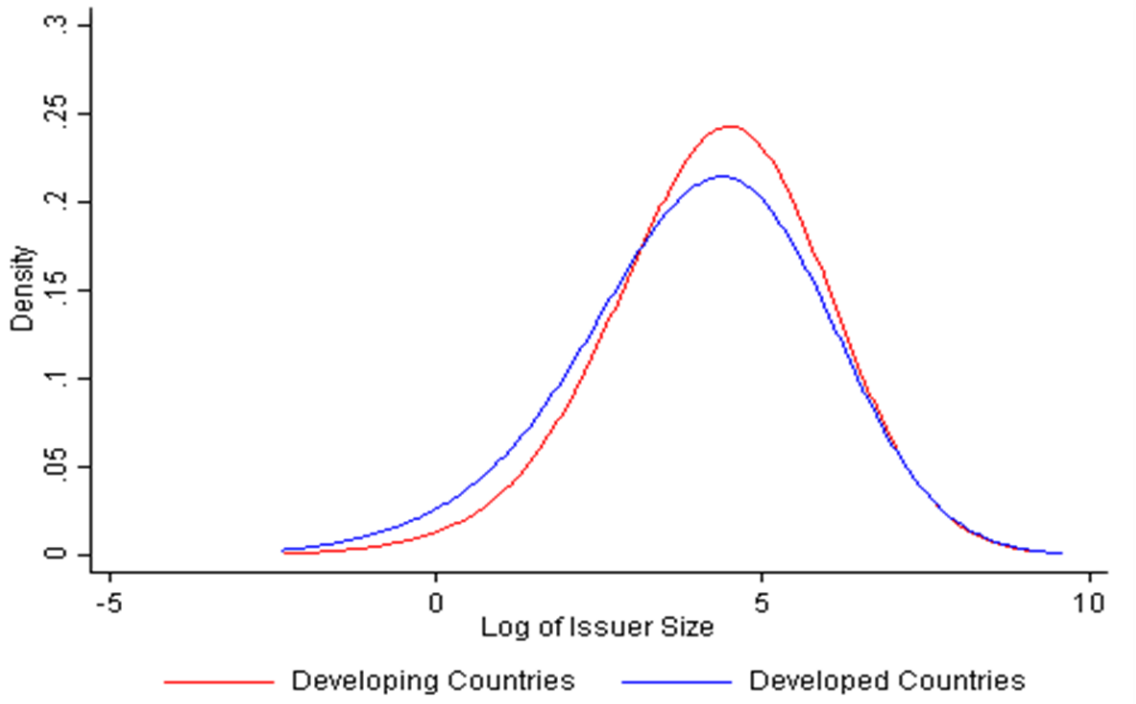


Figure 7. Size-Maturity Distributions of Issuing Firms

Panel A reports the average debt maturity, the share of the total amount raised, and the share of the total number of issuances for firms from each decile of the firm size distribution. Below each size decile, the figure reports the average size of the issuers in that decile. Panels B and C present the same statistics, distinguishing between corporate bonds and syndicated loans, respectively. Size is reported in millions of 2011 U.S. dollars.

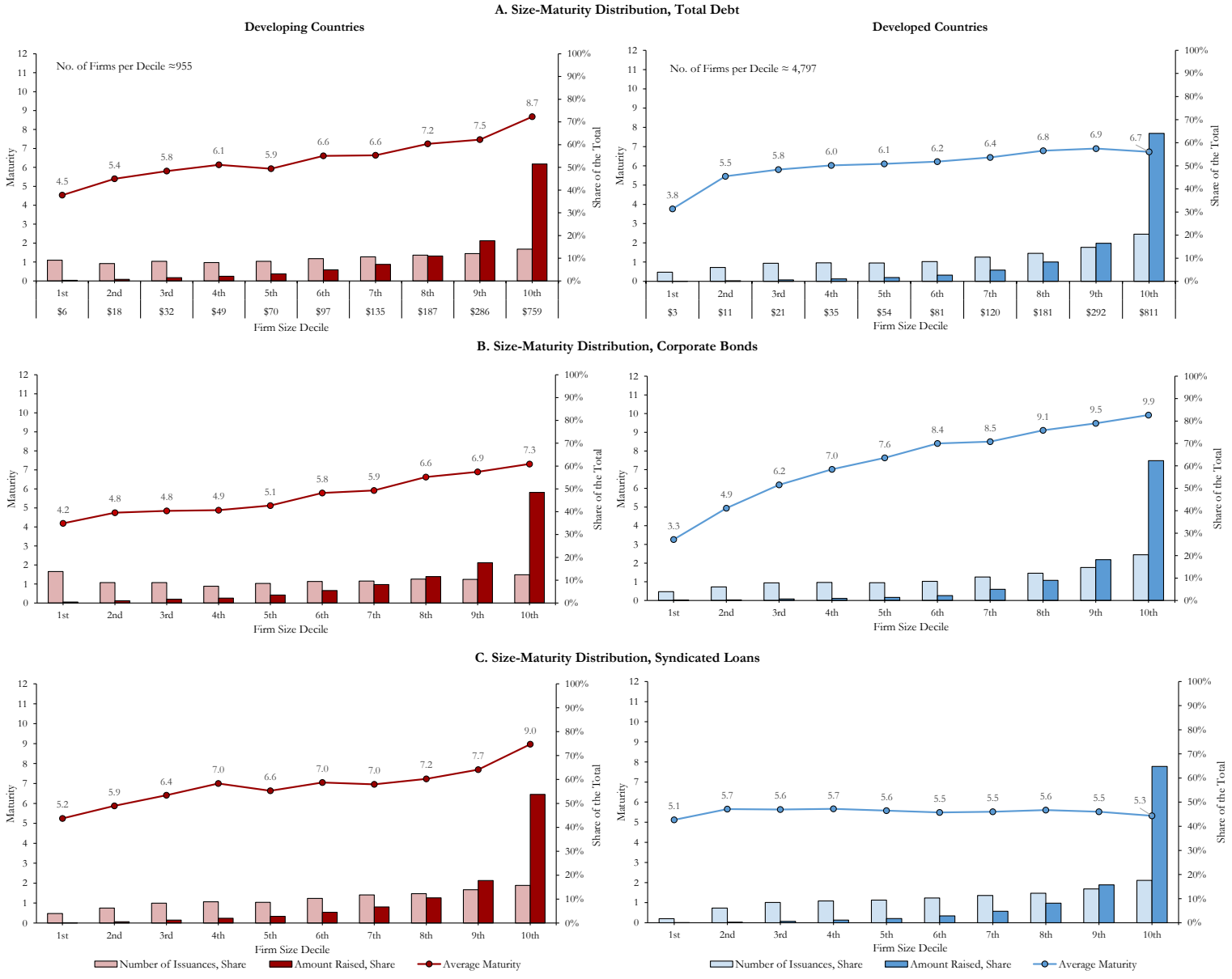
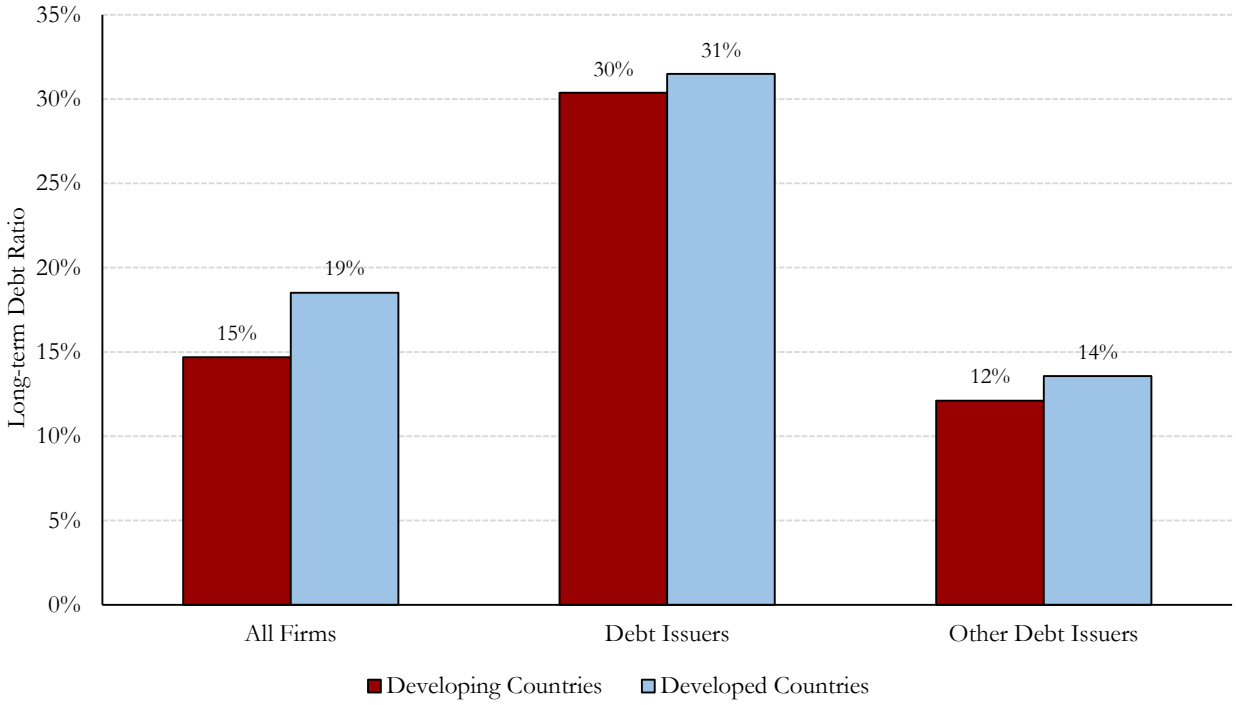


Figure 8. Long-term Debt in Balance Sheet Data

Panel A shows the average ratio of long-term debt to total liabilities over the 2003-11 period. The median firm in the median country is reported. Panel B shows the ratio of the number of debt issuers to all listed firms plotted against the average level of GDP per capita for each country calculated over the sample period. Debt issuers are defined as firms issuing at least one bond or syndicated loan during the 2003-11 period. Other debt issuers are those not issuing bonds or syndicated loans during the 2003-11 period.

A. Long-term Debt over Total Liabilities



B. Share of Debt Issuers and GDP per Capita

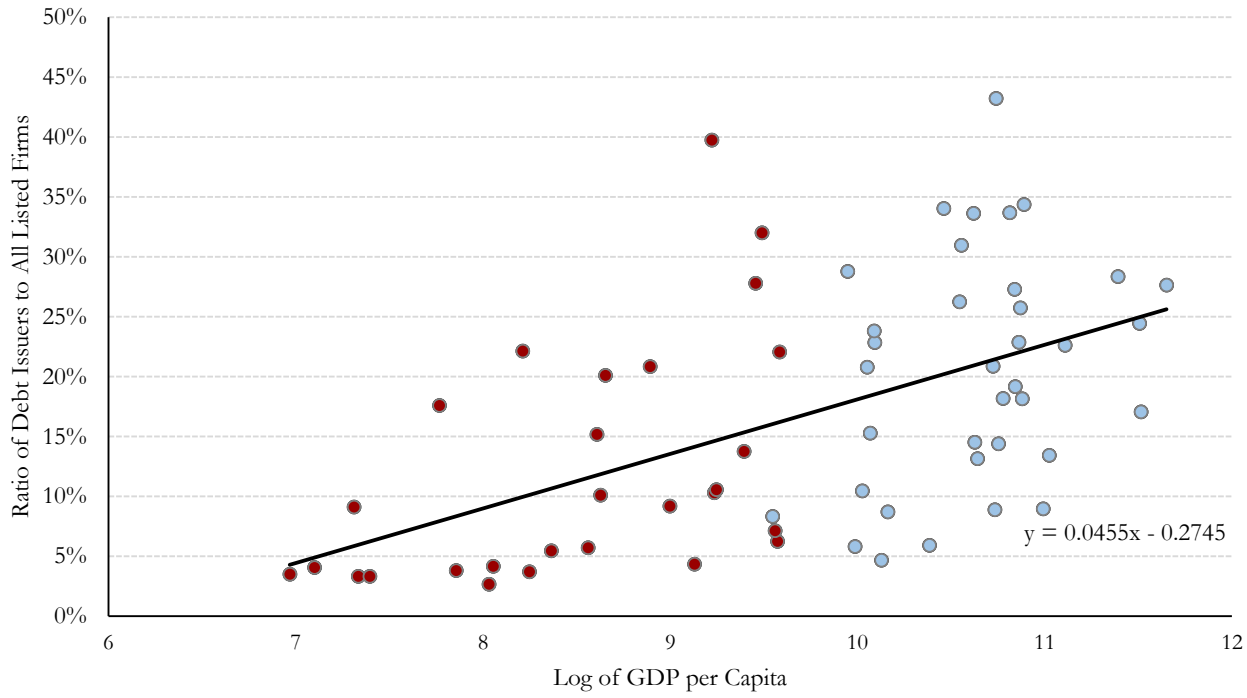


Table 1. Summary Statistics

This table shows the total amount of capital raised over the sample period and the (value) weighted average maturity (in years) of all debt issued by firms from developing and developed countries during 1991-2014. The data on the amount raised are in billions of 2011 U.S. dollars.

A. Total Debt

Country Type	No. of Firms	No. of Issuances	Amount Raised (Billions)	Share of Total Issuances with Maturity over 10 Years	Average Maturity
	(a)	(b)	(c)	(d)	(f)
Developing Countries	9,377	28,558	5,485	22%	7.3
Developed Countries	48,136	237,981	62,658	15%	6.2

B. Corporate Bonds

	(a)	(b)	(c)	(d)	(f)
Developing Countries	4,285	15,176	2,417	20%	7.9
Developed Countries	14,915	90,558	19,592	30%	9.8

C. Syndicated Loans

	(a)	(b)	(c)	(d)	(f)
Developing Countries	5,092	13,382	3,068	25%	7.1
Developed Countries	33,221	147,423	43,066	6%	4.5

Table 2. Debt Maturity in Developed and Developing Countries

This table shows regressions for the maturity of total debt, bond, and syndicated loan issuances on a dummy that equals one when the debt is issued by firms from developing countries and zero otherwise (developed country issuances). The regressions are estimated using ordinary least squares, clustering the standard errors (reported in brackets) at the firm level. The sample period is 1991-2014. *, **, and *** denote statistical significance at 10%, 5%, and 1%, respectively.

	Maturity of Total Debt		Maturity of Corporate Bonds		Maturity of Syndicated Loans	
	(a)	(b)	(c)	(d)	(e)	(f)
Developing Country Dummy	0.41 ***	0.08	-1.62 ***	-1.97 ***	1.80 ***	1.60 ***
	[0.07]	[0.07]	[0.14]	[0.15]	[0.08]	[0.07]
Industry-Year Dummies	No	Yes	No	Yes	No	Yes
Number of Observations	266,539	266,539	105,734	105,734	160,805	160,805
Number of Firms	57,513	57,513	24,386	24,386	42,146	42,146
R-squared	0.001	0.08	0.01	0.10	0.02	0.09

Table 3. Use of Proceeds and Maturity in Syndicated Loan Markets

This table shows in column a regressions for the maturity of syndicated loan issuances (in years) on dummy variables capturing the different uses of the proceeds raised (acquisition financing and leveraged buyout operations is the omitted category). Columns b-e show regressions for the maturity of syndicated loan issuances (in years) on a dummy variable that equals one for developing country issuances and zero otherwise (developed country issuances). The regressions also include controls for the use of proceeds, rate of the issued debt, and industry-year effects. The regressions are estimated using ordinary least squares, clustering the standard errors (reported in brackets) at the firm level. The sample period is 1991-2014. *, **, and *** denote statistical significance at 10%, 5%, and 1%, respectively.

	Maturity of Syndicated Loans				
	All Transactions	All Transactions	All Transactions	Only Project Finance	No Project Finance
	(a)	(b)	(c)	(d)	(e)
Developing Country Dummy		0.46 ***	0.46 ***	0.47 ***	0.49 ***
		[0.06]	[0.06]	[0.16]	[0.06]
Use 1: General Corporate Purposes	-1.37 ***				
	[0.03]				
Use 2: Project Finance	4.77 ***				
	[0.09]				
Use 3: Refinancing and Capital Structure Management	-0.90 ***				
	[0.03]				
Use 4: Others	-0.68 ***				
	[0.10]				
Industry-Year Dummies	Yes	Yes	Yes	Yes	Yes
Use of the Proceeds Dummies	No	Yes	Yes	No	No
Floating Rate Dummy	No	No	Yes	Yes	Yes
Number of Observations	160,805	160,805	160,805	17,148	143,657
Number of Firms	42,146	42,146	42,146	8,178	35,586
R-squared	0.26	0.27	0.27	0.07	0.05

Table 4. Debt Maturity in Domestic and International Markets

This table shows in the first two columns in each panel regressions of the maturity of debt issuances on a developing country dummy. The third column in each panel shows regressions adding another dummy variable indicating whether the issuance takes place in international markets and an interaction term between the international and the developing country dummies. The regressions are estimated using ordinary least squares, clustering the standard errors (reported in brackets) at the firm level. The sample period is 1991-2014. *, **, and *** denote statistical significance at 10%, 5%, and 1%, respectively.

	Maturity of Corporate Bonds			Maturity of Syndicated Loans		
	All Issuances	Only International Issuances	All Issuances	All Issuances	Only International Issuances	All Issuances
	(a)	(b)	(c)	(d)	(e)	(f)
Developing Country Dummy	-2.11 ***	-0.57 **	-2.57 ***	0.35 ***	-0.05	1.62 ***
	[0.19]	[0.28]	[0.25]	[0.07]	[0.07]	[0.12]
International Issuance Dummy			-0.36			0.48 ***
			[0.21]			[0.03]
(Developing Country D.)*(International Issuance D.)			2.38 ***			-1.75 ***
			[0.38]			[0.13]
Industry-Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Use of the Proceeds Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Foreign Currency Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Floating Rate Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observations	68,716	17,502	68,716	160,361	83,093	160,361
Number of Firms	16,200	6,100	16,200	42,063	42,063	23,357
R-squared	0.14	0.12	0.14	0.32	0.33	0.32

Table 5. Firm Size and Type of Issuer

This table shows in the first two columns in each panel regressions of the issuer size on a developing country dummy. In the third column in each panel, the regressions also include a dummy variable indicating whether the firms are international issuers and an interaction term between the international issuer and the developing country dummies. International issuers are defined as firms issuing in international markets at least once during the sample period. Firm size (in logs) is the sample average. The regressions are estimated using ordinary least squares. The standard errors are reported in brackets. The sample period is 1991-2014. *, **, and *** denote statistical significance at 10%, 5%, and 1%, respectively.

	Size of Debt Issuers			Size of Bond Issuers			Size of Syndicated Loan Issuers		
	All Issuers	Only International Issuers	All Issuers	All Issuers	Only International Issuers	All Issuers	All Issuers	Only International Issuers	All Issuers
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Developing Country Dummy	0.20 ***	-0.22 ***	0.58 ***	0.13 ***	-0.05	0.33 ***	0.07 ***	-0.38 ***	0.59 ***
	[0.02]	[0.02]	[0.02]	[0.03]	[0.04]	[0.03]	[0.02]	[0.02]	[0.04]
International Issuer Dummy			1.43 ***			1.33 ***			1.21 ***
			[0.01]			[0.03]			[0.01]
(D. Developing Country)*(D. International Issuer)			-0.79 ***			-0.38 ***			-0.98 ***
			[0.03]			[0.05]			[0.04]
Industry Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observations	57,513	28,456	57,513	24,788	8,659	24,788	42,646	23,803	42,646
R-squared	0.04	0.02	0.20	0.04	0.04	0.14	0.04	0.04	0.21

Table 6. Debt Maturity across the Firm Size Distribution

This table shows firm-level regressions for the (value) weighted maturity of the total debt (Panel A), bonds (Panel B), and syndicated loans (Panel C) issued on a developing country dummy. Firms are divided into five equal-sized groups based on their size. The regressions are estimated separately for each of these quintiles of the firm size distribution. Firm size (in logs) is the sample average. The regressions are estimated using ordinary least squares. The standard errors are reported in brackets. The sample period is 1991-2014. *, **, and *** denote statistical significance at 10%, 5%, and 1%, respectively.

A. All Issuers

	Quintile				
	1st	2nd	3th	4th	5th
Developing Country Dummy	0.36 ***	0.05	0.12	0.32 ***	1.25 ***
	[0.09]	[0.11]	[0.11]	[0.11]	[0.13]
Number of Observations	11,511	11,504	11,502	11,492	11,511

B. Bond Issuers

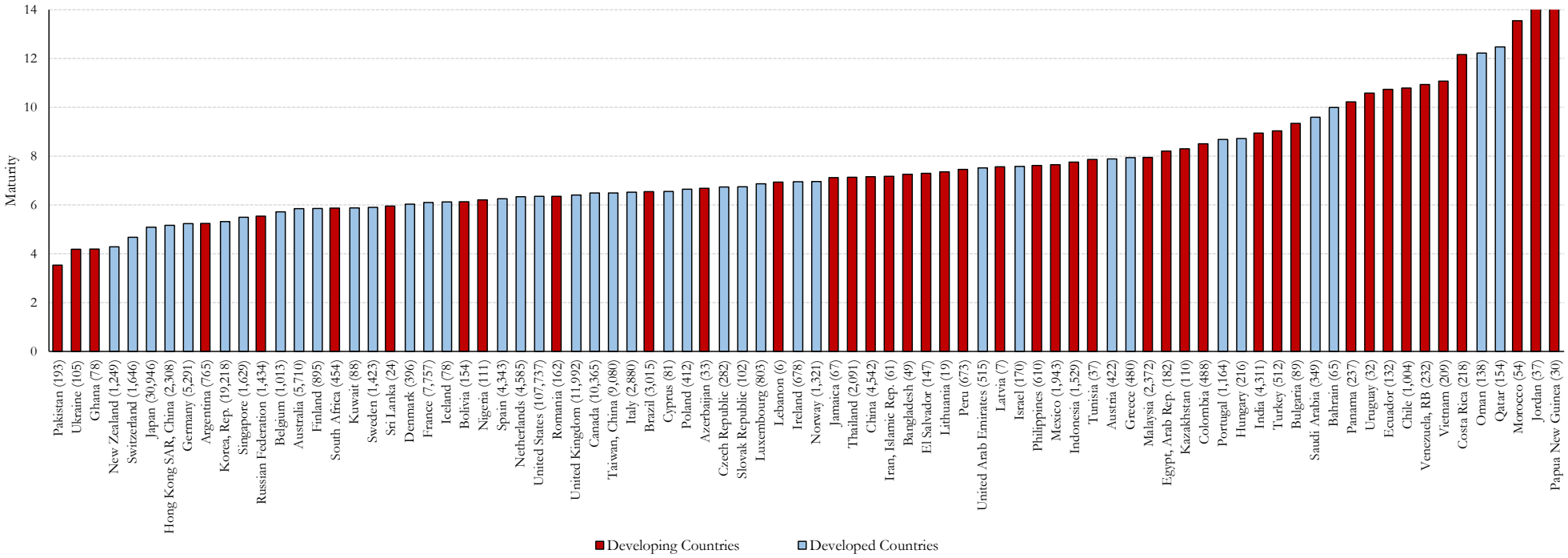
	Quintile				
	1st	2nd	3th	4th	5th
Developing Country Dummy	0.64 ***	-1.75 ***	-2.59 ***	-2.56 ***	-2.62 ***
	[0.10]	[0.16]	[0.17]	[0.14]	[0.15]
Number of Observations	3,782	5,212	6,195	3,106	3,782

C. Syndicated Loan Issuers

	Quintile				
	1st	2nd	3th	4th	5th
Developing Country Dummy	0.15	1.05 ***	1.33 ***	1.53 ***	2.94 ***
	[0.15]	[0.14]	[0.14]	[0.14]	[0.16]
Number of Observations	9,292	9,050	5,477	9,070	9,292

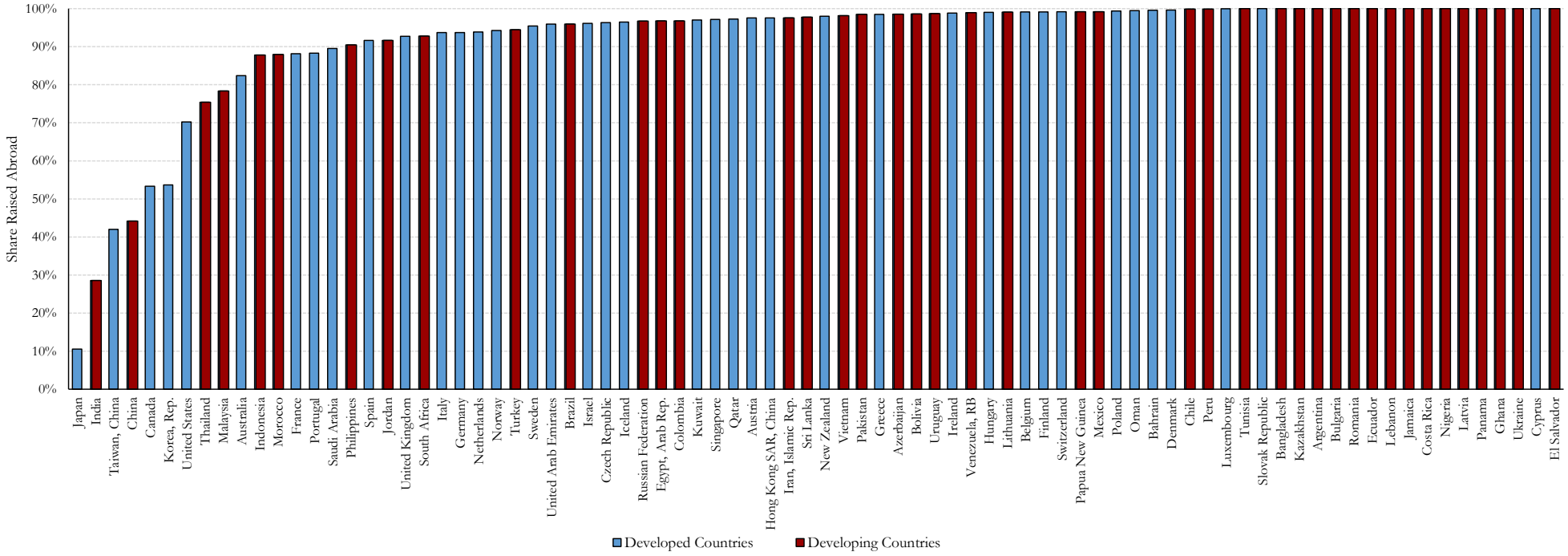
Appendix Figure 1. Debt Maturity by Country

This table shows the (value) weighted average maturity of corporate bond and syndicated loan issuances for each country in the sample. The weighted averages are calculated over the entire sample period, 1991-2014. The figure also shows the total number of debt issuances over the same period for each country.



Appendix Figure 2. Share of Debt Raised Abroad in Syndicated Loan Markets by Country

This figure shows the fraction of the loan proceeds raised in international markets for each country in the sample. The shares are calculated over the entire sample period, 1991-2014.



Appendix Table 1. Total Number of Issuances and Number of Firms by Country

This table shows the total number of issuances in corporate bond and syndicated loan markets and the number of issuing firms per country during 1991-2014 for each country in the sample.

Developing Countries

Country	Number of Bond Issuances	Number of Syndicated Loan Issuances	Number of Firms
Argentina	474	291	245
Azerbaijan	3	30	14
Bangladesh	4	45	22
Bolivia	137	17	40
Brazil	2,228	787	1015
Bulgaria	3	86	30
Chile	623	381	231
China	2,664	1,878	2255
Colombia	364	124	167
Costa Rica	197	21	30
Ecuador	118	14	74
Egypt, Arab Rep.	8	174	49
El Salvador	122	25	20
Ghana	2	76	23
India	1,826	2,485	1331
Indonesia	396	1,133	566
Iran, Islamic Rep.	0	61	15
Jamaica	22	45	15
Jordan	3	34	20
Kazakhstan	28	82	57
Latvia	0	7	6
Lebanon	2	4	3
Lithuania	2	17	10
Malaysia	1,731	641	480
Mexico	1,141	802	499
Morocco	4	50	17
Nigeria	3	108	46
Pakistan	29	164	78
Panama	78	159	132
Papua New Guinea	0	30	11
Peru	535	138	145
Philippines	263	347	151
Romania	9	153	64
Russian Federation	585	849	443
South Africa	140	314	162
Sri Lanka	3	21	12
Thailand	1,174	917	456
Tunisia	0	37	11
Turkey	37	475	183
Ukraine	27	78	39
Uruguay	9	23	21
Venezuela, RB	155	77	87
Vietnam	27	182	97
Total	**15,176**	**13,382**	**9,372**

Developed Countries

Country	Number of Bond Issuances	Number of Syndicated Loan Issuances	Number of Firms
Australia	1,976	3,734	1,441
Austria	229	193	141
Bahrain	3	62	20
Belgium	402	611	219
Canada	4,551	5,814	2,452
Cyprus	11	70	31
Czech Republic	46	236	101
Denmark	171	225	94
Finland	395	500	206
France	2,241	5,516	1,500
Germany	1,062	4,229	1,160
Greece	93	387	155
Hong Kong SAR, China	940	1,368	811
Hungary	11	205	73
Iceland	7	71	23
Ireland	220	458	181
Israel	70	100	51
Italy	481	2,399	897
Japan	9,825	21,121	6,096
Korea, Rep.	17,413	1,805	3,222
Kuwait	2	86	32
Luxembourg	456	347	191
Netherlands	2,387	2,198	785
New Zealand	296	953	203
Norway	419	902	368
Oman	7	131	50
Poland	63	349	147
Portugal	634	530	552
Qatar	6	148	49
Saudi Arabia	14	335	111
Singapore	729	900	512
Slovak Republic	10	92	35
Spain	457	3,886	1,297
Sweden	550	873	257
Switzerland	782	864	382
Taiwan, China	4,982	4,098	1,242
United Arab Emirates	54	461	150
United Kingdom	3,608	8,384	2,565
United States	34,955	72,782	20,339
Total	**90,558**	**147,423**	**48,141**