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Corporate Financing Trends and Balance Sheet Risks in Latin America: Taking Stock of “The Bon(d)anza”

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Western Hemisphere Department

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Abstract

Easy global liquidity conditions, stronger risk appetite and a retrenchment in cross-border bank lending led to a surge in emerging market firms’ bond issuance in international markets (what we term “The Bon(d)anza”). Using firm-level data for five large Latin American economies, we provide evidence of a significant change in companies’ external funding strategies and liability structures after 2010, as well as in the balance sheet risks that firms face. We find that stepped up bond issuance was mostly aimed at re-financing rather than funding investment projects, as firms extended the average duration of their debt while securing lower fixed-rates, reducing roll-over and interest rate risks. The shift towards safer maturity structures has come at the expense of a leveraging-up in foreign-currency-denominated financial debt in several countries— reversing a de-dollarization trend seen during the last decade. We also provide evidence that a substantial part of these bonds were issued through offshore vehicles, suggesting regulatory and tax arbitrage strategies. For some corporations, rising dollar debt and high leverage will be particularly taxing in an environment of US dollar strengthening, less buoyant commodity prices and slowing domestic activity.

JEL Classification Numbers: G32, G15, E44

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Contents	Page
I. Introduction	3
II. Data	5
III. Overview of NFCs Bond Issuance in LA-5 Economies	6
IV. Leverage and Debt Service Capacity	7
V. Shifts in Liability Structures	12
VI. Issuance Through Foreign Subsidiaries	14
VII. Conclusions	15
References	16
Annex	18
 Figures	
1. Nonfinancial Corporates Bond	7
2. Nonfinancial Corporates Bond Issuance	7
3. Median Debt to Equity Ratio	9
4. Weak Tail (25th Percentile) of Debt to Equity Ratio	9
5. Net Debt to Earnings	10
6. Interest Coverage Ratio	10
7. Investment to Total Debt	11
8. Cash To Gross Interest Expenses	11
9. LA5: Corporate Term Loan Financing	12
10. LA5: Investment Grade Yield Curves for Nonfinancial Companies—Fixed-Rate Dollar Denominated Bonds	13

I. INTRODUCTION

Corporates in many emerging markets have taken advantage of unusually easy international liquidity conditions and a search for yield to ramp-up their bond financing, including in external markets. Global real interest rates have been low, particularly after 2009, against a backdrop of unconventional monetary policies in advanced economies and strong investor appetite. In Latin American countries, strong bond issuance was underpinned by stable domestic macroeconomic fundamentals and supportive commodity prices.

Companies' greater access to international capital markets is welcome given that Latin America remains characterized by relatively low domestic saving and investment rates. Yet, the strong rise in bond issuance has also generated concerns that the corporate sector may have overburdened itself with debt, especially in foreign currency, storing up trouble for the future. The build-up of exposures could leave firms exposed to a sudden rise in exchange rates or tighter external financing, as the U.S. continues to normalize its monetary policy. These concerns have been compounded by an environment of less buoyant commodity prices over the recent years, as well as lower potential domestic growth.

If such risks were to materialize, the credit-quality of some corporations could deteriorate, pushing up borrowing costs and financing constraints, which could then become a drag on overall economic growth. Balance sheet pressures on corporations could also potentially affect the domestic banking system, if firms faced difficulties to repay their loan obligations or chose to withdraw their deposits.²

The analysis of balance sheet vulnerabilities in the corporate sector using micro-level data has been scant, but a few recent studies have shed light on how corporate exposures have evolved over time. Gonzalez-Miranda (2012) uses balance-sheet data to show evidence of rising leverage and reduced buffers in the non-financial corporate sector in Latin America between 2000 and 2011. The author also presents evidence from a panel of 18 emerging economies suggesting that vulnerability (as measured by the probability of firm's cash flows falling below short-term debt obligations) increases with leverage and net foreign currency liabilities, reducing with exchange rate flexibility and firm size.

Didier and Schmukler (2014) document major debt trends in emerging economies since the 1990s, showing that economies have generally moved towards less vulnerable positions. In Latin America, they show that the average maturity of bonds in the private sector increased between 1990–99 and 2000–09. Using transaction-level bond issuance data, Caballero and Powell (2014) document that, since the global crisis, the structure of corporate bond debt in the major Latin American countries has moved from a market largely dependent on domestic issuance towards a more globally integrated market.

² The literature highlights different channels through which vulnerabilities can build up in an environment of ample liquidity (Caballero and Krishnamurthy (2003)), and how corporate performance may be a source of spillovers and systemic risk (Claessens et al (2011)).

To gauge the extent of corporate vulnerabilities and provide a more granular picture of recent trends in bond financing in Latin America, our analysis combines micro-level data on bond issuance (Bloomberg, Dealogic) and corporate balance sheets (S&P Capital IQ) for about 1,000 listed non-financial firms between 2003 and 2013 in Brazil, Chile, Colombia, Mexico, and Peru. Using this database, we provide an assessment of the evolution of leverage, debt service capacity, bond issuance dynamics and its main characteristics such as yield, maturity, and currency composition over this period. On this basis, we analyze whether corporate balance sheets have become more vulnerable to financial shocks and how the nature of risks has changed.

Our main results are as follows. First, the surge in bond issuance by Latin American firms has led to a compositional shift away from bank loans and toward bond financing. Both micro and macro-level data indicate that corporates have reduced their relative reliance on longer-term loans, including syndicated cross-border loans. This pattern likely reflects the sharp curtailment of loan supply from European banks—a traditional source of credit for the group of country in the analysis—during the financial crisis as well as re-pricing of bank loans in the context of regulatory reform, which has made bond market finance relatively more attractive.

Second, the shift in liability composition has reduced some dimensions of risk but potentially increased others. Through stepped-up issuance of longer-term bonds, firms have increased the average maturity of their debt, and smoothed the amortization profile. They have done so while securing lower interest rates across the yield curve and keeping the share of floating-rate debt relatively low. Yet, the available data suggest that dollarization on corporate balance sheets remains an issue in some Latin American countries, and the share of foreign-currency debt has increased in recent years. The extent of un-hedged exchange rate exposure in the corporate sector cannot be ascertained with a significant degree of confidence, given that systematic and comprehensive information on relevant offsetting variables (notably natural hedges from net export proceeds, foreign currency income from multinational operations and FX derivative positions) is not simple to construct.

In the absence of more specific information on natural and financial hedges, we use issuer sectors as a proxy indicator. Commodity producers and manufactures exporters, for example, derive a large share of their revenues from sales in foreign currencies, and thus are in a better position to accommodate the rising debt service costs associated with currency depreciation. On the other hand, issuers with mostly domestic revenue (i.e., domestic telecoms, construction companies and utilities) or net importers selling in domestic markets have typically lower foreign currency buffers. Our analysis suggests that sectors linked to exports and commodities, such as mining and oil and gas, explain a relevant portion of bond issuances since 2009. Still, there has been meaningful issuance activity associated with domestically-oriented sectors.

Fourth, consistent with evidence in Chui, Fender and Sushko (2014), balance sheet leverage ratios have clearly increased over the recent years, although they remain below the levels seen a decade ago. Part of the increase in debt ratios since 2010 has been a rebound from

earlier declines in leverage, and the rise in some instances debt has been offset by a fall in non-debt liabilities.

Fifth, debt servicing capacity has remained broadly stable, but there are areas of weakness that require close monitoring. Median interest coverage ratios (EBITDA/interest payments) appear robust in most of the LA-5 countries, but non-negligible subsets of firms exhibit lower ratios and thus appear more vulnerable to shocks. Quantitatively, these weaknesses are most relevant in some parts of the Mexican corporate sector, and in Brazil. Interestingly, however, Brazilian corporates have lived with below-average interest coverage ratios for a long time, and if anything, they feature somewhat stronger debt servicing capacity today than before the global financial crisis. One attenuating factor may be the important role of policy banks in Brazil, which typically lend at subsidized interest rates. Nonetheless, sectors and firms with particularly low buffers need to be monitored closely.

Sixth, bond issuance data point to cycles of investor risk appetite, but there is no indication of a general trend toward weaker issuer quality. We document episodes of exuberance as the share of low-rated companies underwent temporary increases, although the median rating of recently issued bonds is no worse than it has been on average over the past ten years, as earlier episodes of exuberance (such as late 2012/early 2013) were typically followed by periods of moderation. Nonetheless, monitoring marginal issuer trends can provide useful insights into the market's risk appetite for surveillance purposes, as well as maintaining awareness about the tendency towards pro-cyclical ratings.

Finally, we provide granular evidence that Latin American corporates have been building up debt through foreign subsidiaries and other off-shore vehicles, which would not be directly registered in residency-based external debt statistics or BOP flows. Off-shore issuance by emerging market firms is a novel channel through which vulnerabilities can potentially build up, and has received growing attention in policy-oriented analytical studies (Caballero and Powell, 2013, Avdjiev, Chui and Shin, 2014 and Chung *et al*, 2014). Our closer look at the data reveals that this phenomenon chiefly applies to Brazil in the Latin America sample considered, and that the timing of debt issuance through off-shore centers appears linked to capital controls measures, though more work is needed to establish causal relationships. For surveillance purposes, monitoring consolidated balance sheet data is important to better capture external debt issuance in off-shore centers, and augment the standard macro-level indicators of external indebtedness.

The paper is organized as follows. The next section describes the data sources. Section III provides an overview of issuance behavior in LA-5 countries. Section IV discusses leverage and debt-servicing capacity. Section V discusses changes in the liability structure of NFCs, and section VI concludes.

II. DATA

We use Dealogic as the data source for bond issuance, focusing on NFCs of LA-5 countries between 2003 and 2013. Dealogic allows the construction of an issuance-by-issuance cross-sectional database, offering a rich perspective not found in more aggregate information. The

database contains key information about each deal as reported by underwriting banks at the time of issuance such as the transaction size, maturity, coupon rate, currency, placement (foreign versus domestic issuance), yield to maturity, among other details. Dealogic also records information on the issuers' country of incorporation, parent ownership and parent nationality. This information is crucial for constructing residency- and nationality-based issuance measures. Distinction between domestic and foreign placement is based on the place/market in which underwriters are auctioning the security.

The paper also uses the Standard and Poors' Capital IQ as its second main data source, covering balance sheet, income and cash flow statements which are drawn from end-year reports leverage and interest coverage ratios. The sample covers non-financial corporation's in LA-5 (Brazil, Chile, Colombia, Mexico and Peru) countries between 2003 and 2013. The reports are originally in local currency, and later converted to U.S. dollars using end-of-period exchange rates. Table A1 at the appendix presents the sample size for each year in the Dealogic and S&P Capital IQ databases.

III. OVERVIEW OF NFCs BOND ISSUANCE IN LA-5 ECONOMIES

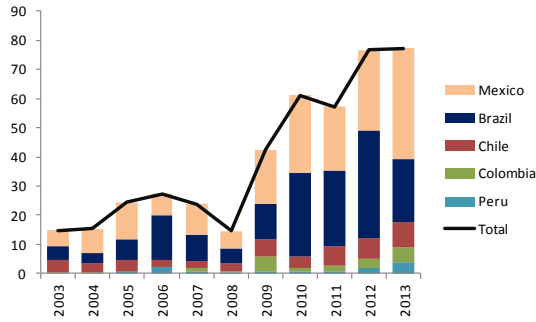
Gross bond issuance by NFCs in LA-5 countries increased from US\$ 15 billion in 2003 (approximately 1 percent of the combined GDP) to US\$77 billion in 2013 (1.8 percent of the combined GDP) totaling US\$435 billion over the entire period (Figure 1). NFCs from Brazil and Mexico have dominated LA-5 issuance (Figure 2): Mexico accounted for nearly 42 percent of NFC issuance between 2003 and 2013, followed by Brazil (39 percent), Chile (12 percent), Colombia (4 percent) and Peru (3 percent). NFCs from Brazil, Chile and Mexico started from a similar (absolute) base, but issuance has grown more rapidly in Mexico and Brazil.³ In Colombia and Peru, NFC issuance grew very fast, but from a low base.⁴

Quasi-sovereign NFCs have played an important role in foreign bond issuance (Panel A1), while foreign placements have led the increase since 2009 (Figure 1). Brazil appears to be an exception with domestic bonds showing up as an important driver. In part, this captures the development of local bond markets in Brazil. However, it also reflects the fact that the majority of foreign issuance associated with Brazilian NFCs has taken place through subsidiaries located outside the country. So, calculating total issuance based on a residency criterion misses a significant amount of bond issuance that can be linked back to Brazil on a nationality basis (Panel 1).

³ The National Development Bank of Brazil (BNDES) provided substantial funding to Brazilian companies through loans and equity injections after the global crisis. This is likely to have contributed to lower bond issuance amongst Brazilians NFCs than it would otherwise have been the case.

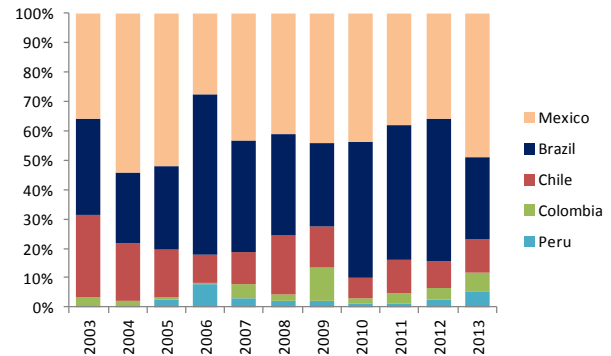
⁴ Information on who holds the NFC bonds in LA-5 economies is incomplete. Data from Bloomberg allows a view of bond holders associated to individual large issuances. The information relies on public filings requirements and coverage is better amongst U.S. holders. The data points to the importance of U.S. institutional investors. While some large investors such as PIMCO and Vanguard have leading positions, there is also non-negligible presence (often larger than 50 percent) of other investors such as small pension funds.

Figure 1. Nonfinancial Corporates Bond Issuance (In US\$ billion)



Sources: Dealogic; and authors' calculations.

Figure 2. Nonfinancial Corporates Bond Issuance (Country Distribution- Percent)



Sources: Dealogic; and authors' calculations.

The share of issuance explained by investment grade NFCs increased significantly since 2009 (Figure A2), which could be reflecting rating pro-cyclicality as issuer's assessed quality would be endogenous to the global funding environment. Nonetheless, high-frequency data indicates that the share of lower-rated corporates tapping the market has fluctuated significantly from month-to-month, particularly for Brazil and Mexico where episodes of exuberance and moderation can be identified (Figure A3). This indicates that markets remain subject to waves of optimism and moderation, despite a positive shift in the overall share of investment graders over the larger recent years, and that risk fluctuations triggered by low quality borrowers have not been eliminated.

The number of different NFCs issuing bonds has increased in Mexico and Brazil, but it has shown no clearly-defined trend for the other LA-5 countries (Figure A1). Value concentration amongst top issuers has generally declined after 2009, but at a much faster pace in Brazil which displays lower concentration in absolute terms and a higher number of issuers as well (Figures A1–A3).

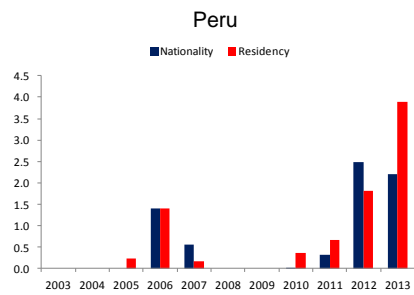
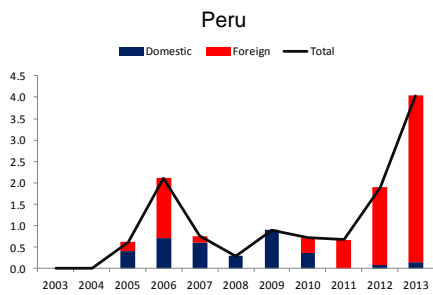
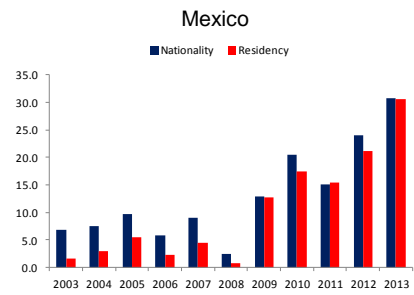
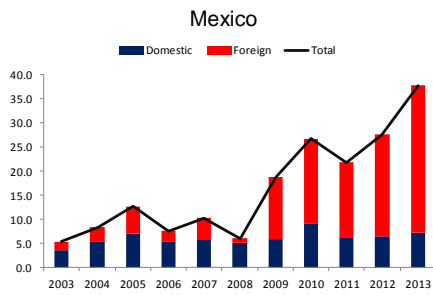
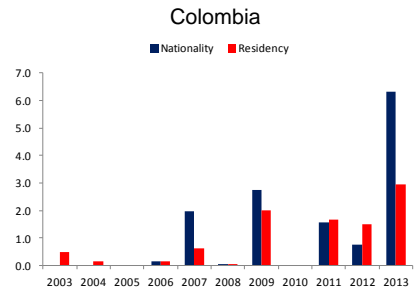
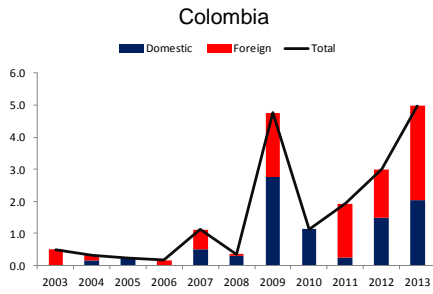
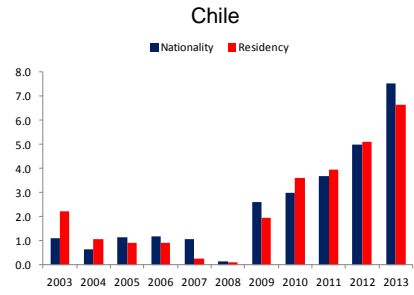
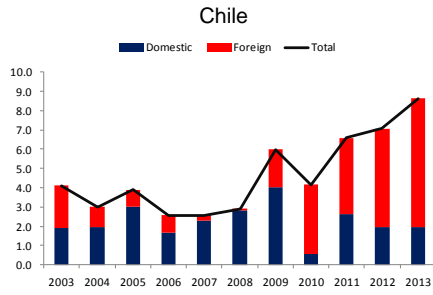
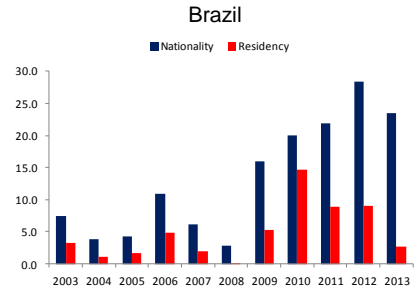
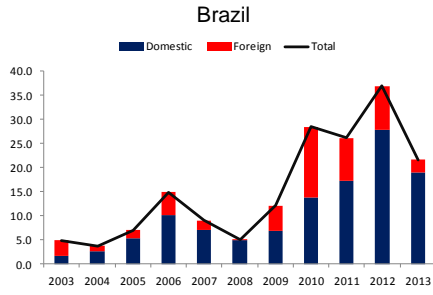
IV. LEVERAGE AND DEBT SERVICE CAPACITY

The median debt-to-equity ratio has increased in the past 4 years, offsetting the deleveraging periods earlier in the decade (Figure 3). Overall, the median corporate had about the same debt-to-equity ratio in 2013 as it did in early 2003. The weaker tails of the distribution do not suggest a stronger deterioration of the debt-to-equity ratio amongst the most leveraged companies (figures 3 and 4).

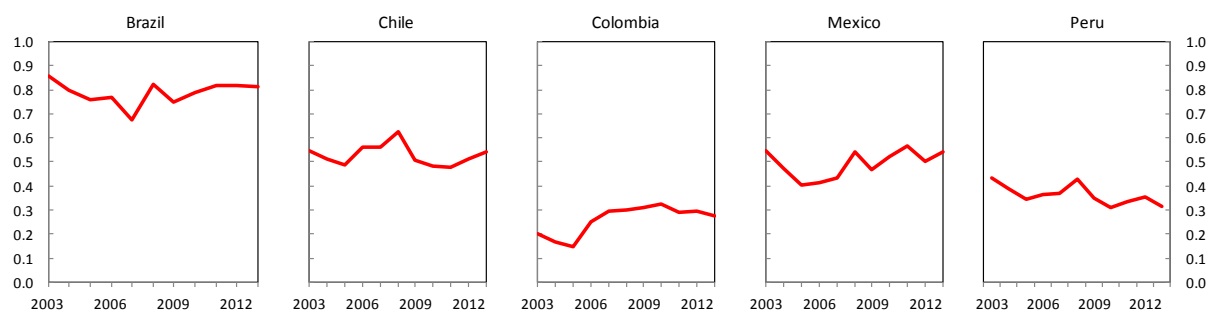
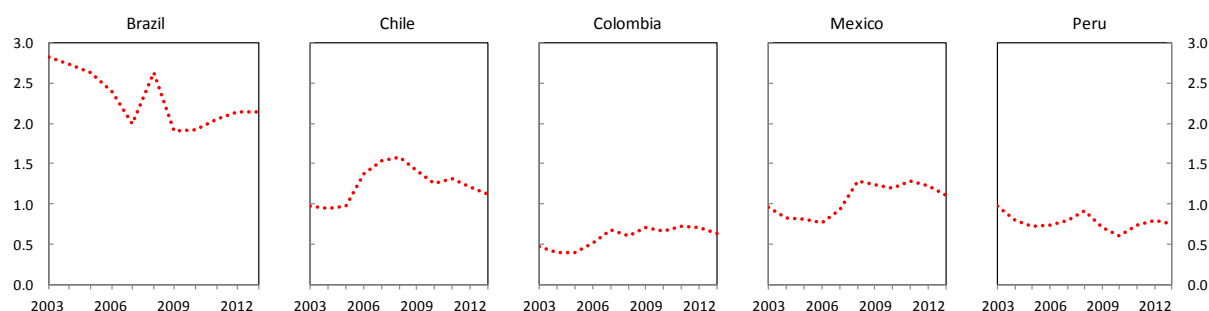
Panel 1

Foreign and Domestic Placements - US\$ Billion

Foreign Placement by Residency and Nationality - US\$ Billion



Sources: Dealogic; and authors' calculations. Issuer's nationality of incorporation as residency criterion. Nationality of ultimate parent as nationality criterion.

Figure 3. Median Debt to Equity Ratio**Figure 4. Weak Tail (25th Percentile) of Debt to Equity Ratio**

Sources: S&P Capital IQ; and authors' calculations. Debt-to-equity ratio is gross debt to total equity.

As of 2013, leverage was highest amongst Brazilian companies, followed by Chilean and Mexicans, while Colombia and Peru come after with lower leverage. Data suggests that subsidiaries have higher median leverage than its parents, except for Mexico. Firm size (proxied by total assets) appeared to be correlated with leverage only in Peru and Colombia; larger companies did not display relatively higher leverage in Brazil, Chile or Mexico (Figure A12).

Similar conclusions hold when considering the liability-to-asset ratio as a measure of leverage (figures A9 and A10). This ratio is subject to large swings if asset prices plunge under correction scenarios, but the broader concept on the numerator encompasses non-debt obligations and can capture liability composition shifts associated with non-debt liabilities. The latter would include items such as account payables or short-term credit lines. Asset-weighted medians for both leverage ratios also support the findings that deterioration of leverage has so far not exceeded levels observed in early 2000s.⁵ Also, the results are robust when we restrict the sample to only continuously reported reports (balanced panel).

⁵ Asset-weighted medians unveil leverage at the median point of the total asset distribution. It is calculated by ordering firms from highest to lower leverage over the relevant category (for instance, country and year). The asset-weighted median corresponds to the leverage observed at the point in which the cumulative sum of total assets over the relevant category reaches 50 percent.

The net-debt-to-earnings ratio, as opposed to the other leverage measures considered above, points to a more marked increase in leverage over the decade, particularly for Brazil and Colombia (Figures 5 and 6). This measure combines stock (numerator) and flows (denominator) variables, and ultimately reveals that earnings growth has not kept pace with debt build-up, drawing attention to issues related to debt-servicing capacity and liquidity. In that regard, however, median interest coverage ratios (EBITDA/gross interest payments) have remained either stable or improved somewhat over the decade. The weaker tail of the debt-servicing capacity distribution has also remained broadly stable (Figure 5).⁶

Figure 5. Net Debt to Earnings

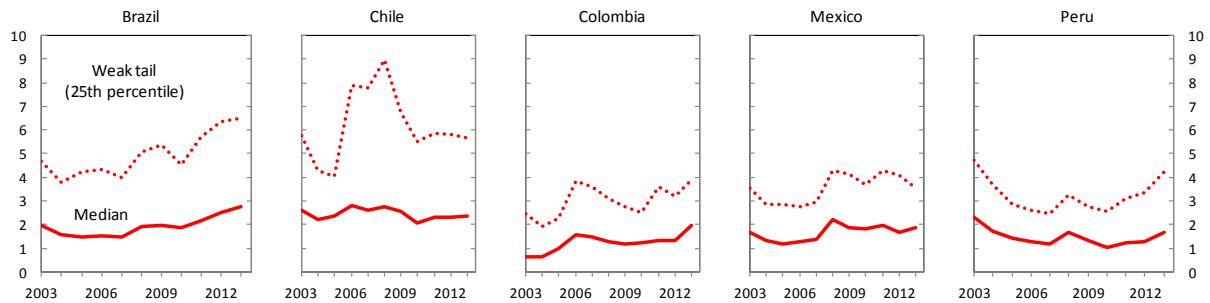
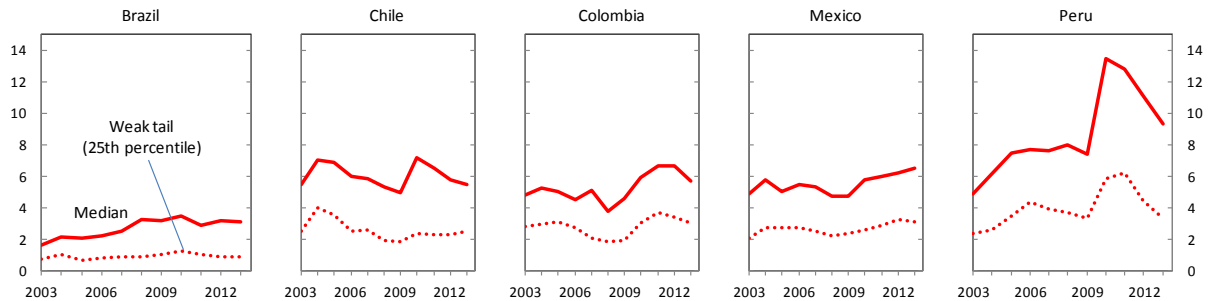


Figure 6. Interest Coverage Ratio



Sources: S&P Capital IQ; and authors' calculations. Figure 5: Net debt-to-earnings before interest, taxes, depreciation and amortization (EBITDA). Figure 6: Earnings before interest, taxes, depreciation and amortization (EBITDA) to interest expense.

Lower borrowing costs more recently has compensated for slower earnings growth. Going forward, however, the global financing environment is expected to become less favorable and borrowing costs for new lending should go up, though this could be partially offset due to stronger prospects for growth in the advanced economies. Overall, the subdued growth outlook for Latin America, and structural growth challenges faced by each LA-5 country, create downside risks for the financial strength of companies. In this context, despite no clear deterioration in debt-service capacity, firms could still find it challenging to withstand a prolonged environment of depressed earnings. In addition, even if leverage indicators do not point to excessive debt burdens currently, liquidity challenges could feed into higher leverage in the absence of earnings growth.

⁶ Similar conclusions hold when debt-servicing capacity is measured using EBIT, instead of EBITDA.

While firm debt has contributed to capital expenditure, it has not led to an investment surge. Data shows that capital expenditures as a proportion of total debt has followed an increasing trend, and that most leveraged firms have not shown relatively higher investment rates (Figures 7, 8 and A13). In addition, firms have increased significantly their level of cash holdings over the last decade. In 2013, the median firm cash holdings in all LA-5 countries corresponded to twice the amount necessary to cover its gross interest payments. Cash does not appear to be used more intensively by firms with lower debt servicing capacity—cash holdings are higher amongst firms with better debt servicing capacity. This situation implies greater their resilience to liquidity shocks, but also signals a limited investment appetite that is feeds into the subdued outlook for growth for the region. In this context, the data suggests that the increase in issuance partly reflected an opportunistic behavior, whereby firms seized the chance to lock in historically lower rates.

Figure 7. Investment to Total Debt

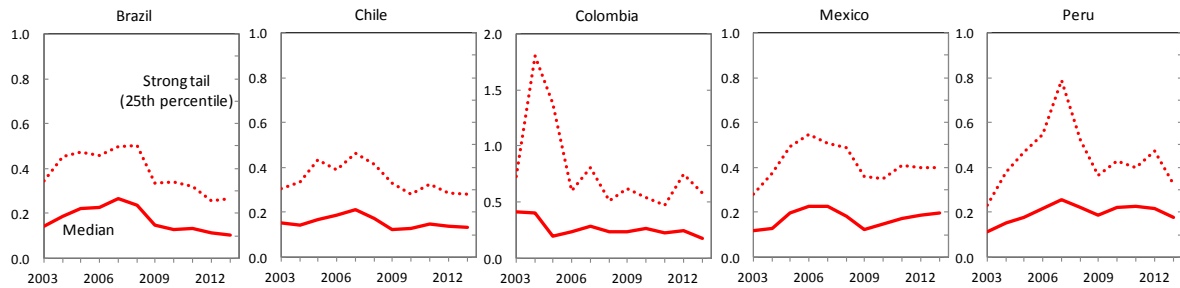
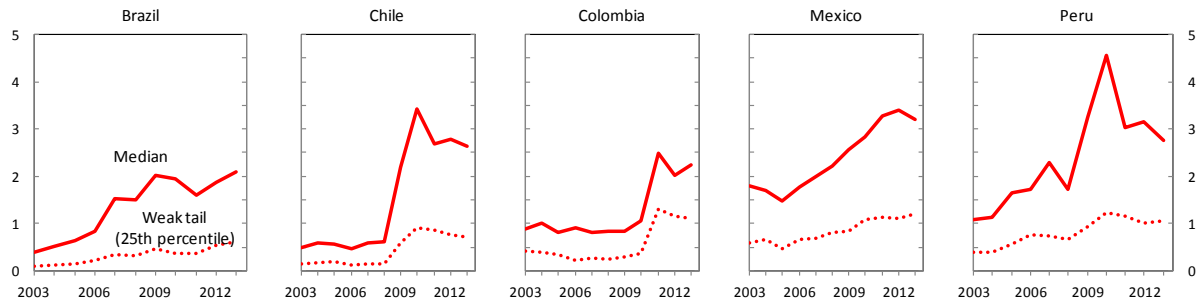


Figure 8. Cash To Gross Interest Expenses

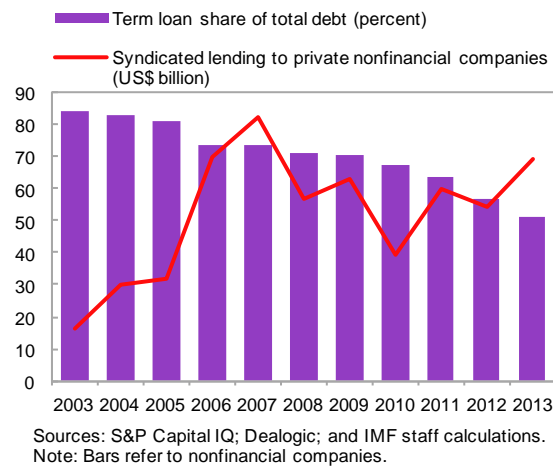


Sources: S&P Capital IQ; and authors' calculations.

V. SHIFTS IN LIABILITY STRUCTURES

Increased bond issuance has been accompanied by changes on the liability structure of NFCs. These changes have reflected both new supply-side conditions and active liability management by companies. On the supply-side, banks have cut back on the pace of cross-border lending, which has been an important source of firms' funding in the past. This has been caused by efforts to clean and deleverage balance sheets in the aftermath of the financial crises and by stricter regulatory rules, which are likely to be a permanent feature of bank activity. Data shows that bank terms loans as a share of total debt have declined amongst NFCs in LA-5 countries. Similarly, the volume of syndicated lending to private non-financials has reduced in 2008 and, although generally rising, has not recovered yet to the levels observed in 2007 (Figure 9).

Figure 9. LA5: Corporate Term Loan Financing

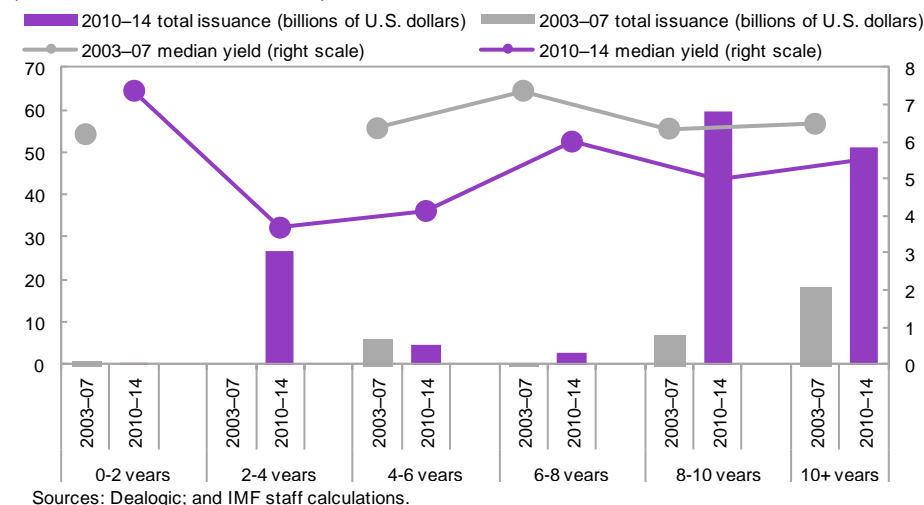


NFCs have also taken advantage of the favorable financing environment to manage their liabilities. Issuance volume increased across maturity ranges, indicating that firms had more options to shape their liability maturity profile (Figures 10 and A14). The increase in maturities above 8 years is noticeable and shows that firms were able to access longer-term funding through capital markets. The ability to issue short-term bonds at low rates has also been exploited, playing important role for management/repayment of more expensive short-term debt and other non-debt liabilities.⁷

⁷ Figure A11 shows that Non-debt liabilities as a proportion of total liabilities have decreased in Brazil and Mexico after 2009.

**Figure 10. LA5: Investment Grade Yield Curves for Nonfinancial Companies—
Fixed-Rate Dollar-Denominated Bonds**

(Percent unless otherwise noted)



The funds associated with the increased bond issuance have served different purposes: long-term financing, replacing more expensive debt, and opportunistic issuance to constitute buffers. So aggregate measures, such as median maturities in Figure 10, may not convey the full story. An assessment of company-specific bond issuance histories strengthens the evidence of increasing ability to place larger volumes at lower interest rates without incurring in maturity shortening or floating rate risk. (Figures A15 to A18).

Foreign Currency Exposures

Notwithstanding these benefits, the increased bond issuance has carried risks. The surge in bond issuance in international capital markets has meant greater reliance on foreign currency debt, a source of vulnerability amply discussed in the literature (for example, Calvo (2001)). Such concern is particularly relevant as Latin American currencies may face exchange rate depreciation pressures in a context of slowing Chinese growth and rising international interest rates.

Assessing the extent of currency risk for a NFC is not simple. It requires a comparison between “net foreign currency–denominated liabilities and the net present value of domestic currency–denominated cash flow” (Eichengreen, Hausmann and Panizza (2003)). So to quantify the impact of exchange rate depreciations it is necessary to track their effect over time on the revenue and asset side as well. This requires granular financial information on NFCs which is not readily available in a comprehensive fashion in most countries, and remains an open area of investigation. In addition, the lack of systematic and publicly-available detailed data on FX derivative positions further clouds the analysis. For the case of Mexico, however, (IMF, 2014) provides a comprehensive data on firms’ foreign currency and interest rate exposures.

Bond issuance by sector can shed additional light into the question. In principle, the impact of currency depreciations would be more harmful amongst the NFCs in more domestically-oriented sectors or whose cash flows is primarily in local currency. The data shows that sectors linked to exports and commodities, such as mining and oil and gas, explain a relevant portion of annual issuances since 2009. On the other hand, there has been meaningful issuance activity associated with domestically-oriented sectors—for instance, Brazilian and Mexican NFCs in the construction sector have together issued approximately US\$3.5 billion after 2009; NFCs from Chile in the retail sector respond for 15 percent of total issuance since 2011 (Panel A4).

Overall currency exposure from NFC foreign issuance has been partly mitigated by the increase in international reserves in the region. Going forward, caution is needed so that these reserves do not become a source of moral hazard behavior in the private sector. The reserves provide countries with strong ammunition to mitigate excessive volatility and/or to smooth equilibrium adjustments in the exchange rate, but a false expectation of currency stability can induce excessive risk-taking in the private sector and/or amplify currency corrections when adjustment cannot be delayed anymore. Ultimately, exchange rate flexibility is the most efficient incentive for NFCs to manage risks pro-actively (Kamil (2012)).

VI. ISSUANCE THROUGH FOREIGN SUBSIDIARIES

Residency criterion, used in the compilation of balance of payment statistics and aggregate external positions, could mask the build-up of private sector foreign liabilities associated with a particular country when foreign subsidiaries are used for issuing abroad. The nationality-based criterion would capture the increase of foreign liabilities that are linked to a country given the nationality of the parent company, regardless of the location of issuing subsidiaries. Based on Bank for International Settlements data on international debt securities, Turner (2014) and Shin (2013) have highlighted the phenomenon of issuance abroad by nationals of Brazil and China. Brazil and China have significantly higher levels of outstanding international debt securities measured under the nationality-based criterion than under the residency-based criterion. Such differences have existed since the early 2000s, but it has increased strongly after 2010. Shin argues that international debt issuance involving foreign subsidiaries could be serving different purposes, from hedging U.S. dollar receivables to allowing for speculative carry trade, while potentially increasing currency mismatches.⁸

We information on the location of issuer and location of the parent company from Dealogic to construct residency and nationality issuance measures. The difference between the two criteria is not meaningful for Mexico, Chile and Peru, while in Colombia there has been a wedge in 2013 only. In contrast, the data confirms Shin's findings for Brazil: external

⁸ From a systemic risk perspective, Shin notes that corporate deposits in the domestic banking systems have increased along with offshore issuance. So corporate distress can trigger withdrawals and shocks to the banking sector at home. In addition, aggregate shocks leading to deterioration of economic fundamentals can reduce the appetite of asset managers for holding EM corporate bonds in general. This, in turn, would limit corporate funding under adverse scenarios, and induce downward adjustments in capital expenditures that would further weaken economy-wide growth prospects and fundamentals.

issuance of Brazilian NFCs has been substantially larger under the nationality criterion than under the residency. There has been a long-standing difference between nationality-based and residency-based foreign bond placements in Brazil. However, the difference between the two measures has widened substantially after 2009, which coincided with the post-global crisis environment of ample liquidity.

The growing wedge between residency and nationality criteria since 2010 has coincided with stepped up efforts from the Brazilian government to mitigate currency appreciation pressures through capital control measures (figure A5). In particular, between early 2011 and early 2012, the government progressively increased the maturity of the debt issued abroad subject to foreign exchange taxation. Because foreign subsidiaries are non-residents from a balance of payments perspective, they would not be subject to the tax unless the proceeds were repatriated. Interestingly, issuance through Cayman Islands has increased after the tax tightening, and reduced after the tax loosening between 2010 and 2012. In addition, FDI intercompany loans (one possible repatriation channel of the proceeds from foreign issuance) have increased after tax loosening as well, while portfolio and FDI-equity stabilized (figure A6).⁹

More work is necessary to establish causal relationships, but evidence suggests that structural incentives may be at play. Anecdotal evidence suggests that the regulatory environment, including the foreign exchange legislation, could be the source of complexities which contribute to NFCs' decision to issue abroad through foreign subsidiaries. In contrast, another driver could be the fact that the bulk of foreign issuance is led by global Brazilian companies who have set up subsidiaries abroad to carry out its international operations.

VII. CONCLUSIONS

Bond issuance from NFCs in LA-5 economies has been increasing over the past decade, more significantly after 2009. Companies have had greater space to manage liabilities, raising cheaper funds across different maturities without increasing floating-rate debt. Strong bond issuance has contributed to financial markets development in LA-5 economies, as NFCs had to meet more stringent regulatory and disclosure pre-requisites to issue publically-traded securities. This is important given the low domestic savings of the region and that capital markets and non-bank financial institutions are expected to play a greater financing role in the future given stricter banking regulatory requirements.

NFC foreign-currency debt has increased, but assessing currency risks at the firm level remains an area of on-going research. Data gaps preclude a comprehensive assessment of the implications from exchange rate depreciations to firm revenues, as well as the extent to which financial market hedging is in place. From a more aggregate perspective, foreign issuance has been strong in sectors with revenues linked to foreign currency (natural hedges).

⁹ This paper focuses on NFCs, but it is worthy of note that issuance through Cayman Islands by Brazilian financial corporations merits a separate analysis as well. As an illustration, Figures A7 and A8 indicate a less clear association between issuance and foreign exchange rate tax from a timing perspective, but show that banks have been issuing at lower maturities than NFCs more recently.

On the other hand, domestically-oriented sectors (such as construction) have also incurred in foreign currency debt and potential currency risks originating in the financial sector remains hard to write off—particularly from non-bank financial institutions which are less regulated.

The data does not suggest flagrant financial excesses in terms of leverage and debt-servicing capacity, but there is no room for complacency. Further increases in leverage would be a cause for concern after the recent re-leveraging observed. NFC debt has outpaced earnings and capital expenditure growth, while cash holding levels have increased. This bodes poorly for growth and possibly reflects structural impediments that are beyond financing, though it also means the firms have some liquidity buffers. The current outlook of subdued regional growth coupled with the expected normalization of U.S. monetary policy reinforces concerns about NFCs financial strength and performance going forward. Even if major financial stress is avoided, NFCs may not necessarily escape mediocre performance despite the period of cheap funding.

Macro policy frameworks also play an important role in cushioning near-term economic volatility stemming from global developments such as the normalization of U.S. monetary policy. Exchange rate flexibility is critical. Large international reserves enable governments to limit excessive exchange rate volatility, but providing full insurance against currency fluctuation may discourage pro-active currency risk management. Authorities face the challenge of balancing intervention and adjustment, resisting the temptation of delaying the latter when fundamentals call for it.

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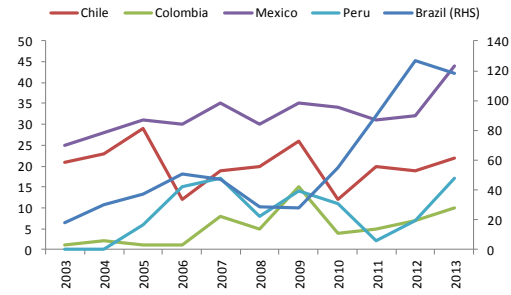
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ANNEX

Table A1. Sample Size: NFCs' Bond Issuance and Financial Statements						
	Bond Issuance from Dealogic				Financial Data from Standard and Poors' Capital IQ	
	Number of Issuance by Residency of Issuer		Number of Issuance by Nationality of Parent		No. of firms Reporting Debt to equity	No. of firms Reporting Interest Coverage
	Domestically Placed	Foreign Placed	Domestically Placed	Foreign Placed	Ratios	Ratios
Brazil						
2003	16	18	18	33	438	357
2004	28	7	24	18	473	386
2005	36	7	28	15	528	420
2006	38	21	34	28	547	439
2007	42	7	38	19	556	472
2008	30	1	27	9	540	482
2009	23	8	17	15	520	468
2010	48	20	33	31	514	466
2011	90	13	77	25	484	441
2012	124	18	108	35	448	410
2013	125	6	106	23	415	380
Chile						
2003	29	6	17	3	206	195
2004	23	3	19	2	218	209
2005	33	2	30	3	223	210
2006	11	3	14	3	379	329
2007	18	1	17	4	395	340
2008	25	1	22	1	389	334
2009	29	5	25	6	381	323
2010	4	9	4	9	374	311
2011	14	7	12	6	357	300
2012	14	7	14	7	346	299
2013	14	13	15	15	337	288
Colombia						
2003	0	1	0	0	36	15
2004	1	1	0	0	41	22
2005	1	0	1	0	45	26
2006	0	1	0	1	55	37
2007	9	1	6	4	58	38
2008	4	1	3	1	59	38
2009	19	2	16	3	66	48
2010	6		6	0	68	50
2011	2	3	1	3	66	54
2012	6	2	4	1	63	55
2013	8	4	5	9	54	48
Mexico						
2003	38	4	36	15	133	119
2004	38	7	37	10	140	121
2005	41	15	37	18	145	127
2006	34	8	33	11	142	123
2007	28	13	27	15	142	124
2008	32	4	32	5	144	129
2009	26	24	22	24	147	138
2010	26	26	22	23	149	139
2011	29	22	25	21	146	133
2012	22	31	18	30	144	130
2013	32	39	29	42	128	120
Peru						
2003	0	0	0	0	118	112
2004	0	0	0	0	127	117
2005	15	1	8	0	134	127
2006	33	2	5	2	146	140
2007	37	1	20	1	156	144
2008	21	0	7	0	159	144
2009	37	0	13	0	150	143
2010	9	4	5	1	150	139
2011	0	2	0	1	152	138
2012	3	6	0	9	143	131
2013	8	12	5	8	124	114

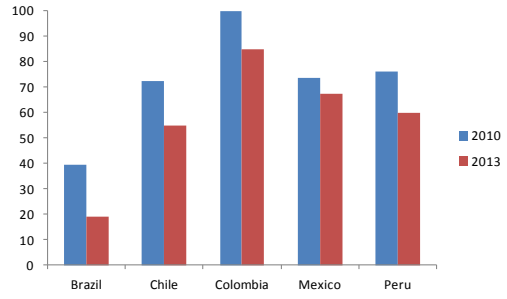
Source: Dealogic and S&P Capital IQ

Figure A1. Number of NFC Issuers (Units)



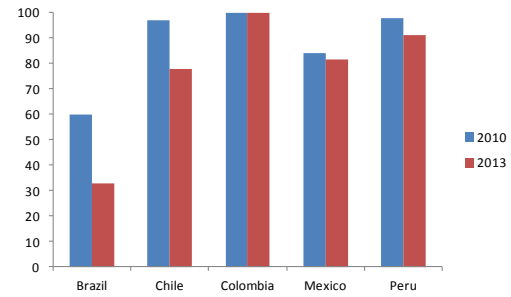
Sources: Dealogic; and authors' calculations.

Figure A2. Share of Issuance by Top 5 Issuers (Percent)



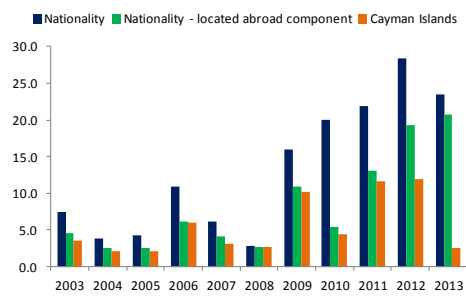
Sources: Dealogic; and authors' calculations.

Figure A3. Share of Issuance by Top 10 Issuers (Percent)



Sources: Dealogic; and authors' calculations.

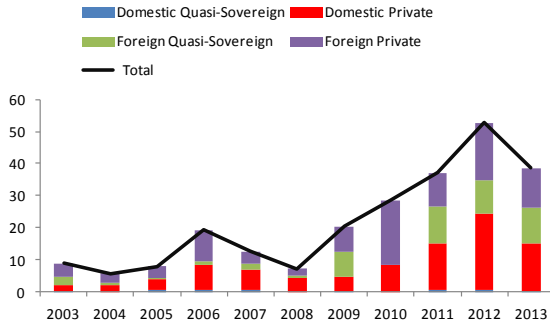
Figure A4. Brazil: Foreign Placement - Nationality (Percent)



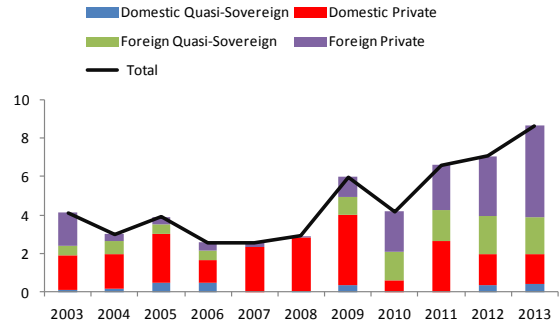
Sources: Dealogic; and authors' calculations.

Panel A1 Issuance Breakdown – US\$ billion

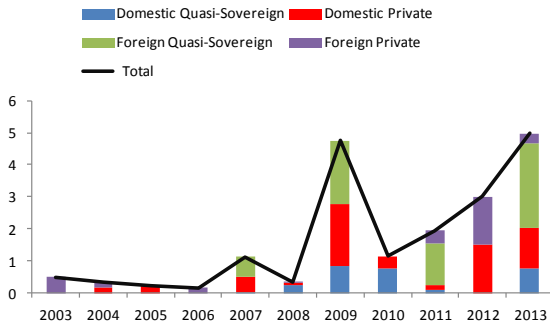
Brazil (Nationality)



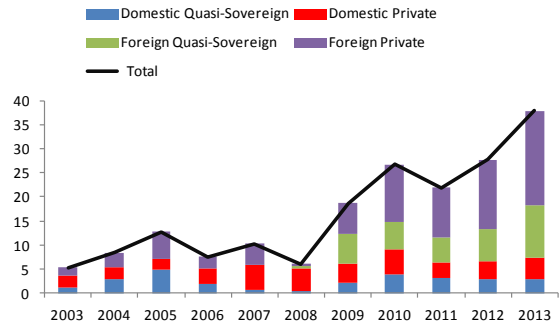
Chile



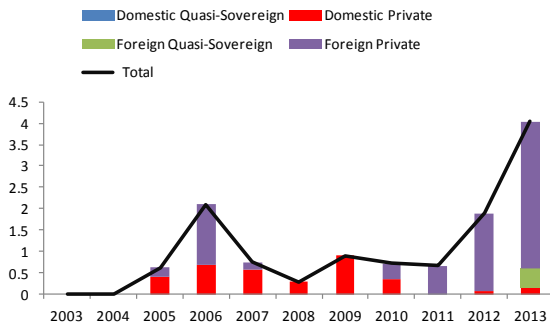
Colombia



Mexico



Peru



Sources: Dealogic; and authors' calculations.

Figure A5. Issuance from Nonfinancial Corporates incorporated in Cayman Islands whose Parent is Brazilian (US\$ billion)

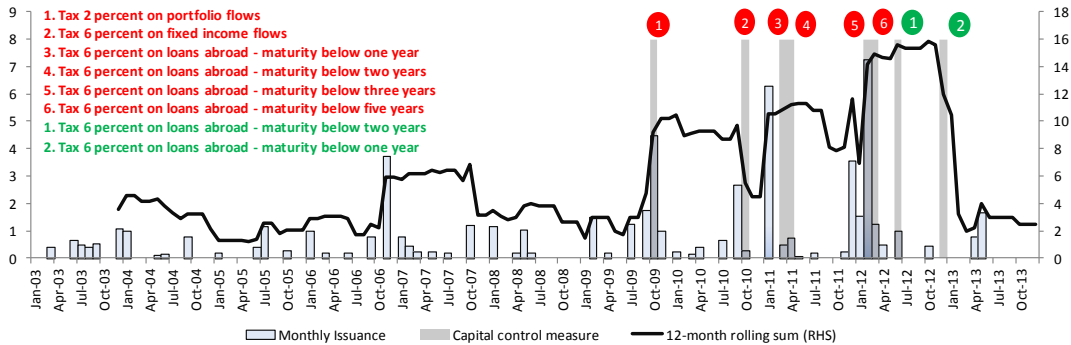


Figure A6. Brazil - Selected Foreign Liabilities (Stock) (US\$ billion)

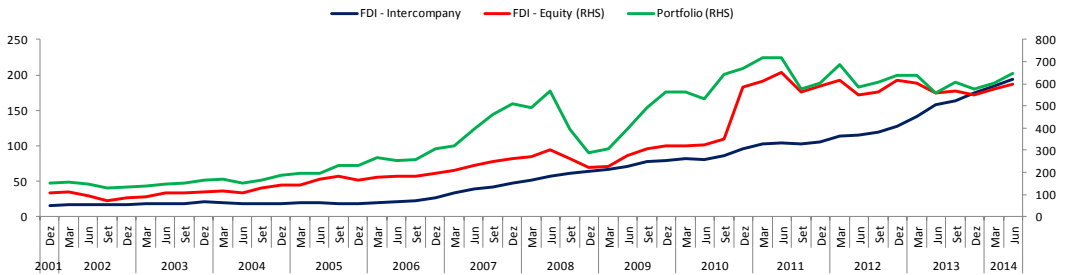


Figure A7. Issuance from Financial Corporates incorporated in Cayman Islands whose Parent is Brazilian (US\$ billion)

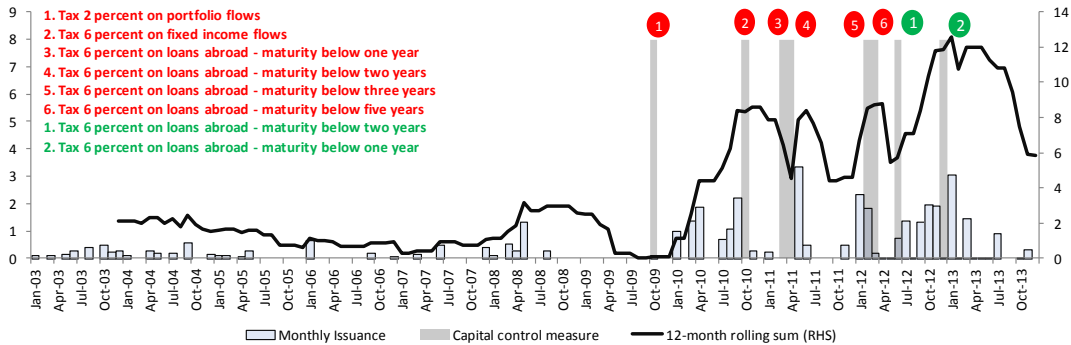
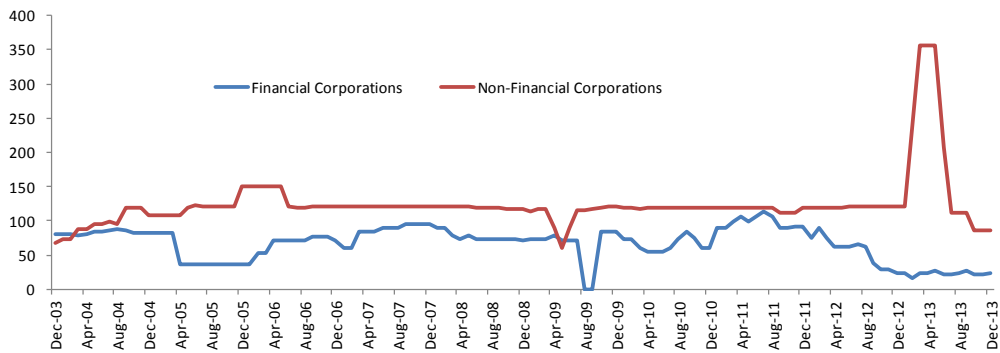
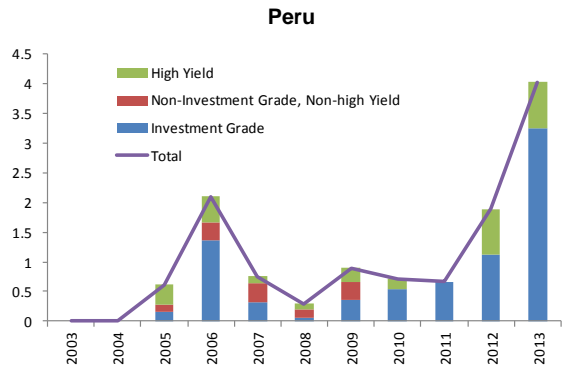
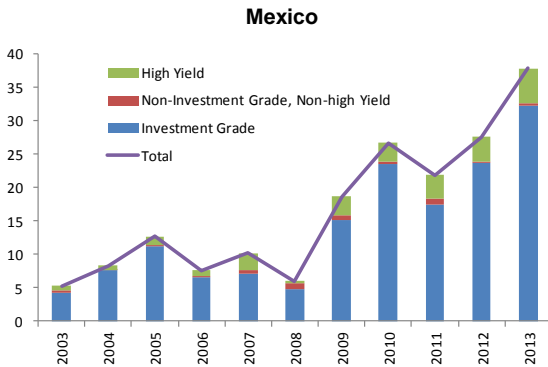
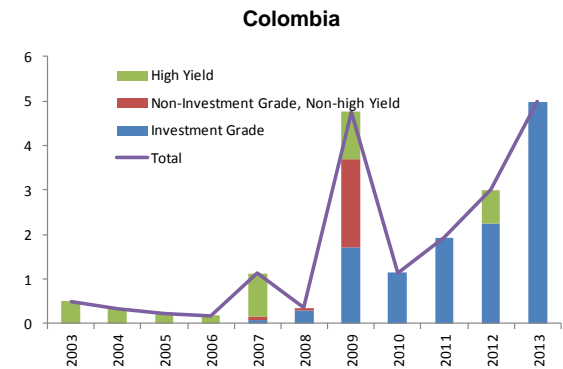
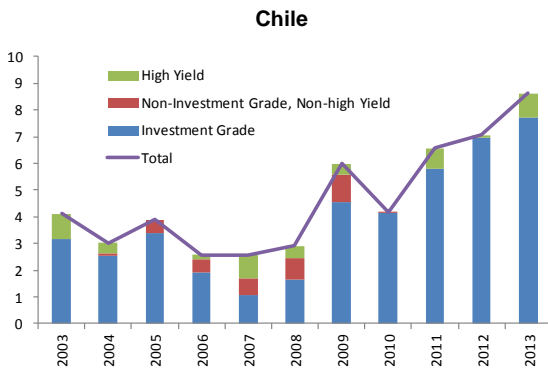
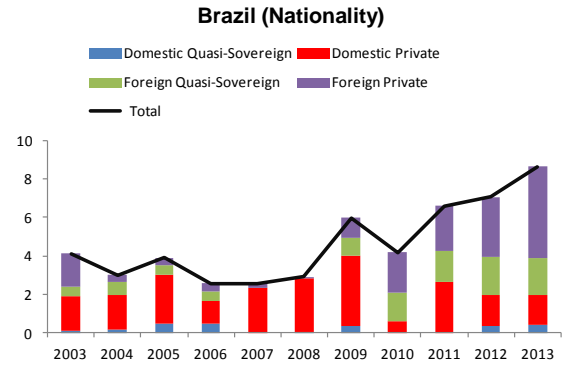
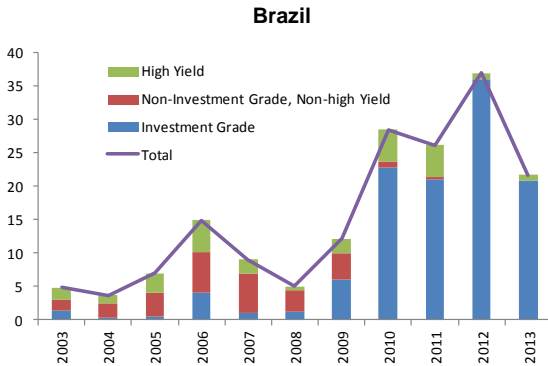


Figure A8. Maturity at Issuance (median over the previous 12 months) (Months)



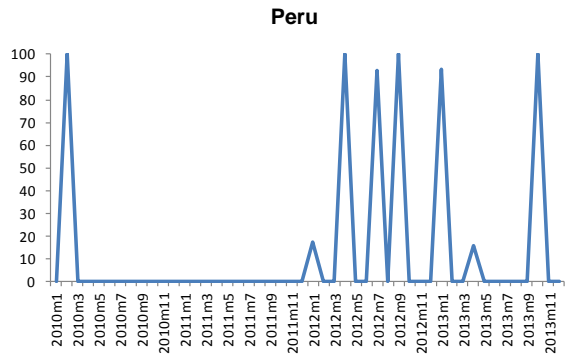
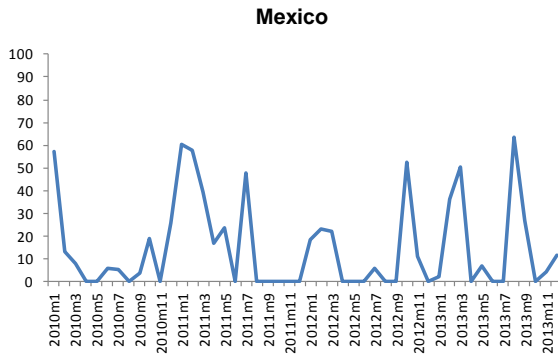
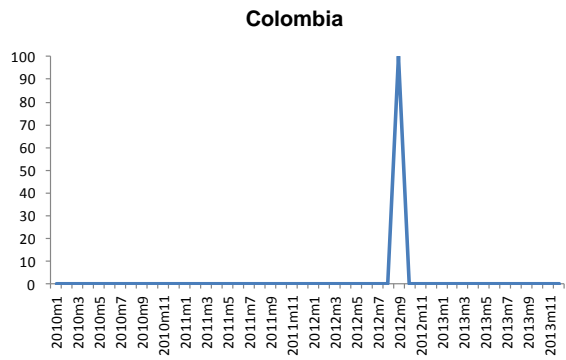
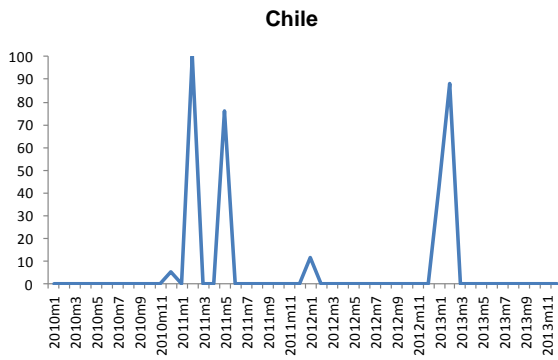
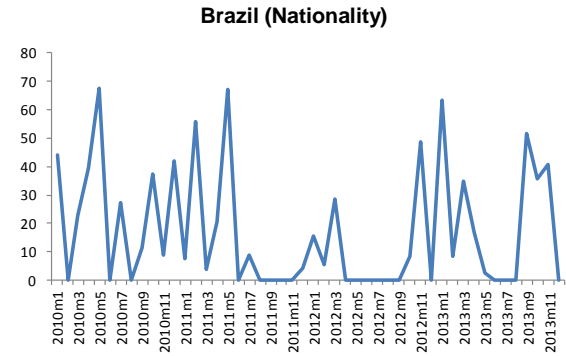
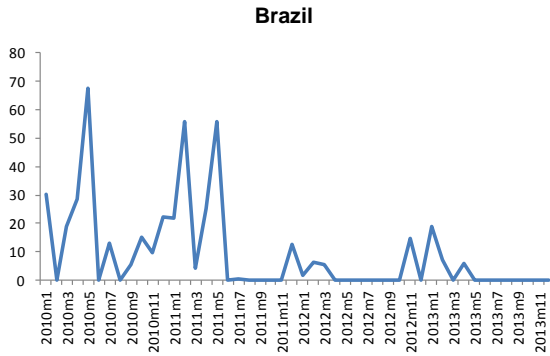
Sources: Dealogic; Brazilian Central Bank; authors' calculations.

Panel A2
Issuance by Issuer's Rating Grade
(US\$ billion)



Sources: Dealogic; and authors' calculations.

Panel A3
Percent of Non-Investment Grade Issuance (Monthly)
(Percent)



Sources: Dealogic; and author s'calculations.

Figure A9. Median Liability to Asset Ratio

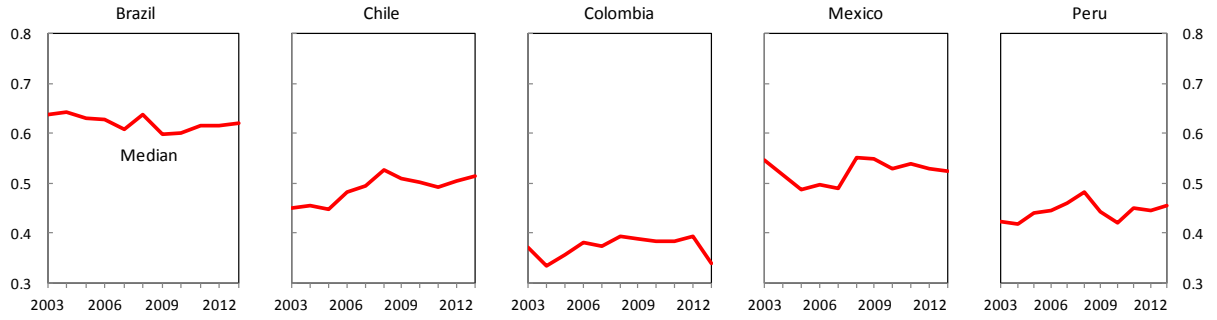


Figure A10. 75th Percentile (Weak Tail): Liability to Asset Ratio

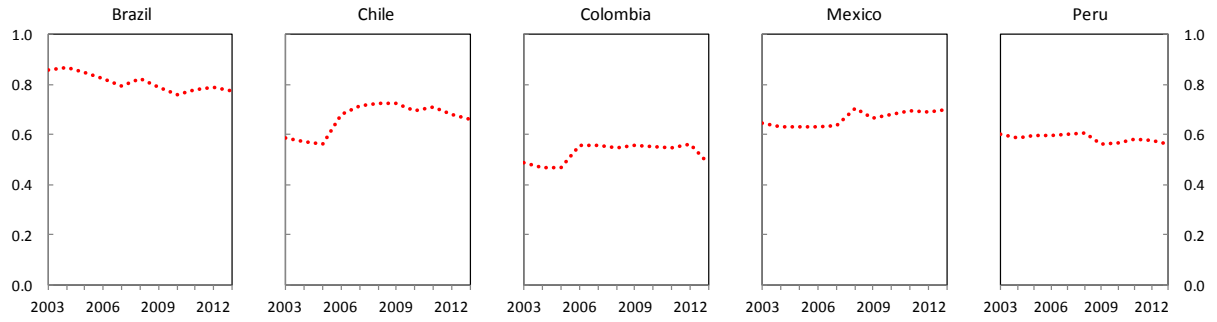
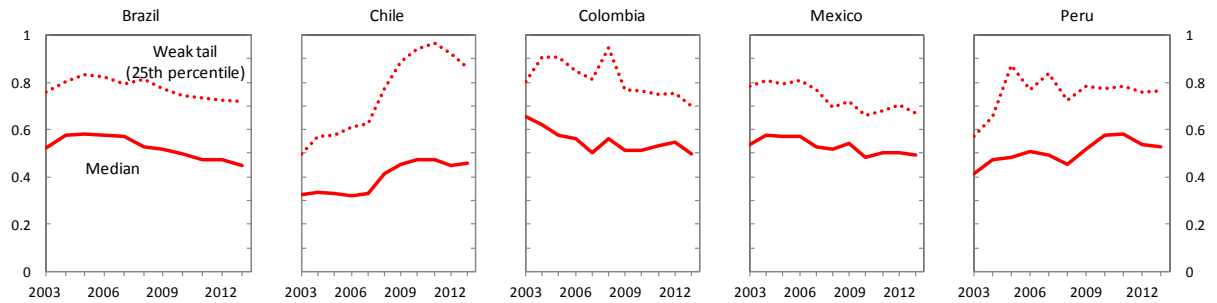


Figure A11. Non-Debt Liabilities to Total Liabilities



Sources: S&P Capital IQ; and authors' calculations.

Figure A12

Cross Distribution of Leverage and Company Size in 2013

Debt to equity - percentage by percentile range combination
(lower) <----- leverage -----> (higher)

Total assets - percent by percentile range combination
(larger) <----- company size (asset-based) by country -----> (smaller)

Percentile	0-25	25-50	50-75	75-100	sum	Obs
Brazil						
0-25	11%	3%	3%	8%	25%	414
25-50	7%	4%	7%	7%	25%	
50-75	5%	9%	7%	4%	25%	
75-100	3%	10%	8%	5%	25%	
sum	25%	25%	25%	25%	100%	
Chile						
0-25	14%	4%	3%	5%	25%	337
25-50	7%	7%	4%	7%	25%	
50-75	3%	8%	6%	8%	25%	
75-100	1%	7%	12%	5%	25%	
sum	25%	25%	25%	25%	100%	
Colombia						
0-25	15%	4%	6%	2%	26%	54
25-50	6%	11%	0%	7%	24%	
50-75	4%	4%	9%	9%	26%	
75-100	2%	6%	11%	6%	24%	
sum	26%	24%	26%	24%	100%	
Mexico						
0-25	9%	4%	5%	7%	25%	128
25-50	5%	9%	6%	5%	25%	
50-75	8%	5%	7%	5%	25%	
75-100	3%	7%	7%	8%	25%	
sum	25%	25%	25%	25%	100%	
Peru						
0-25	13%	6%	3%	3%	26%	125
25-50	6%	5%	10%	5%	25%	
50-75	5%	10%	3%	7%	25%	
75-100	2%	4%	9%	10%	25%	
sum	26%	25%	25%	25%	100%	

Source: S&P Capital IQ and staff calculation. The numbers indicate the percentage of companies in each combination of leverage and company size percentile range

Figure A13

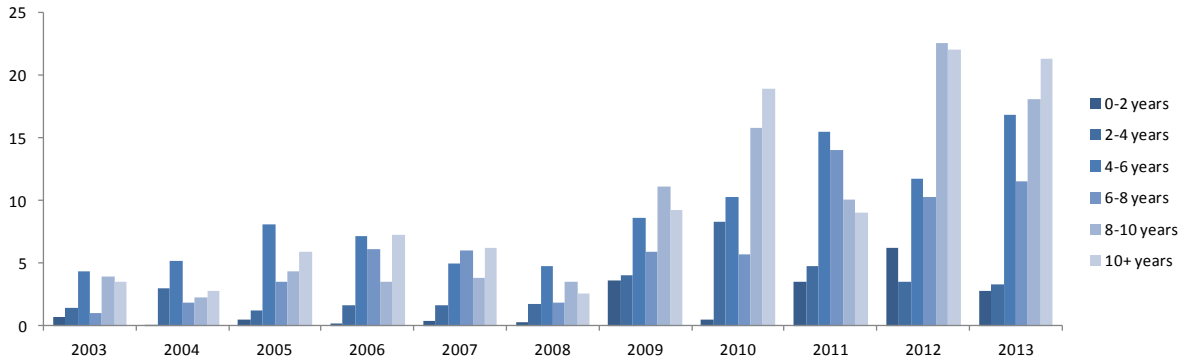
Cross Distribution of Leverage and Investment Level in 2013

Debt to equity - percentage by percentile range combination
(lower) <----- leverage -----> (higher)

Percentile	0-25	25-50	50-75	75-100	sum	Obs
Brazil						
0-25	7%	5%	7%	7%	25%	338
25-50	6%	7%	7%	5%	25%	
50-75	6%	7%	5%	7%	25%	
75-100	6%	6%	7%	6%	25%	
sum	25%	25%	25%	25%	100%	
Chile						
0-25	9%	2%	4%	9%	25%	272
25-50	6%	6%	6%	7%	25%	
50-75	7%	8%	7%	3%	25%	
75-100	3%	8%	8%	6%	25%	
sum	25%	25%	25%	25%	100%	
Colombia						
0-25	12%	4%	6%	4%	27%	49
25-50	4%	6%	8%	6%	24%	
50-75	4%	4%	8%	8%	24%	
75-100	6%	10%	2%	6%	24%	
sum	27%	24%	24%	24%	100%	
Mexico						
0-25	6%	4%	6%	10%	26%	121
25-50	8%	6%	7%	4%	25%	
50-75	5%	7%	9%	4%	25%	
75-100	7%	8%	3%	7%	25%	
sum	26%	25%	25%	25%	100%	
Peru						
0-25	7%	9%	4%	5%	25%	118
25-50	8%	6%	5%	5%	25%	
50-75	4%	6%	8%	8%	25%	
75-100	6%	3%	8%	7%	25%	
sum	25%	25%	25%	25%	100%	

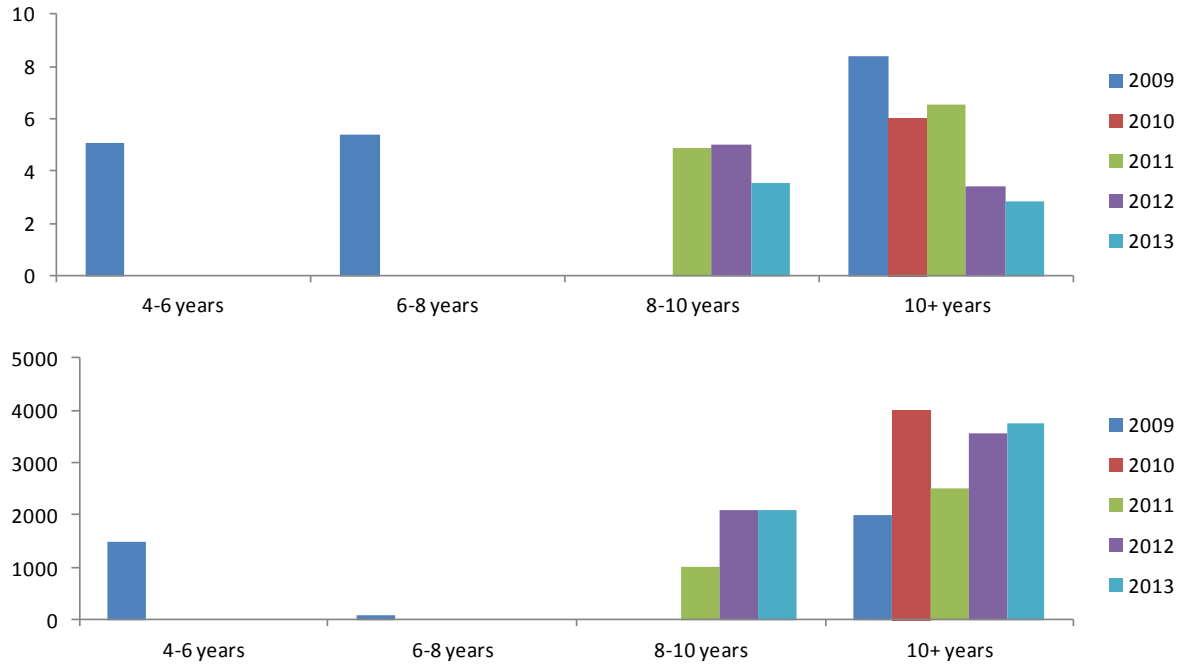
Source: S&P Capital IQ and staff calculation. The numbers indicate the percentage of companies in each combination of leverage and investment level percentile ranges

Figure A14. LA-5 Issuance by Maturity
(US\$ billion)



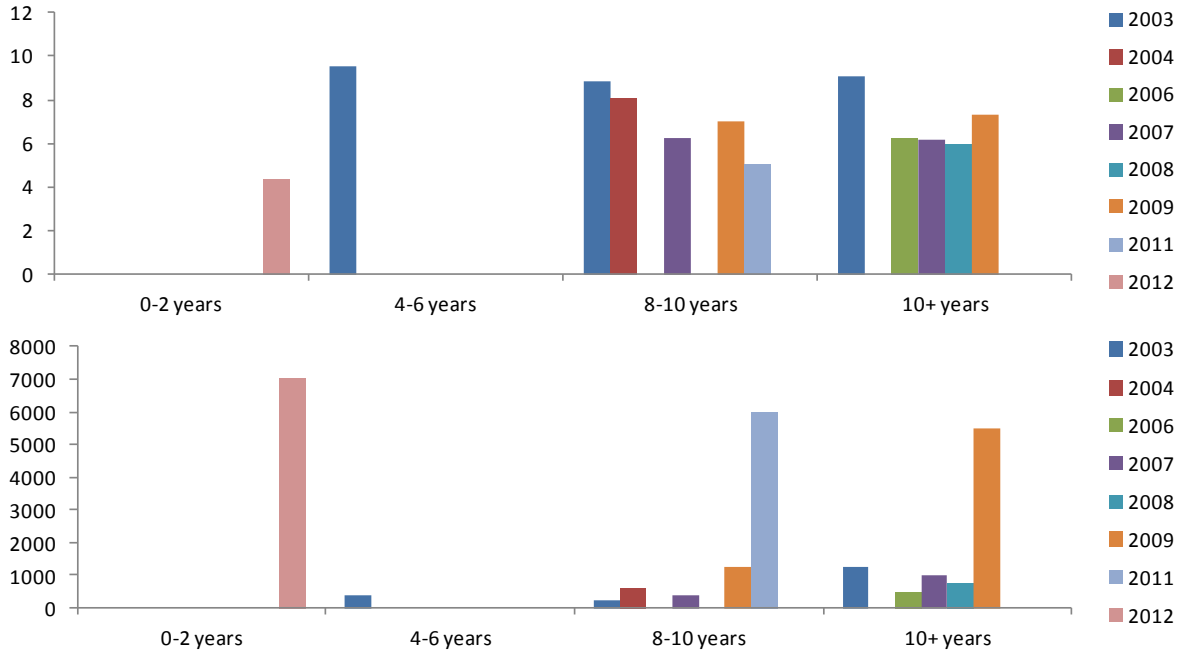
Sources: Dealogic; and authors' calculations.

Figure A15. PEMEX-Mexico Yield at Issuance by Term and Volume
(Foreign placement, fixed rate, dollar bond) Yield (top) and US\$ million (bottom)



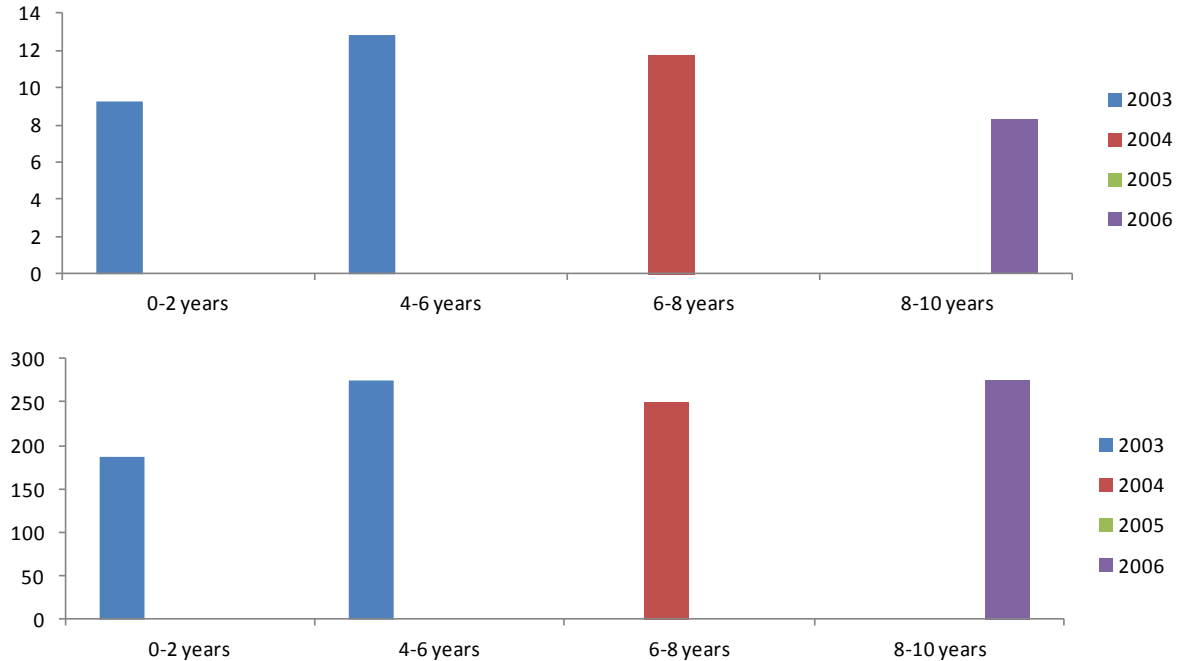
Sources: Dealogic; and authors' calculation.

Figure A16. Petrobras (Brazil - Cayman Islands subsidiary) Yield at Issuance by Term and Volume
 (Foreign placement, fixed rate, dollar bond) Yield (top) and US\$ million (bottom)



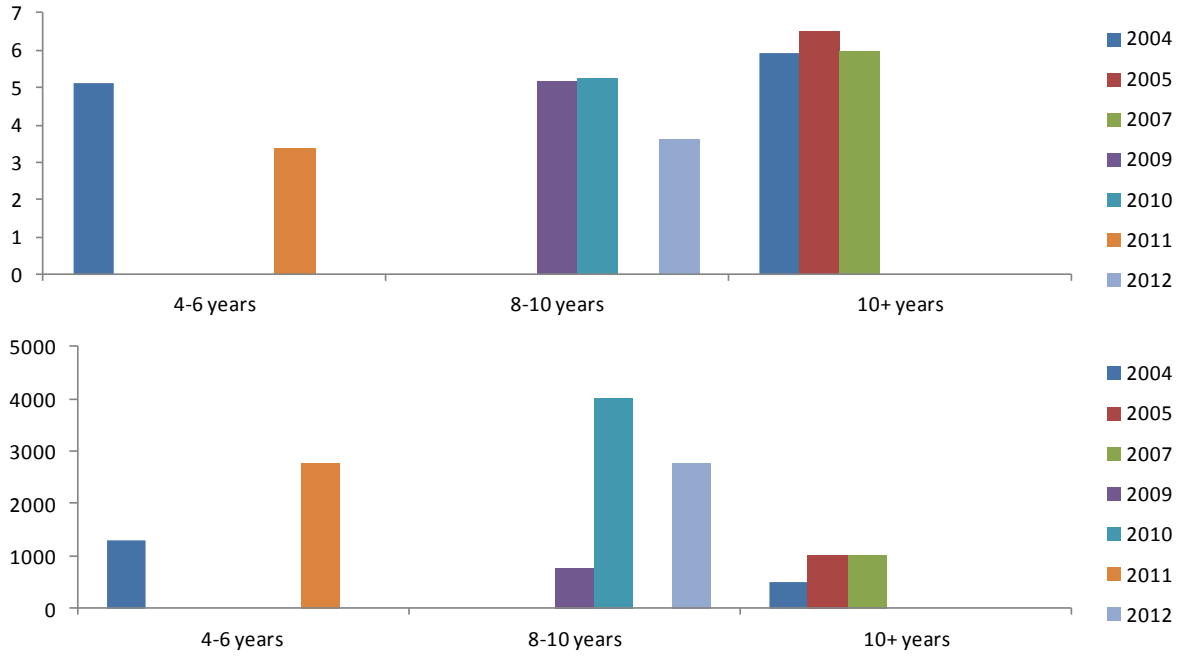
Source: Dealogic and author calculation

Figure A17. Braskem-Brazil Yield at Issuance by Term and Volume
 (Foreign placement, fixed rate, dollar bond) Yield (top) and US\$ million (bottom)



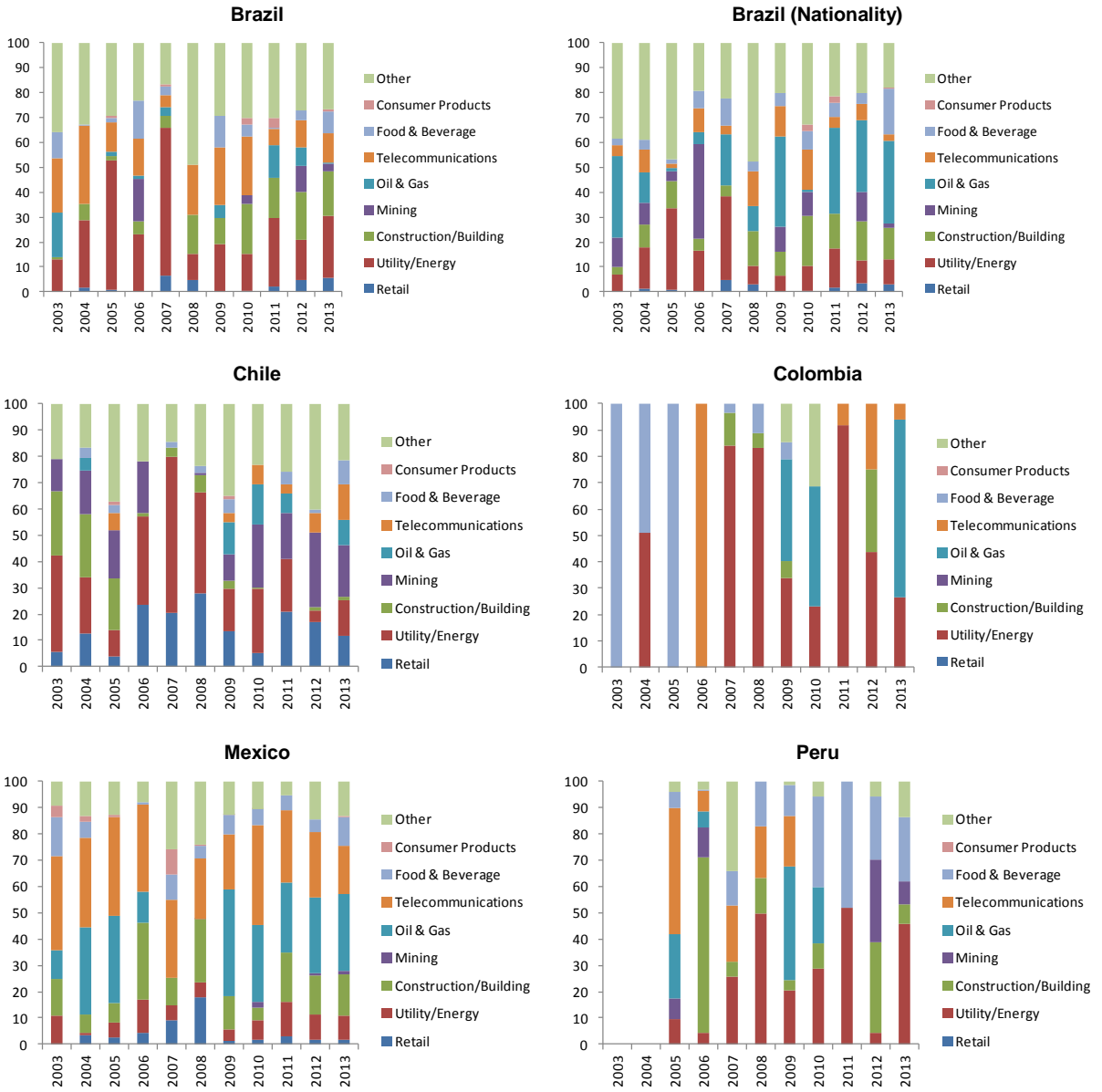
Sources: Dealogic; and authors' calculations.

Figure A18. America Movil - Mexico Yield at Issuance by Term and Volume
 (Foreign placement, fixed rate, Dollar bond) Yield (top) and US\$ million (bottom)



Sources: Dealogic; and authors' calculations.

Panel A4
Foreign Issuance by Sectors
(Percent)



Sources: Dealogic; and authors' calculations.