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The Boom in Corporate Borrowing after the Global Financial Crisis: Different Tales from East Asia and Latin America

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Firms from emerging economies increased their bond financing significantly after the 2008–09 global financial crisis. The patterns of corporate borrowing in East Asia and Latin America offer very different lessons. In East Asia, the main component behind the overall growth in bond financing was an expansion in domestic bond issuances, in domestic currency, by more and smaller firms. This expansion seems to be explained by a higher supply of funds by domestic investors, which lowered issuance costs. In Latin America, relatively larger firms tended to borrow from international markets issuing foreign currency bonds. These contrasting patterns have resulted in exposures to different types of risks. Risks in East Asia have been more related to the increasing debt accumulation by smaller firms, issuing debt at shorter maturities. Latin American firms have been more exposed to external factors and currency depreciations.

The Role of Domestic and International Bond Markets in the Two Regions

During the 1990s and 2000s, emerging market firms greatly expanded the amount of financing raised in bond markets. As a result of increased financial liberalization in emerging economies, international issuances were a key component of this expansion (World Bank 2005). International issuances accelerated after the 2008–09 global financial crisis. The literature associates the increase in international bond issuances after the global financial crisis with an expansion in the supply of capital by foreign investors, which lowered the cost of raising capital in international markets (Shin 2014; Turner 2014; McCauley, McGuire, and Sushko 2015). The expansion in international bond issuances led to a surge in corporate debt and corporate vulnerability across emerging economies (IMF 2019).

Whereas many studies have documented the growth in international bond issuances after the global financial crisis, not much is known about the issuance of domestic bonds by emerging market firms. The distinction between international and domestic bond markets is not trivial. It is ex ante unclear to what extent emerging market firms used domestic bond markets as they increased their issuances abroad. On the one hand, in an increasingly globalized world where financial transactions can take place anywhere, preference for deeper and more liquid international bond markets could have made domestic markets less relevant (Levine and Schmukler 2006). On the other hand, even when barriers to financial transactions are removed, frictions (such as information asymmetries, fixed transactions costs, or tax barriers) can still cause market segmentation across international and domestic bond markets to persist (Bekaert et al. 2011; Colla, Ippolito, and Li 2013).

This Research & Policy Brief discusses corporate bond financing in East Asia and Latin America. In doing so, it sheds light on the role of domestic and foreign bond markets in emerging economies since the global financial crisis. The Brief focuses on these two regions because together they accounted for about 90 percent of the total amount raised in corporate bond markets by emerging economies between 2010 and 2019. At the same time, the two regions exhibited contrasting patterns in terms of use of domestic and international markets, the driving forces behind their issuance activity, and the various risks their increased borrowing has entailed.

The Brief devotes more attention to East Asia because this region accounts for most of the corporate bond issuance activity in emerging economies as a whole; it weighs heavily in international portfolios; and policy makers in the region made a conscious effort to develop domestic bond markets following the 1997–98 Asian financial crisis. Moreover, the patterns from this region challenge many of the predictions in the academic literature and the messages in policy reports. The experiences of East Asia and Latin America offer different lessons on how financial markets have evolved in emerging economies and what that means for corporate debt and vulnerability across regions.

The Rise in Bond Issuance

Following the global financial crisis, corporate debt steadily increased among East Asian and Latin American economies. Between 2010 and 2019, the ratio of corporate debt to GDP in the median economy increased from 119 percent to 144 percent in East Asia and from 34 percent to 42 percent in Latin America (figure 1, panel a). An increase in bond issuances by firms accompanied this growth in corporate debt. In the median East Asian and Latin American economy, the annual amount raised in corporate bonds during 2010–19 was about twice the amount raised during 2000–07. However, bond financing produced different patterns in each region. In Latin America, the annual amount of bond financing followed an inverted U-shape, peaking in 2013 and declining afterward. Still, the annual amount of bond financing during 2014–19 was typically larger than that during 2000–07. In contrast, in East Asia the annual amount of bond financing consistently increased throughout 2010–19 (figure 1, panel b).

The rise of corporate bond financing in East Asia and Latin America is consistent with the so-called "second phase of global liquidity" that started after the global financial crisis (Shin 2014; Turner 2014). Before the crisis, the banking sector (mainly international banking) was at the center of firm financing in emerging economies. This pattern changed after the global financial crisis, when institutional investors through purchases of corporate bonds replaced banks as key liquidity providers of financing to emerging market firms. In fact, the growth of corporate debt over GDP in emerging economies turned flat when the issuance of bond securities is excluded (Abraham, Cortina, and Schmukler 2020). This development resulted in global financing conditions becoming more sensitive to changes in bond markets.

Although firms in both East Asia and Latin America increased their bond issuances during 2010–19, there is an important difference between the two regions. Whereas in East Asia most of the growth in bond issuances occurred through bonds denominated in domestic currency, most of the bonds issued by firms in Latin America were denominated in foreign currency. In the median East Asian economy, 72 percent of the total amount of bonds raised per year during 2010–19 (which includes domestic and foreign currency issuances) was denominated in domestic currency. This represented an increase of 7 percentage points relative to the annual share of domestic currency bond issuances in 2000–07. This pattern still holds when China is excluded from the sample. In contrast, the share of domestic currency bonds over the total bonds raised per year in the median Latin American economy was 33 percent in 2010–19 (figure 2). Importantly, this share indicates a decrease in the proportion of domestic currency bonds raised in Latin America with respect to the period before the global financial crisis. In 2000–07, domestic currency bond issuances captured about 57 percent of the total capital raised in bond markets per year.

Given the high correlation between currency denomination and issuance market, these trends mean that most of the bonds raised after the global financial crisis in East Asia (Latin America) were issued in domestic (foreign) bond markets. Moreover, the growth in domestic bond financing in East Asia was accompanied by an increasing number of firms using those markets. In the median East Asian economy, the number of firms issuing domestic bonds per year doubled after the global financial crisis. This trend contrasts with that in international markets, where the annual number of issuers slightly declined after the global financial crisis.

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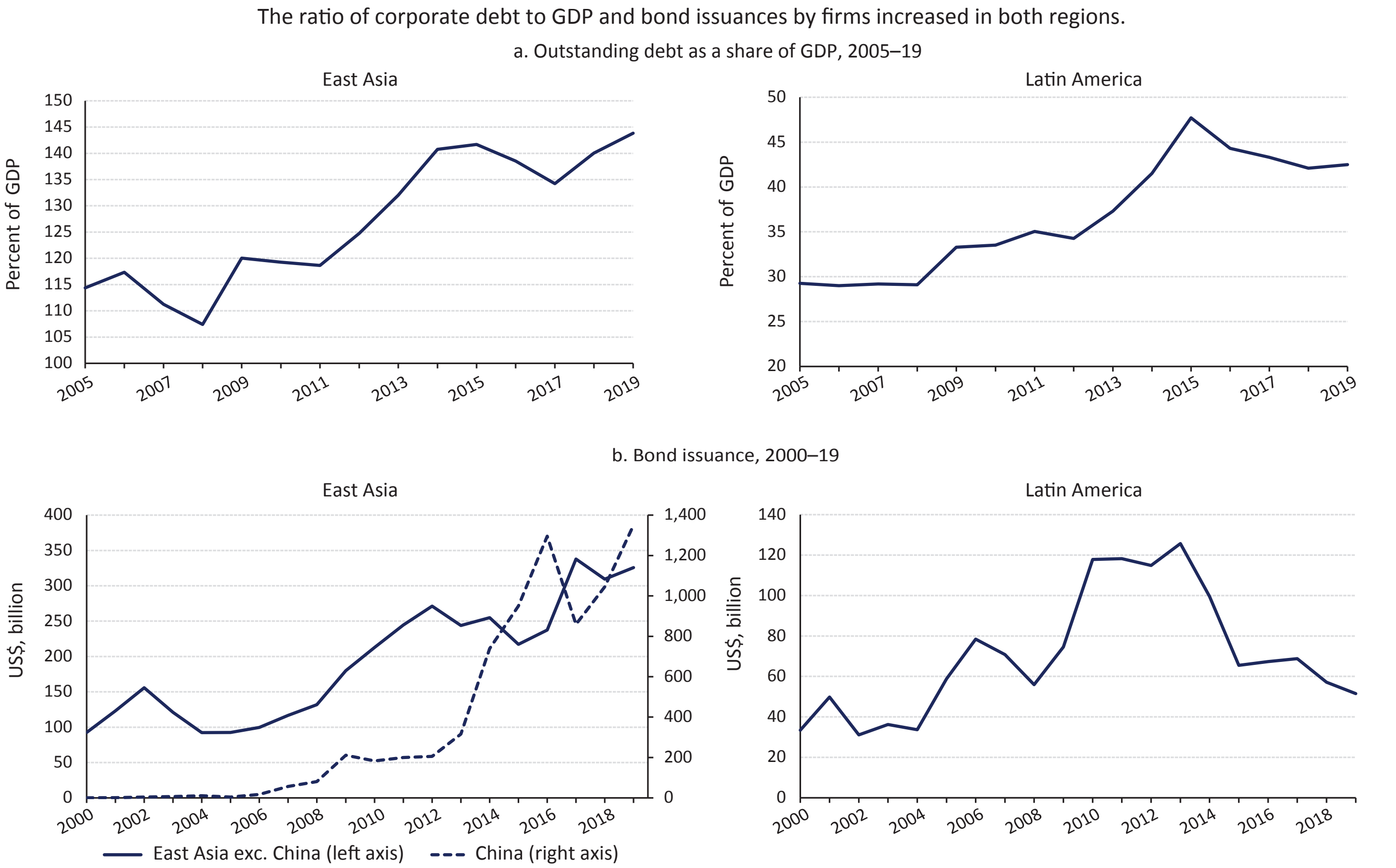
Figure 1. Growth of Corporate Debt after the Global Financial Crisis



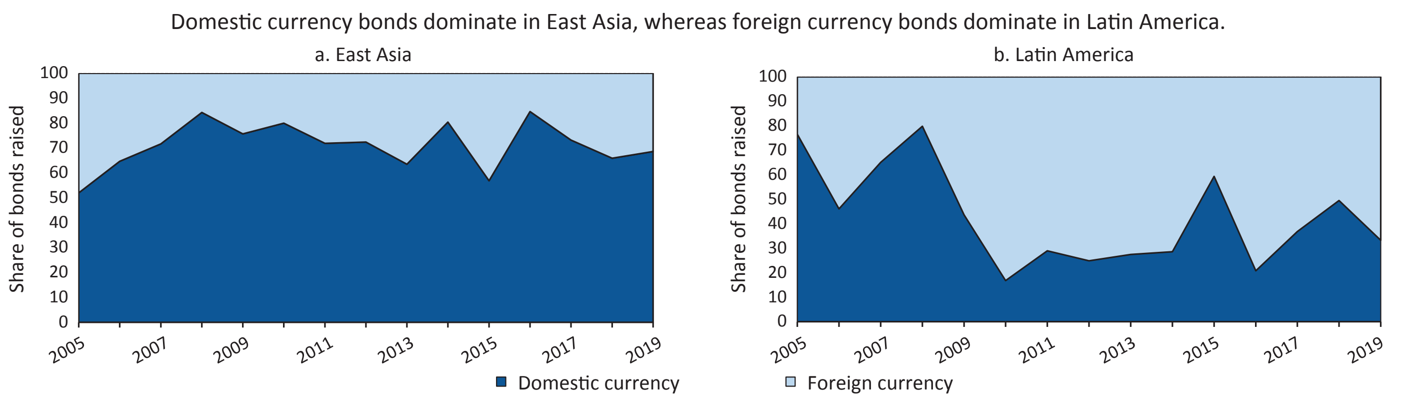
Source: Abraham, Cortina, and Schmukler 2021a.
Note: This figure shows the evolution of corporate debt and bond issuances in East Asia and Latin America. Panel a shows, for each region, the amount of corporate debt outstanding as a share of GDP for the median economy per year. Panel b shows, for each region, the aggregate amount of corporate bonds issued per year. East Asia includes: China, Hong Kong SAR, China, Indonesia, Malaysia, Philippines, Republic of Korea, Singapore, Taiwan, China, Thailand, and Vietnam. Latin America includes: Argentina, Brazil, Chile, Colombia, Costa Rica, Mexico, Panama, Peru, and Venezuela. East Asia is split into China and the rest. Values are in constant 2011 U.S. dollars.

Firms borrowing in international markets are typically larger than those borrowing in domestic markets. In East Asia and Latin America, the size of the median international issuer during 2008–16 was more than three times the size of the median domestic issuer. Therefore, the observed trends also imply that the growth in bond market activity in East Asia comprised the participation of smaller issuing firms than in Latin America. The size of the median firm issuing bonds decreased (increased) in East Asia (Latin America) as the use of domestic (international) markets expanded after the global financial crisis (figure 3). In 2016, the median asset size of publicly listed issuing firms in Latin America was US$10 billion, more than ten times higher than that in East Asia (US$1 billion). The differences are also substantial when comparing all firms (listed and unlisted) using the size of bond issuances. The median issuance size in Latin America was US$118 million in 2016, more than four times higher than in East Asia (US$28 million).

What Drove the Rise in Domestic Bond Issuances?

The patterns of issuance activity in Latin America are in line with the argument in the literature that an expansion in the supply side of capital by foreign investors lowered the cost of issuing bonds in international markets, boosting foreign bond issuances after the global financial crisis. But what caused the, mostly overlooked, acceleration in domestic bond issuances in East Asia? Was

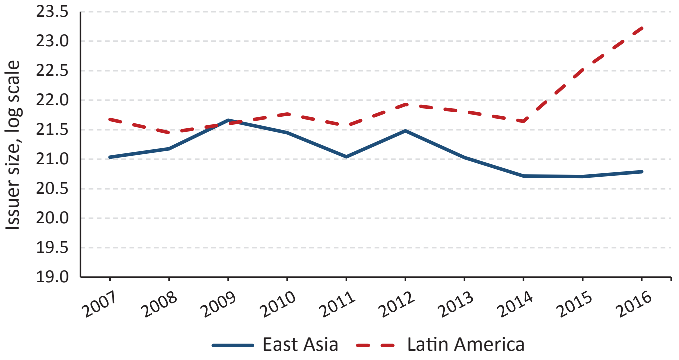
Figure 2. Domestic Currency versus Foreign Currency Bond Issuances, 2005–19



Source: Abraham, Cortina, and Schmukler 2021a.
Note: This figure shows, for each region, the share of corporate bond financing raised in domestic currency or foreign currency as a percentage of the total bonds raised for the median economy in each year.

Figure 3. Size of Firms Issuing Bonds, 2007–16

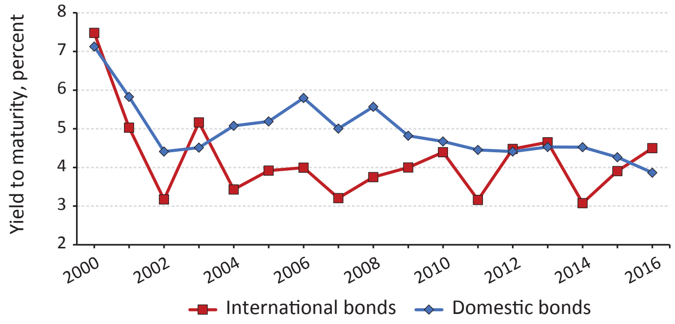
The size of the median firm issuing bonds decreased in East Asia and increased in Latin America after the global financial crisis.



Source: Abraham, Cortina, and Schmukler 2021a.
Note: This figure shows, for each region, the size of the median firm in the median economy issuing bonds each year. Firm size is measured as the end-of-year value of total assets.

Figure 4. Cost of Corporate Bond Issuances by East Asian Firms, 2000–16

The cost of issuing corporate bonds declined after the global financial crisis, and yields declined more for domestic than for international bonds.



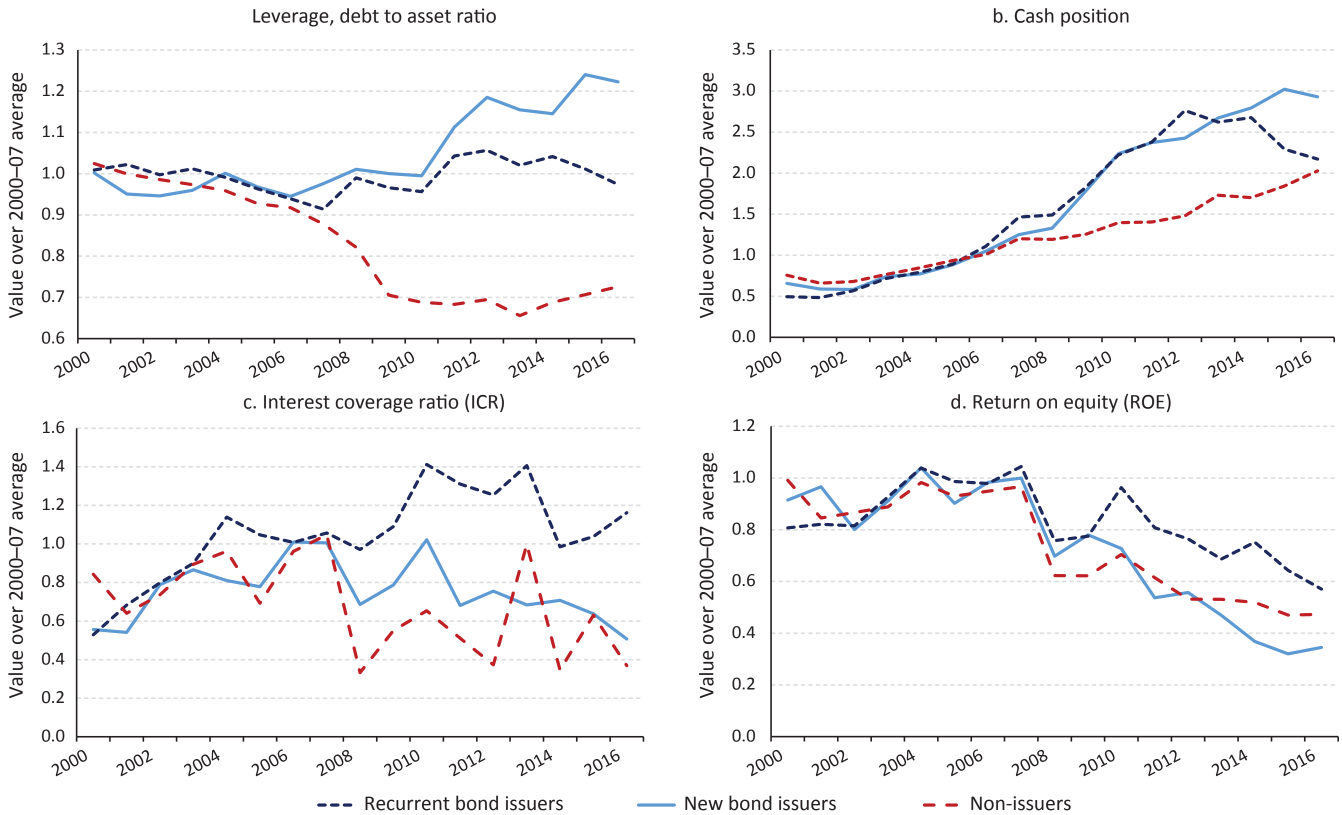
Source: Abraham, Cortina, and Schmukler 2021b.
Note: This figure shows, for the median economy in East Asia, the median bond yield to maturity per year. The figure only includes domestic currency issuances.

the acceleration in domestic bond issuances driven by an increased appetite for domestic bonds by investors (supply-side expansion) or by a higher demand of capital by firms (demand-side expansion)? Overall, the evidence is consistent with a supply-side expansion by domestic investors being the main force driving the rise of domestic bond markets in East Asia since the global financial crisis.

Movements in the cost of issuances are informative to study this issue because a decline in the cost of capital would suggest that the liquidity provided by investors grew faster than firms' demand for new financing. If an increasing demand for capital by firms was the main driver behind the acceleration in bond issuances, domestic bond yields would be expected to increase (other things equal). The evidence shows that the cost of issuing domestic bonds declined after the global financial crisis in East Asia. East Asian firms issued corporate bonds in 2008–16 at a cost 39 percent lower (measured as the yield to maturity) than in 2000–07 (figure 4). Moreover, yields declined more for domestic than for international issuances. Yields of domestic and international bonds declined by about 42 percent and 29 percent, respectively, between 2000–07 and 2008–16, at the same time that domestic issuances increased more than international ones. The decline in

Figure 5. Financial Status of East Asian Firms, 2000–16

New, smaller firms that started issuing bonds in domestic markets in 2008–16 accumulated more debt and cash, and their financial performance worsened relative to their position before 2008.



Source: Abraham, Cortina, and Schmukler 2021b.
Note: This figure shows the trends in financial statement variables for recurrent issuers (issued bonds before 2008), new issuers (began issuing bonds after 2008), and non-issuers in East Asia. All variables are normalized by their average value during 2000–07. For each variable, the figure shows the results for the median firm in the median economy per year.

the issuance cost of international bonds is consistent with the argument in the literature that an increase in the supply of bond financing by foreign investors drove international bond issuances after the global financial crisis. Importantly, the larger decline in the issuance cost of domestic bonds implies that the supply side of funds (investors' demand) for domestic bonds grew even faster than that for international bonds. The patterns in corporate bond markets contrast with those in syndicated loans, where the cost of issuances increased for East Asian firms during 2008–16.

Domestic investors, with substantial and growing funds, were the main buyers of domestic securities, contributing to the decline in the cost of capital in those markets. For example, the holdings of East Asian corporate bonds by East Asian mutual funds increased five-fold between 2008 and 2016, and 93 percent of these bond holdings were in domestic issuances. On the other hand, foreign investors were the main buyers of securities issued in international markets. Out of the total East Asian corporate bonds held by U.S. investors and foreign mutual funds during 2008–16, 96 percent and 99 percent were issued in international markets, respectively (Abraham, Cortina, and Schmukler 2021b). This evidence is consistent with the view that institutional investors tend to buy securities issued in their own markets documented in the literature (Maggiori, Neiman, and Schreger 2020).

Evidence on firm performance provides additional support to the hypothesis that the expansion of domestic bond markets in East Asia was supply driven. Smaller firms typically have access to a limited number of (mainly domestic) debt markets and are more financially constrained than larger firms. Thus, if the supply side of financing drove the rise in domestic bond issuances, the relatively smaller new issuers would be expected to increase their leverage more than the larger firms already issuing bonds, which typically have adequate access to funds through multiple domestic and international debt markets (Faulkender and Petersen 2006). The evidence shows that the new, smaller firms that started issuing bonds in domestic markets in 2008–16 (new issuers) indeed accumulated debt faster than assets, increasing their leverage positions more than firms that had already issued bonds prior to 2008 (recurrent issuers) and non-issuers (figure 5, panel a).

Moreover, the supply-side expansion hypothesis would suggest that firms hoarded large shares of the bond proceeds in cash and that the share of cash savings per bond issuance was higher during 2008–16 than in previous periods (Erel et al. 2012; Acharya, Byoun, and Xu 2020). The alternative hypothesis that increasing firms' demand for capital was more important would suggest that firms invested or spent most of the bond proceeds raised. The data indicate that the relatively cheaper domestic bond financing was associated with high cash accumulation by bond issuers. Although bond issuers increased their investments, cash accumulation was the most important use of funds per bond issuance since the global financial crisis and, as a result, both new and recurrent bond issuers accumulated a substantial amount of cash after 2008 (figure 5, panel b). Specifically, during 2008–16, bond issuers held around 40 cents in cash for every dollar raised, and the average amount of cash saved per bond issuance was significantly higher than in previous years.

The net effect of the increase in the supply side of financing on East Asian firms is unclear. On the one hand, financial performance of new issuers worsened relative to the period before 2008, as measured by the interest coverage ratio (ICR) (figure 5, panel c) and return on equity (ROE) (figure 5, panel d). Even though new issuers could access cheaper financing in bond markets, these patterns could imply that the large cash holdings yielded returns below the cost of financing. It might also be the case that the financing directed to new investments was geared toward projects with relatively low rates of return. Moreover, the new issuers raised bonds at relatively shorter maturities than in the past, which could have amplified rollover risks. The maturity of bond issuances by East Asian firms declined from 4.3 years in 2004–07 to 3.7 years in 2010–19. On the bright side, higher amount of cash savings (which could be used during negative shocks) and the domestic currency nature of the bonds raised could have lowered debt-related risks.

Conclusion

Although international bond markets were an important contributor to the corporate financing boom in East Asia during the 1990s, domestic markets have played an even more important role in the new millennium, especially since 2008. As the amount raised domestically grew faster than that raised internationally, the share of domestic currency debt increased, the number of firms issuing in domestic markets expanded, and the size of issuing firms declined. The evidence is consistent with the notion that a higher supply of funds by domestic investors is an important driver behind the rise in domestic bond financing.

The patterns of bond financing in East Asia are not observed in other emerging regions. For example, in Latin America—which also accounted for a significant share of corporate bond issuance activity by emerging economies—the rise in corporate bond issuances was mostly conducted through international markets, denominated in foreign currency, and driven by larger firms.

The much higher use of domestic bond markets in East Asia than in Latin America since the global financial crisis could be related to different factors. The growth of East Asian domestic bond markets might be traced back to the Asian financial crisis, after which policy makers implemented a series of reforms that expanded the investor base, improved market infrastructure, and enhanced investor protection. Another key reason behind the expansion in domestic financing for the corporate sector might be related to the growth in public and private savings. Stronger fiscal discipline and positions by East Asian governments could have reduced crowding out and, as a result, directed more financing toward the corporate sector. Moreover, as households became richer, they might have increased their savings and investments in financial products. Higher demand for investment products, coupled with a home bias, could have increased the flow of funds toward domestic bond markets through domestic institutional investors. The retrenchment in international capital flows after the global financial crisis could have also contributed to these developments, at least in the immediate years following the crisis when investors worldwide became more risk averse and reduced their share of foreign assets.

Differences in the use of domestic and international bond markets imply that firms in East Asia and Latin America have been exposed to different types of risks. Firms in East Asia might be less vulnerable to changes in global market conditions, as they have relied less on foreign currency debt. In turn, the main risks for East Asia have been more related to the higher overall indebtedness and the participation of smaller firms, as these firms tend to issue bonds at shorter maturities and have fewer financing options during crises. Latin American firms have been more exposed to external factors and currency depreciations because they have relied more heavily on foreign financing in foreign currency.

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