CHAPTER 2

Expansion of Capital Markets Globally

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Key Messages

- Cumulative net capital issuance (CNI) by firms in low- and middle-income countries amounted to approximately US$4 trillion in 1990–2022, compared with US$34 trillion by all firms globally (in constant 2020 US dollars).
- The period between 2000 and 2022 witnessed a fourfold increase in capital market financing in middle-income countries and an eightfold increase in low-income countries.
- CNI grew from 2 percent of gross domestic product (GDP) in 1990–99 to 8 percent in 2010–22 in low-income countries and from 5 percent to 17 percent in middle-income countries.
- In the 1990s, firms from 38 high-income countries, 47 middle-income countries, 14 low-income countries, and China issued equity or bonds in capital markets. Between 2000 and 2022, firms from 32 additional middle-income countries and 13 additional low-income countries gained access to capital markets.
- Both capital market financing and the number of issuing firms grew strongly in all geographic regions, especially in low- and middle-income countries.

- In China, annual CNI rose from 3 percent of GDP, on average, in 1990–99 to 20 percent of GDP in 2010–22, against the backdrop of rapid GDP growth.
- Bonds and equities contributed roughly equal proportions to total CNI across all income groups, except in low-income countries, where equities accounted for two-thirds.
- Domestic market issuance accounted for more than half of the total in low- and middle-income countries (79 percent of equity and 53 percent of bonds during 1990–2022).

Capital Market Activity Has Surged for Firms Both Globally and within Low- and Middle-Income Countries

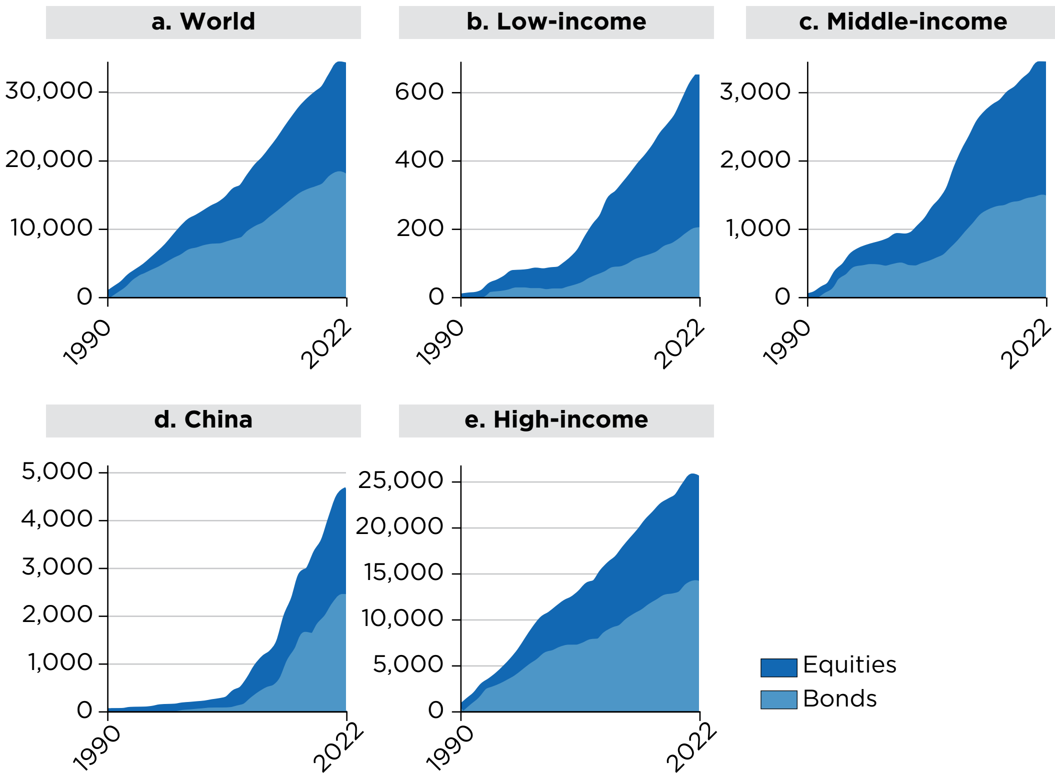
Global CNI (starting in 1990 as the base year) for nonfinancial firms was around US$10 trillion by end-1999 and US$34 trillion by end-2022 (figure 2.1, panel a), with low- and middle-income countries accounting for US$4 trillion by 2022 (all data are in constant 2020 US dollars).[1]

Whereas capital markets were relatively small for low- and middle-income countries in the 1990s and early 2000s,[2] they have since made significant strides, with CNI up about eightfold in low-income countries and fourfold in middle-income countries from the late 1990s to 2022 (figure 2.1, panels b and c).[3] China mirrored the trajectory of low-income countries until the late 2000s, but its CNI subsequently surged, with a more than fourfold increase from 2010 to 2022 (figure 2.1, panel d). As for high-income countries, their CNI increased threefold from the late 1990s to 2022 (figure 2.1, panel e).

FIGURE 2.1

CNI for Nonfinancial Firms Grew Rapidly in 1990–2022 Worldwide and within Low- and Middle-Income Countries

Billions of constant 2020 US dollars



Source: Calculations using issuance data from the Securities Data Company Platinum database from LSEG.

Note: This figure presents the CNI of bond and equity issuance for nonfinancial firms in 1990–2022 in billions of constant 2020 US dollars. CNI for year *Y* is computed as the sum of equity issuance and bond issuance (minus bonds that matured) between 1990 and year *Y*. Appendix B provides the list of countries, grouped by income category. CNI = cumulative net capital issuance.

Box 2.1 describes the data used for this analysis.

BOX 2.1

Data on CNI Facilitate an Understanding of Capital Markets Worldwide

The primary database used is the Securities Data Company Platinum database from LSEG, which offers extensive data on new bond issues, mergers and acquisitions, syndicated loans, and equity.[a] This book leverages data on capital issuances for both publicly listed and privately held companies for the 1990–2022 period. Detailed transaction-level information from the Securities Data Company Platinum database provides comprehensive coverage of global bond and equity issuances, facilitating a thorough documentation and characterization of capital markets worldwide and yielding detailed insights into the participation of countries and firms. Although the Securities Data Company Platinum database includes data on issuance by financial firms and governments, this book primarily analyzes issuance by nonfinancial firms.[b] While issuances by governments and government agencies are excluded from the data set, state-owned enterprises (defined as firms with direct state ownership of 50 percent or more) are included (see appendix C for more details).

The book focuses on cumulative net capital issuance (CNI), which—for each period under consideration—is calculated as the sum of equity and bond issuances since 1990 minus bonds that have matured since 1990.[c] For example, CNI over 1990–2022 is the sum of all issuances of equities and bonds, minus bond redemptions, during that period. It is termed “cumulative” because it sums all capital issued since the start of the period and “net” because matured bonds are subtracted. For long periods, using a cumulative measure has similarities to analyzing the stock of financing, such as outstanding bank credit. Furthermore, CNI is not distorted by the refinancing of bond debt, capturing instead only additional financing to firms.[d]

Equity has no maturity date and hence is not subtracted from CNI. On occasion, firms may reduce their outstanding equities by

continued

BOX 2.1 *(Continued)*

buying them back through transactions known as stock buybacks. In this book, such transactions are not considered, owing to data limitations. However, existing evidence shows that this approach yields an acceptable approximation, especially for low- and middle-income countries. In 2022, global stock buybacks accounted for only 3.6 percent of global CNI and occurred primarily in high-income countries (Manconi, Peyer, and Vermaelen 2019).

a. Appendix C presents a more detailed overview of the data and data coverage, while appendix B presents the countries included in the book.

b. Appendix D reviews financial firm issuance and compares it to nonfinancial firm issuance.

c. The sample period begins in 1990 given the incomplete coverage of country capital issuance data before that year. Therefore, CNI is set to zero at the start of the year 1990 for the purpose of this book's analysis. Of course, capital markets predate this period—for example, stock market capitalization amounted to approximately US$19 trillion by 1990 (appendix E).

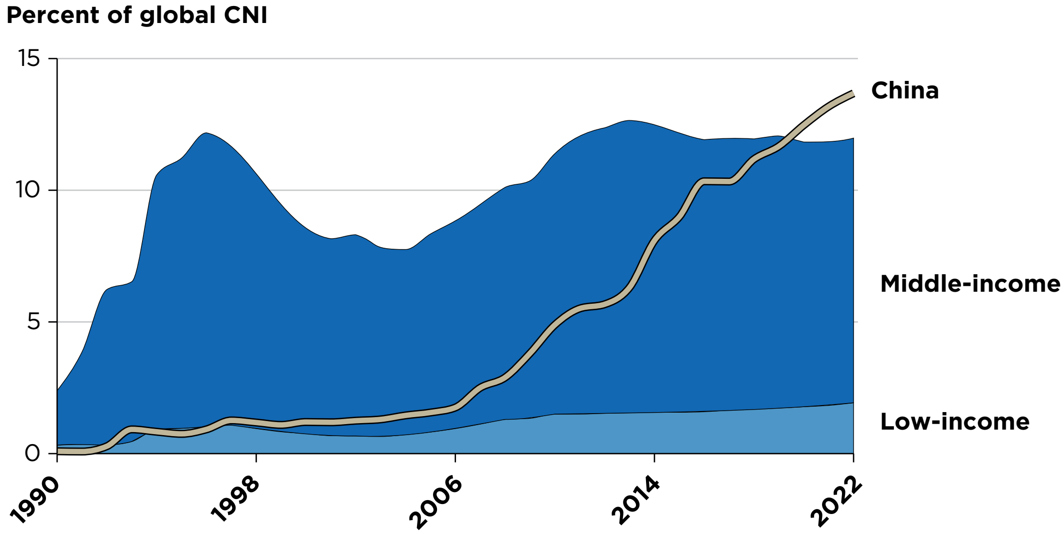
d. An alternative measure of capital market activity is gross capital issuance—the volume of bonds and equity issued each year. As opposed to net issuance, gross issuance for bonds includes maturing bonds that are being rolled over (representing refinancing rather than additional financing for a firm). Appendix F discusses gross issuance, finding that bonds represent a majority (72 percent) of gross capital issued each year.

Low- and Middle-Income Countries' Share of Global Capital Market Financing Is Rising

Starting from a low base in 1990, the share of global CNI by low- and middle-income countries rose rapidly in the mid-1990s and again in the mid-2000s (figure 2.2). By 2022, this share had grown to 12 percent.

FIGURE 2.2

Low- and Middle-Income Countries Increased Their Share of Global Capital Markets between 1990 and 2022



Source: Calculations using issuance data from the Securities Data Company Platinum database from LSEG.
Note: This figure presents the annual share of global CNI accounted for by middle-income countries, low-income countries, and China. CNI for year *Y* is computed as the sum of equity issuance and bond issuance (minus bonds that matured) between 1990 and year *Y*. Appendix B provides the list of countries, grouped by income category. CNI = cumulative net capital issuance.

The share of middle-income countries in capital markets rose the most in the 1990s, followed by a slight decline in the early 2000s, which subsequently rebounded in the late 2000s and has since stabilized at around 10 percent. Capital markets in low-income countries have grown steadily over the past 30 years. Although still modest (approximately 2 percent by 2022), their share of global CNI was more than twice as large as it was at the end of the 1990s. China followed a growth trajectory similar to that of low-income countries until the late 2000s, surging thereafter from 5 percent of the total in 2010 to 13 percent in 2022.

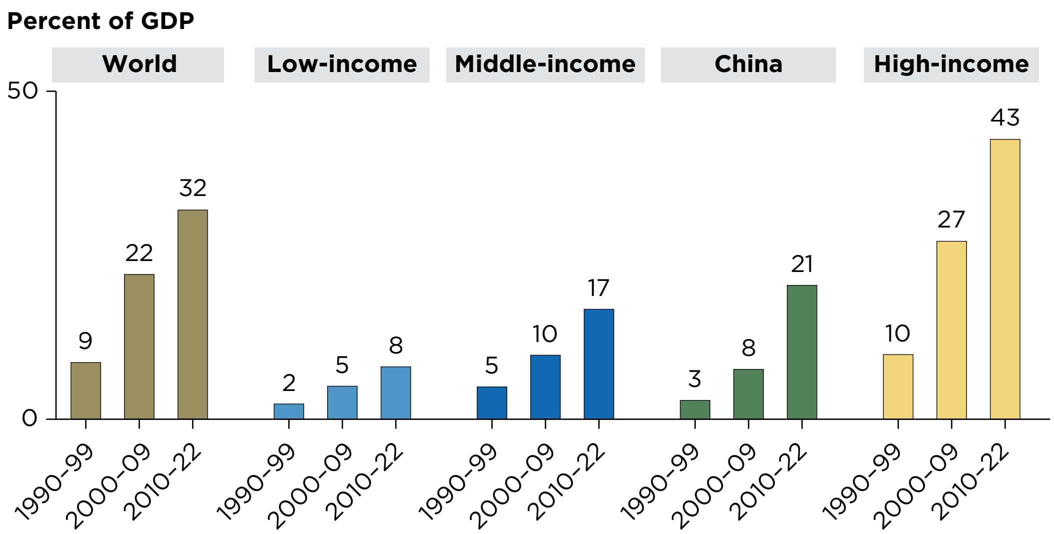
Cumulative Net Capital Issuance Has Risen Faster Than GDP

CNI outpaced GDP both at the global level and in each group of countries considered during the past three decades (figure 2.3). In 1990–99, annual CNI as a share of global GDP was, on average, 9 percent.[4] By 2010–22, it amounted to 32 percent. Similar trends are observed when examining solely low- and middle-income countries.[5] In low-income countries, it grew from 2 percent of GDP in

1990–99 to 8 percent in 2010–22, while in middle-income countries, it increased from 5 percent to 17 percent. Particularly notable is China, whose capital relative to GDP grew more than sixfold over the three decades. In high-income countries, issuance rose from 10 percent of GDP in 1990–99 to 43 percent in 2010–22, outpacing the more modest economic growth experienced by this group of countries.

FIGURE 2.3

Growth in CNI Outpaced Growth in GDP, 1990–2022

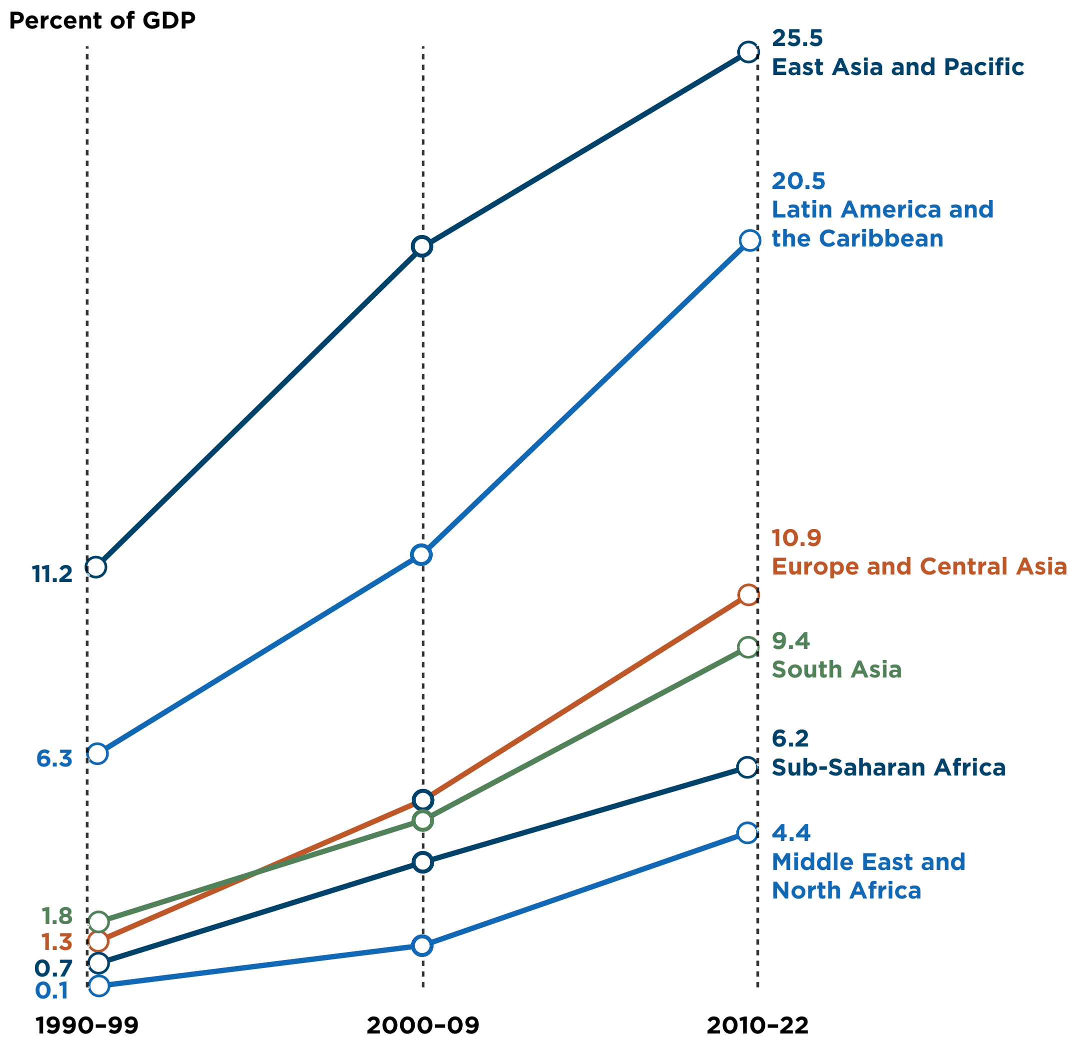


Sources: Calculations using issuance data from the Securities Data Company Platinum database from LSEG and GDP data from the World Bank's World Development Indicators.
Note: This figure presents the CNI (as a percentage of GDP) for nonfinancial firms for 1990–2022. CNI as a ratio to GDP for year *Y* is computed as the sum of equity issuance and bond issuance (minus bonds that matured) between 1990 and year *Y*, divided by GDP in year *Y*. The figure reports decade averages for such ratios. Appendix B provides the list of countries, grouped by income category. CNI = cumulative net capital issuance; GDP = gross domestic product.

Among low- and middle-income countries, East Asia and Pacific led in CNI as a percentage of GDP across all three decades: 11 percent in 1990–99, 20 percent in 2000–09, and more than 25 percent in 2010–22. However, growth was evident in low- and middle-income countries in other regions as well (figure 2.4). Latin America and the Caribbean reached about 20 percent of GDP in 2010–22. The Middle East and North Africa and Sub-Saharan Africa regions, which had minimal access to capital markets in 1990–99, experienced a remarkable financial market expansion over the past two decades. CNI in the Middle East and North Africa started at 0.15 percent of GDP in 1990–99 and rose to 4 percent of GDP in 2010–22. Capital market growth was also robust in Sub-Saharan Africa, with CNI reaching around 6 percent of GDP in 2010–22.

FIGURE 2.4

CNI Rose for All Low- and Middle-Income Regions between 1990 and 2022



Sources: Calculations using issuance data are from the Securities Data Company Platinum database from LSEG and GDP data from the World Bank's World Development Indicators.

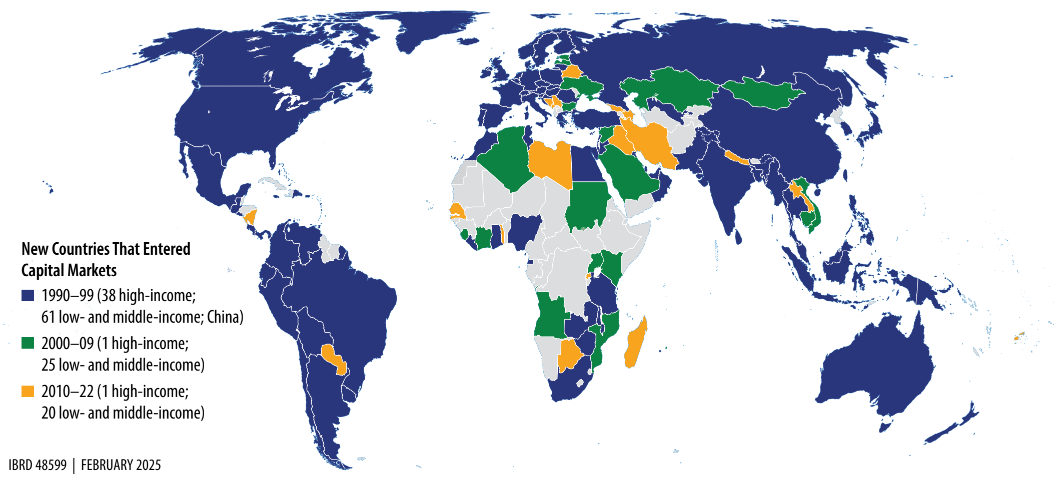
Note: This figure shows the average CNI (as a percentage of GDP) across decades for low- and middle-income countries by region. CNI as a ratio to GDP for year *Y* is computed as the sum of equity issuance and bond issuance (minus bonds that matured) between 1990 and year *Y*, divided by GDP in year *Y*. The figure reports decade averages for such ratios. Appendix B provides the list of countries, grouped by income category. CNI = cumulative net capital issuance; GDP = gross domestic product.

Firms in More Countries Are Tapping Capital Markets

From 1990 to 2022, firms in 147 countries accessed capital markets, including 106 low- and middle-income countries.[6] Of these countries, 47 had zero CNI in 1990–99. Firms in these countries (32 middle-income, 13 low-income, and 2 high-income countries) gained access to capital markets between 2000 and 2022 (map 2.1).[7] The majority of these new market entrants are in Africa and the Middle East. Three countries had zero issuance in 2010–22, after experiencing positive issuance in 1990–2009 (map 2.1).[8]

MAP 2.1

Firms in 32 More Middle-Income Countries and in 13 More Low-Income Countries Entered Capital Markets between 2000 and 2022

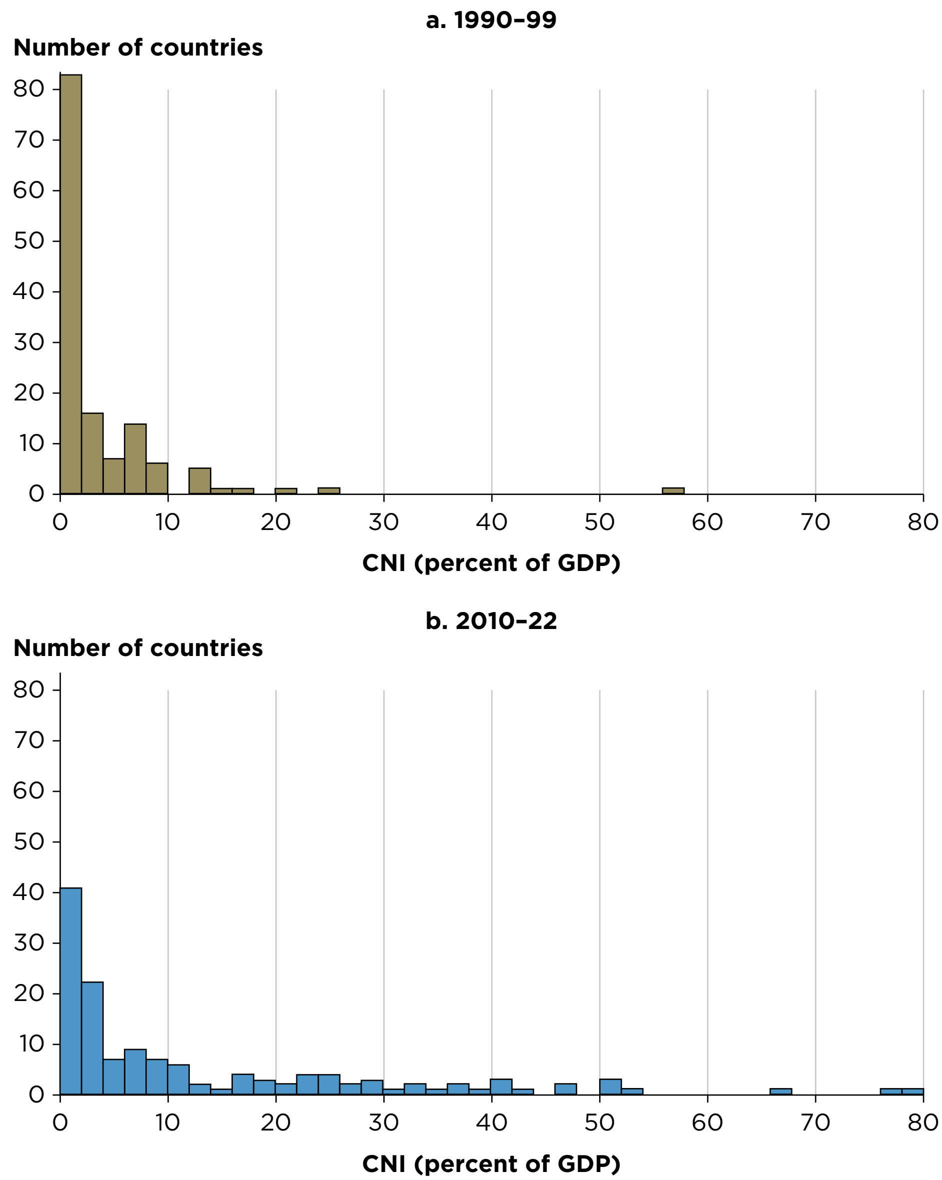


Source: Calculations using issuance data from the Securities Data Company Platinum database from LSEG.
Note: This map reports the timing of issuance for firms in each country. A single bond or equity issuance qualifies a country to be counted as having capital market activity. Although firms were able to issue in capital markets, the activity in several countries might be limited. Appendix B provides the list of countries, grouped by income category.

Firms in a growing number of countries have tapped capital markets over the past 30 years, and the amount of CNI for each country has increased as well. In 1990–99, CNI was less than 2 percent of GDP in more than half of countries in the sample (figure 2.5). In contrast, by 2010–22, CNI was less than 2 percent of GDP in less than a third of the countries. The shifts to the right show that capital market issuance has become larger for most countries. Overall, more firms in more countries have begun to participate in capital markets and to access larger amounts of capital.

FIGURE 2.5

Firms in More Countries Accessed Capital Markets, and CNI Increased in Most Countries between 1990 and 2022



Sources: Calculations using issuance data from the Securities Data Company Platinum database from LSEG and GDP data from the World Bank's World Development Indicators.
Note: This figure compares the first decade with the last decade in the sample period considered. It presents the histogram of CNI (as a percentage of GDP) for 1990–99 and 2010–22, for all countries. CNI as a ratio to GDP for year *Y* is computed as the sum of equity issuance and bond issuance (minus bonds that matured) between 1990 and year *Y*, divided by GDP in year *Y*. The figure reports decade averages for such ratios. Appendix B provides the list of countries, grouped by income category. CNI = cumulative net capital issuance; GDP = gross domestic product.

Bonds and Equities Contribute Roughly Equal Proportions to Total Cumulative Net Capital Issuance, Except in Low-Income Countries

Firms must weigh various financial and strategic factors when deciding whether to issue bonds or equity. Bonds impose fixed financial obligations, and although interest payments are tax deductible, they can restrict cash flow. In contrast, equity does not involve regular payments and thus offers greater flexibility, but it dilutes ownership, which may be unappealing to existing shareholders. Market conditions also influence this decision-making process. Favorable interest rates and credit markets may make bond issuance more attractive, whereas strong stock market conditions and high company valuations might prompt a firm to issue equity.

Initially, bonds constituted the majority of CNI in middle-income countries, at 56 percent in the 1990s (figure 2.6, panel b). By 2022, however, CNI was slightly more than half the total, comparable to that in high-income countries.[9] For low-income countries, equity consistently outweighed bonds, accounting for three-quarters of total CNI, on average, over the entire period (figure 2.6, panel a).[10] This pattern was also evident in China in 1990–99 and 2000–09, but from 2010 onward, China's bonds surged, rising from around 5 percent of GDP in 2010 to around 15 percent by 2022 (figure 2.6, panel c). Although equity continued to increase after 2010, China's bonds became the main driver of capital growth, and by 2022, bonds and equity contributed roughly equal proportions to CNI.

FIGURE 2.6

Bonds and Equities Accounted for Equivalent Shares of CNI in Middle- and High-Income Countries, whereas Equities Prevailed in Low-Income Countries

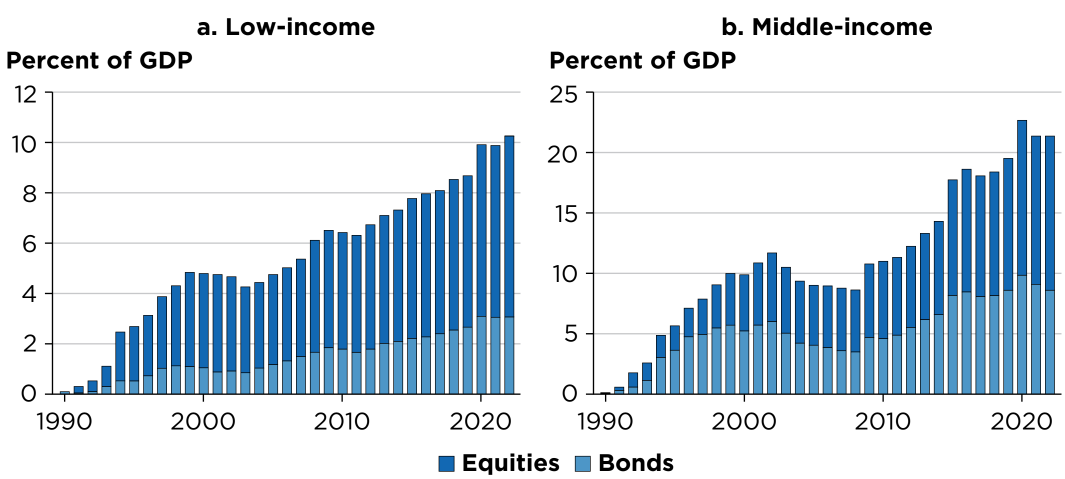


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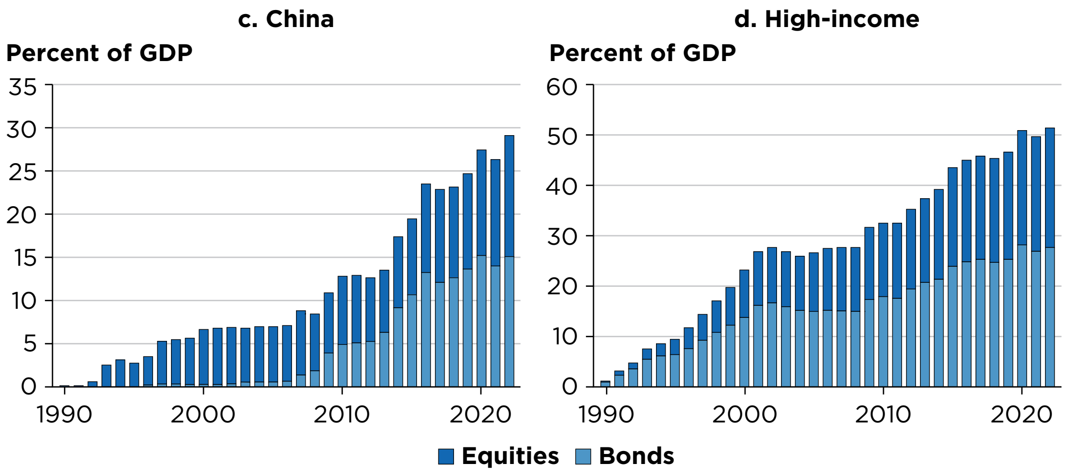
FIGURE 2.6 *(Continued)*



Sources: Calculations using issuance data from the Securities Data Company Platinum database from LSEG and GDP data from the World Bank's World Development Indicators.
Note: This figure presents CNI of bonds and equities (as a percentage of GDP). CNI as a ratio to GDP for year *Y* is computed as the sum of equity issuance and bond issuance (minus bonds that matured) between 1990 and year *Y*, divided by GDP in year *Y*. Appendix B provides the list of countries, grouped by income category. CNI = cumulative net capital issuance; GDP = gross domestic product.

Issuance Is More Prominent in Domestic Capital Markets Than in International Markets

Firms consider several factors when deciding whether to raise capital in domestic or in international capital markets. In domestic markets, firms typically are better known to domestic investors and financial analysts, which can boost investor confidence and facilitate access to funding. However, these markets may be limited in the amount of capital that can be raised. For firms needing large amounts of capital, international markets provide access to a larger pool of investors with sizable funds. In addition, international markets often attract a diverse set of investors, including institutional investors. This diversity can enhance liquidity and potentially result in more favorable terms for raising capital. However, firms seeking capital may need to disclose more information in international markets than in domestic markets.

Currency also influences the choice of market. When issuing in international markets, firms whose revenues are in local currency will usually face currency risk because capital raised is typically in foreign currency.[11] If a firm issues a bond in a foreign currency and its local currency depreciates against the financing currency, the amount to be repaid in local currency increases. Conversely, domestic market issuance is usually in local currency, which mitigates risk. Ultimately, the choice between domestic and international markets depends on balancing these factors to align with the firm's strategic goals and financial needs.[12]

In the analysis that follows, bond issuances are defined as domestic or international by comparing the market location of issuance with the residence of the issuing firm.[13] Similarly, equity is classified as domestic or international by comparing the location of the primary exchange where a firm's stock trades with the residence of the issuing firm.

Most of the growth of capital markets in low- and middle-income countries occurred in domestic markets, which accounted for 79 percent of equity and 53 percent of bond cumulative net issuances between 1990 and 2022 (figure 2.7 presents data for low- and middle-income countries separately). China displayed minimal reliance on international capital, with only 8 percent of equity and 5 percent of bonds being issued in international markets in 2022.

FIGURE 2.7

Domestic Capital Markets Drove the Growth of CNI between 1990 and 2022

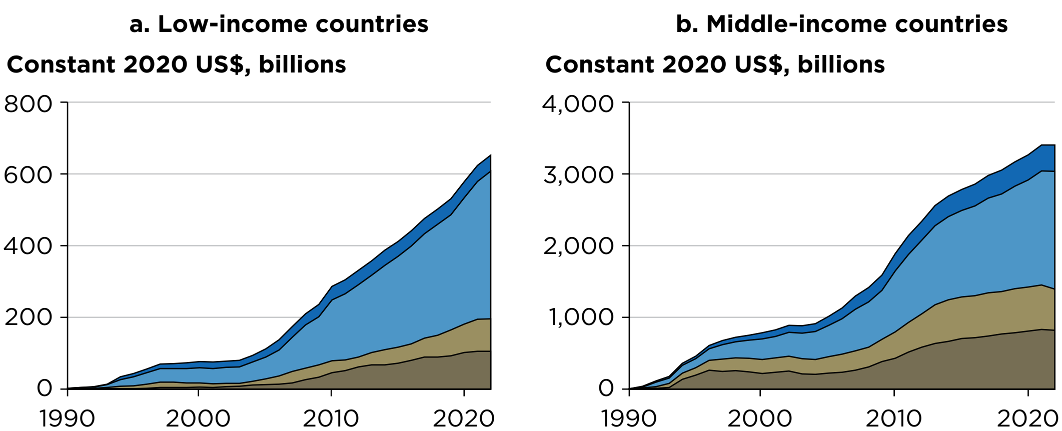


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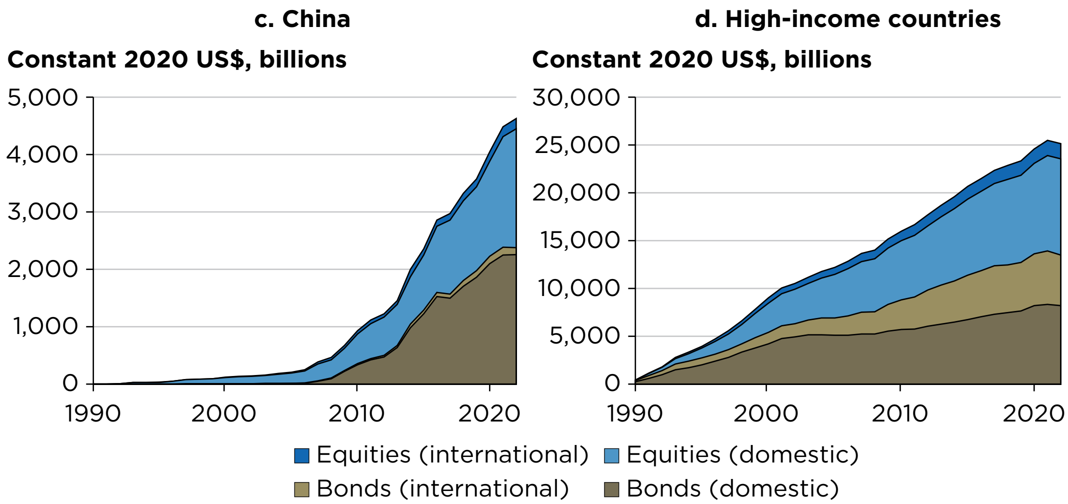
FIGURE 2.7 *(Continued)*



Source: Calculations using issuance data from the Securities Data Company Platinum database from LSEG.

Note: This figure presents the amount of CNI in domestic and international markets for 1990–2022 in billions of constant 2020 US dollars. CNI for year *Y* is computed as the sum of equity issuance and bond issuance (minus bonds that matured) between 1990 and year *Y*. Bonds are categorized as domestic or international by comparing the market location of issuance with the residence of the issuing firm. Equity is classified as domestic or international by comparing the location of the primary exchange where a firm's stock trades with the residence of the issuing firm. Appendix B provides the list of countries, grouped by income category. CNI = cumulative net capital issuance; GDP = gross domestic product.

In low- and middle-income countries, the share of domestic CNI rose from about 63 percent in 1990–99 to 70 percent in 2010–22 (figure 2.7, panel a), and in high-income countries, the domestic share remained relatively constant across decades.

The increase in domestic share in low- and middle-income countries was driven primarily by East Asia and Pacific (figure 2.8, panel b). Many countries in this region—including Indonesia, the Republic of Korea, Malaysia, the Philippines, Singapore, and Thailand—experienced financial crises during the late 1990s. After recovering, banks underwent restructurings, and financial regulation was strengthened. These countries focused on developing domestic debt markets to reduce the reliance on volatile international capital flows. This development of domestic bond markets is reflected in a rising share of domestic CNI—from 73 percent in 1990–99 to 84 percent in 2010–22.

The share of domestic issuance also grew significantly in South Asia—from 60 percent in 1990–99 to 80 percent in 2010–22. In low- and middle-income countries in other regions, the share of domestic market issuance has also risen since the 1990s, but firms continue to rely more on international capital. Latin America and the Caribbean, which ranks second in total CNI behind East Asia and Pacific, still exhibits considerable use of international capital markets, with about 40 percent of total CNI in international markets during 2010–22. Other regions rely similarly on international capital.

FIGURE 2.8

Domestic Market Shares of CNI Rose in Low- and Middle-Income Countries

a. By income group

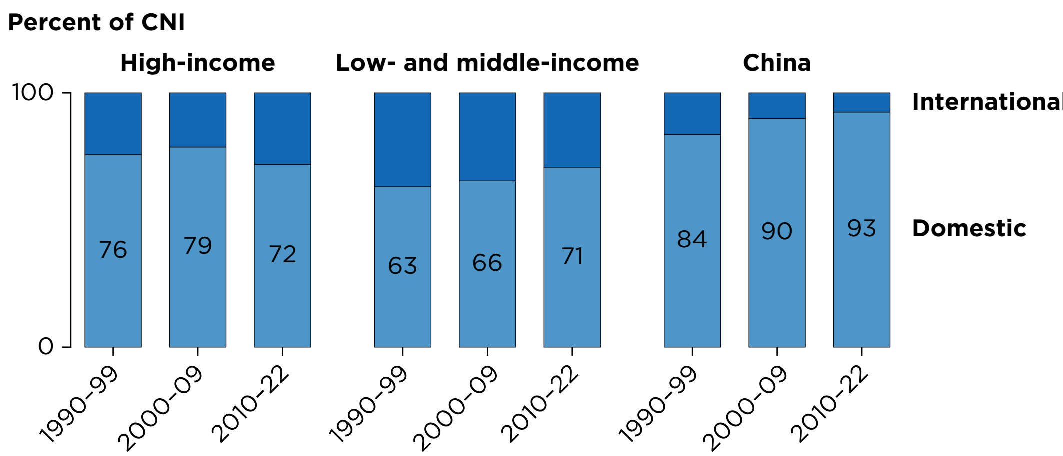


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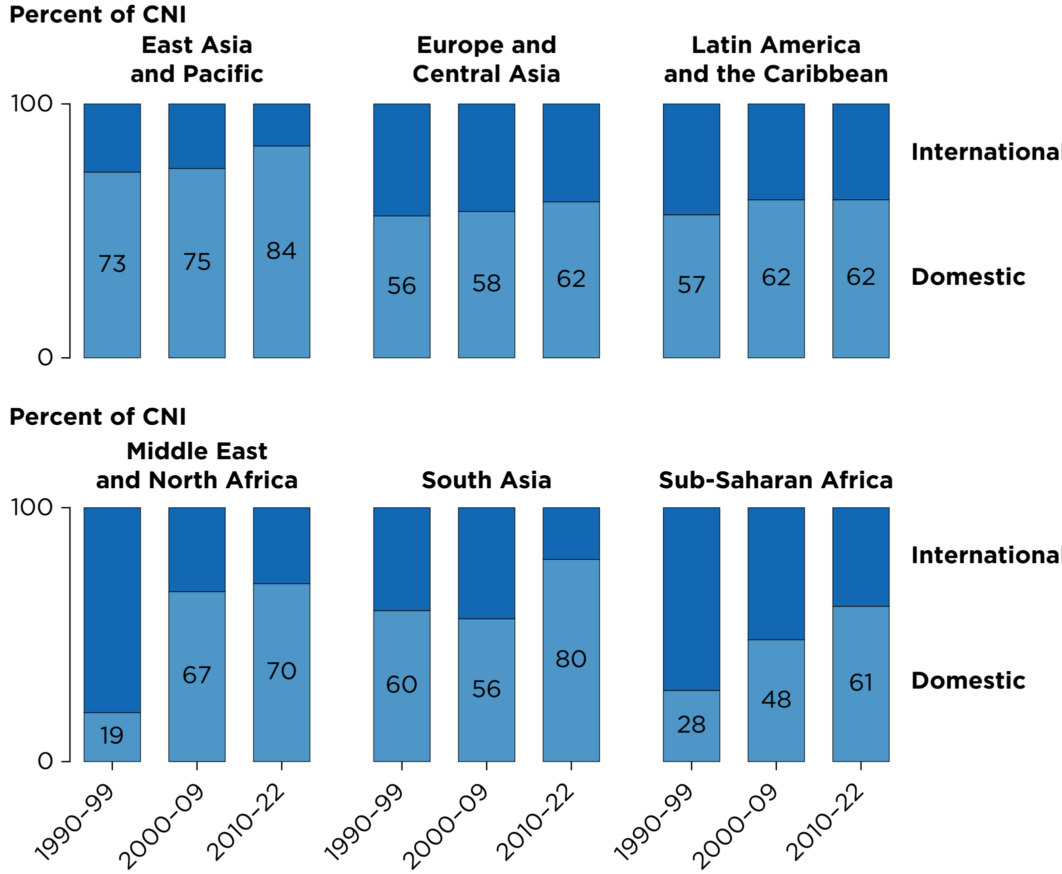
FIGURE 2.8 *(Continued)*

b. By low- and middle-income regions



Source: Calculations using issuance data from the Securities Data Company Platinum database from LSEG.

Note: This figure presents the shares of CNI in domestic and international markets by income group and by region (for low- and middle-income countries only). CNI for year *Y* is computed as the sum of equity issuance and bond issuance (minus bonds that matured) between 1990 and year *Y*. The shares are calculated annually and then averaged across decades. Bonds are categorized as domestic or international by comparing the market location of issuance with the residence of the issuing firm. Equity is classified as domestic or international by comparing the location of the primary exchange where a firm's stock trades with the residence of the issuing firm. Appendix B provides the list of countries, grouped by income category. China is excluded from the East Asia and Pacific region. CNI = cumulative net capital issuance; GDP = gross domestic product.

Notes

1. The data refer to bond and stock values at issuance and hence are not influenced by subsequent capital gains, which would be reflected in secondary market prices.
2. Based on the World Bank country income classification, low- and middle-income countries are broken down into two subgroups: middle-income countries and low-income countries, excluding China. China is treated separately throughout the book given its economic ascent and size, which could otherwise distort the analysis for other country categories. The year for classifying countries into income groups is 1990 and is published by the World Bank (refer to appendix B). Although currently classified as a middle-income country, China was classified as a low-income country in 1990.
3. The book uses the period 1990 to 2022 to study long-run changes in capital market activity. In several exercises, it takes the 1990s as a base period and analyzes changes from the year 2000 onward, after the 1990s crises in low- and middle-income countries subsided and countries had implemented several capital market and macroeconomic reforms. The book also uses alternative periods to show the robustness of the results.
4. CNI as a ratio to GDP for year *Y* is computed as the sum of equity and bond issuance (minus bonds that matured) between 1990 and year *Y*, divided by GDP in year *Y*. When reported as decades, the figures are decade averages for such ratios.
5. In low- and middle-income countries, CNI increased from 0.1 percent of GDP in 1990 to 9 percent in 2000 and 18 percent in 2022.
6. Many countries, typically smaller countries with little participation in the global economy, have never tapped capital markets. Although developments in capital market access and use are associated with macroeconomic economic developments, the analysis in this book does not systematically relate the two.
7. Nine countries had only one issuance between 1990 and 2022: Micronesia in the 1990s, and Angola, Belarus, Kiribati, Libya, Madagascar, Maldives, Sudan, and Togo, thereafter.
8. In some countries, issuance may have abated or stopped owing to wars or other major disruptions.
9. As noted, the data used here do not capture instances in which equity is repurchased or retired.
10. Firms in middle-income countries experienced a boom in bond issuance in the 2000s, which was not witnessed in low-income countries (Abraham, Cortina, and Schmukler 2021).
11. Although this constraint is more significant for firms in low- and middle-income countries, it also applies, to a lesser extent, to firms in high-income countries. Appendix G provides details on the currency composition of issuance by firms from low- and middle-income countries across domestic and international markets.
12. Gozzi et al. (2015) show that a significant portion of firms continue to issue in domestic markets even after accessing international markets, suggesting that international markets are complements to rather than substitutes for domestic markets.
13. For firms in the euro area, bonds are classified as domestic or international based on the governing law under which they were issued. This approach is used because, after the adoption of the euro, firms in these countries began issuing most of their bonds in the eurobond market, even when the governing law was that of the firm's home country.

References

Abraham, F., J. J. Cortina, and S. L. Schmukler. 2021. "The Rise of Domestic Capital Markets for Corporate Financing: Lessons from East Asia." *Journal of Banking and Finance* 122 (January): 105987.

Gozzi, J. C., R. Levine, M. S. Martinez Peria, and S. L. Schmukler. 2015. "How Firms Use Corporate Bond Markets under Financial Globalization." *Journal of Banking & Finance* 58 (September): 532–51. https://doi.org/10.1016/j.jbankfin.2015.03.017.

Manconi, A., U. Peyer, and T. Vermaelen. 2019. "Are Buybacks Good for Long-Term Shareholder Value? Evidence from Buybacks around the World." *Journal of Financial and Quantitative Analysis* 54 (5): 1899–935.