Global and Regional Market Developments

Higher bond yields in advanced economies spilled over to emerging East Asia

Yields on 2-year and 10-year local currency (LCY) government bonds rose in advanced markets and most emerging East Asian markets between 30 November 2021 and 9 March 2022.[1] Robust economic recovery, rising inflation, and a shift in monetary policy stances in advanced economies have driven up bond yields in advanced markets. Higher bond yields in advanced economies and continued inflationary pressure from rising oil and food prices pushed up bond yields in emerging East Asia. While most regional central banks are maintaining accommodative monetary stances, widely anticipated monetary tightening by the Federal Reserve and the Russian invasion of Ukraine have heightened risk aversion and pushed up risk premiums. Regional financial conditions, while still robust, slightly weakened, as the majority of currencies depreciated and the strong performance momentum in equity markets softened during the review period (**Table A**).

In major advanced markets, progress in economic recovery and persistent inflation has led to expected monetary tightening and pushed up bond yields. In the US, 2-year and 10-year bond yields rose strongly by 111 basis points (bps) and 51 bps, respectively, between 30 November 2021 and 9 March 2022. The Federal Reserve announced at its 2–3 November meeting that it would taper its monthly purchases of Treasury assets by USD10 billion and mortgage-backed securities by USD5 billion. At its 14–15 December meeting, the Federal Reserve indicated that it would accelerate tapering by reducing Treasury purchases by USD20 billion and mortgage-backed securities by USD10 billion per month, aiming to end all asset purchases by March 2022.

Table A: Changes in Global Financial Conditions

	2-Year Government Bond (bps)	10-Year Government Bond (bps)	5-Year Credit Default Swap Spread (bps)	Equity Index (%)	FX Rate (%)
Major Advanced Economies					
United States	111	51	–	(6.3)	–
United Kingdom	93	72	6	1.9	(0.9)
Japan	9	11	0.3	(8.5)	(2.3)
Germany	25	57	8	(8.3)	(2.3)
Emerging East Asia					
China, People's Rep. of	(24)	(0.3)	2	(8.6)	0.7
Hong Kong, China	62	20	–	(12.1)	(0.3)
Indonesia	36	68	23	5.1	(0.1)
Korea, Rep. of	34	51	11	(7.6)	(3.8)
Malaysia	7	15	14	3.2	0.4
Philippines	44	41	30	(2.9)	(3.6)
Singapore	46	16	–	5.1	0.5
Thailand	(13)	29	9	4.8	2.2
Viet Nam	88	27	28	(0.3)	(0.5)

( ) = negative, – = not available, bps = basis points, FX = foreign exchange.
Notes:
1. Data reflect changes between 30 November 2021 and 9 March 2022.
2. A positive (negative) value for the FX rate indicates the appreciation (depreciation) of the local currency against the United States dollar.
Source: *AsianBondsOnline* computations based on Bloomberg LP data.

[1] Emerging East Asia comprises the People's Republic of China; Hong Kong, China; Indonesia; the Republic of Korea; Malaysia; the Philippines; Singapore; Thailand; and Viet Nam.

In its December projections, the Federal Reserve revised upward its 2022 forecasts for gross domestic product (GDP) growth and Personal Consumption Expenditures inflation to 4.0% and 2.6%, respectively, from its September forecasts of 3.8% and 2.2%. Per the dot plot released after the December Federal Open Market Committee meeting, the federal funds rate was projected to rise by 75 bps in 2022.

During it's 25–26 January meeting, the Federal Reserve affirmed that its asset purchase program would end in March and acknowledged that high inflation, continued economic recovery, and a strong labor market warranted an increase in the federal funds target range "soon." Nonfarm payroll additions in February rose to 678,000 from 481,000 in January and 588,000 in December. The unemployment rate also declined to 3.8% in February, an improvement from 4.0% in January and 3.9% in December. The Federal Reserve raised the federal funds rate by 25 bps at its 15–16 March meeting. Projections indicate a total of 175 bps rate hike in 2022 and 2023.

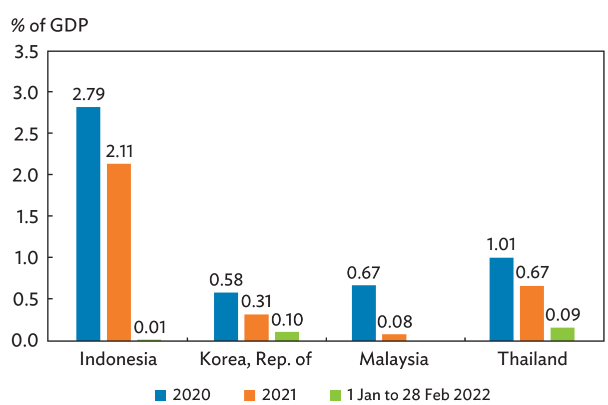
Continued economic growth and mounting inflation also led to Asset Purchase Programme (APP) adjustments by the European Central Bank (ECB). The euro area's GDP expanded 4.6% year-on-year (y-o-y) in the fourth quarter of 2021, up from 4.0% y-o-y in the third quarter. During its 10 March meeting, the ECB noted the euro area's economic growth and rising inflation. The ECB updated its GDP forecasts for 2021, 2022, and 2023 to 5.4%, 3.7%, and 2.8%, respectively, compared with December forecasts of 5.1%, 4.2%, and 2.9%. The ECB also raised its inflation forecasts for 2021, 2022, and 2023 to 2.6%, 5.1%, and 2.1%, respectively, from 2.6%, 3.2%, and 1.8%. Similar to the Federal Reserve, the ECB announced that bond purchases under the Pandemic Emergency Purchase Programme would end in March. During its 16 December meeting, the ECB said that following the end of such purchases, the ECB will temporarily increase bond purchases under its conventional APP from the current monthly pace of EUR20 billion to EUR40 billion in the second quarter of 2022 and to EUR30 billion in the third quarter. However, uncertainty related to the Russian invasion of Ukraine might influence these adjustments. At its 10 March meeting, the ECB accelerated its tapering of the APP, announcing monthly net purchases amounting to EUR40 billion in April, EUR30 billion in May, and EUR20 billion in June. If the data support it, the ECB might conclude net purchases in the third quarter of 2022.

At its 18 January meeting, the Bank of Japan (BOJ) revised its 2022 GDP growth and inflation forecasts upward to 3.8% and 1.1%, respectively, from previous forecasts of 2.9% and 0.9% made in October. The BOJ's monetary policy was largely left unchanged, with the short-term policy rate target maintained at −0.1%; the 10-year Japan Government Bond yield target held at zero; and the current purchase of government bonds, corporate bonds, and commercial paper unchanged. The BOJ expects its policy rates to remain either at or below current levels, but affirmed that it would end monthly asset purchases of corporate bonds and commercial paper in March.

While most regional central banks maintained easy monetary stances amid modest inflation, the Bank of Korea and Monetary Authority of Singapore began tightening their respective monetary policies due to inflationary pressure. Many regional central banks also reduced their LCY bond purchases in 2021 as economic activities gradually recovered (**Figure A**). Tracking rising bond yields in major advanced markets and rising inflation in the region, 2-year and 10-year bond yields rose in almost all emerging East Asian markets between 30 November and 9 March (**Figure B**).

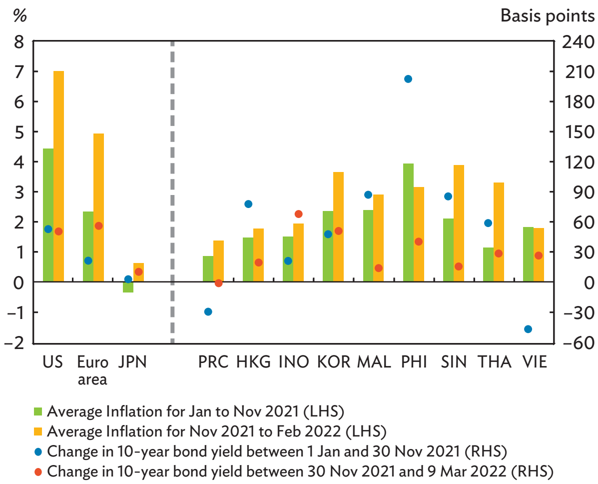
Indonesia and the Philippines witnessed relatively large increases in 10-year bond yields of 68 bps and 41 bps,

Figure A: Central Banks' Local Currency Bond Purchase Program in Emerging East Asia



GDP = gross domestic product.
Notes:
1. Central bank purchases as a share to GDP was computed based on December 2021 GDP.
2. For Indonesia, data for 2022 cover the period 1 January to 18 February.
3. For Malaysia, data for 2022 cover the period 1 January to 31 January.
Sources: CEIC Data Company, Haver Analytics, and various local sources.

Figure B: Inflation and Bond Yield Changes in Major Advanced Markets and Emerging East Asia

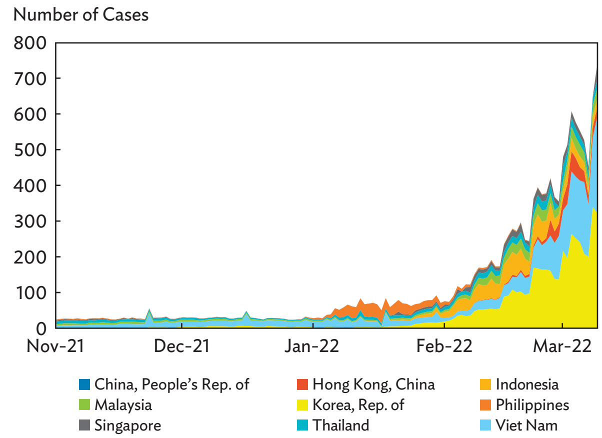


PRC = China, Rep. of; HKG = Hong Kong, China; INO = Indonesia; JPN = Japan; KOR = Korea, Rep. of; LHS = left-hand side; MAL = Malaysia; PHI = Philippines; RHS = right-hand side; SIN = Singapore; THA = Thailand; US = United States; VIE = Viet Nam.
Note: Average inflation for Nov 2021 to Jan 2022 was used for Hong Kong, China; Malaysia; and Singapore.
Source: Various local sources.

respectively, amid subdued investment sentiment due to the Russian invasion of Ukraine, continued inflationary pressure, and the Federal Reserve's tapering and expected rate hikes. The Republic of Korea also recorded a large rise in 10-year bond yields of 51 bps, partly because the Bank of Korea continued raising its policy rate—by 25 bps on both 25 November 2021 and 14 January 2022. For short-term bonds, Viet Nam's 2-year yield recorded the largest rise in the region at 88 bps on increased financing demand and subdued investment sentiment given the rapid increase in local coronavirus disease (COVID-19) cases in February. This was followed by Hong Kong, China, where the 2-year yield jumped 62 bps during the review period amid rising local COVID-19 cases (**Figure C**).

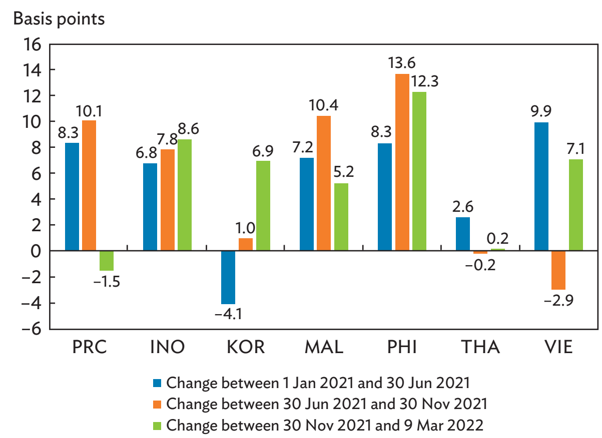
The People's Republic of China (PRC) was the sole market in emerging East Asia that saw a decline in both its 2-year and 10-year bond yields. The decline in yields followed monetary easing by the People's Bank of China, which reduced the reserve requirement ratio by 50 bps on 6 December and further lowered the 1-year medium-term lending facility rate by 10 bps on 16 January in response to growth moderation. The PRC's GDP growth slowed to 4.0% y-o-y in the fourth quarter of 2021 from 4.9% y-o-y in the third quarter and 7.9% y-o-y in the second quarter. In December, the Asian Development Bank downgraded

Figure C: Daily COVID-19 Cases in Emerging East Asia (thousand)



COVID-19 = coronavirus disease.
Note: Data as of 9 March 2022.
Source: Our World in Data.

Figure D: Changes in Credit Default Swap Spreads in Select Emerging East Asian Markets (senior 5-year)

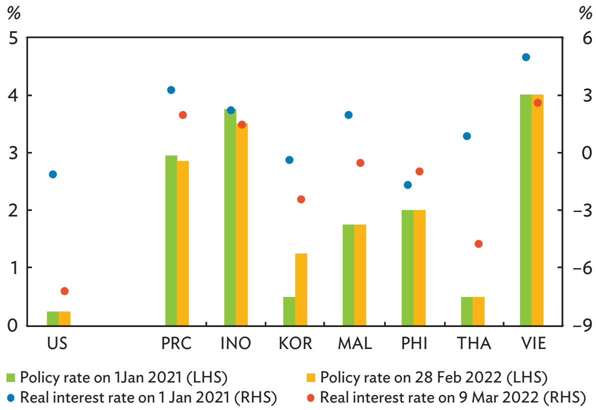


PRC = China, Rep. of; INO = Indonesia; KOR = Korea, Rep. of; MAL = Malaysia; PHI = Philippines; THA = Thailand; VIE = Viet Nam.
Sources: *AsianBondsOnline* computations based on Bloomberg LP data.

its forecast for the PRC's GDP growth in full-year 2022 to 5.3% from 5.5% in September.

Strong economic recovery and expected monetary tightening in the US pushed up regional risk premiums in 2021. Risk premiums edged up further at the end of February following the Russian invasion of Ukraine (**Figure D**). Nevertheless, modest inflation and the gradual pace of recovery in emerging East Asia has allowed regional central banks to maintain their current

Figure E: Policy Rates and Real Interest Rates in the United States and Emerging East Asia



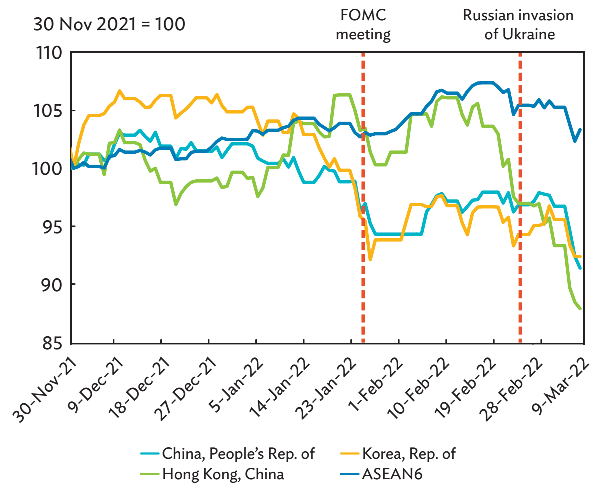
PRC = China, Rep. of; INO = Indonesia; KOR = Korea, Rep. of; LHS = left-hand side; MAL = Malaysia; PHI = Philippines; RHS = right-hand side; THA = Thailand; US = United States; VIE = Viet Nam.
Note: For the real interest rate on 9 March 2022, the inflation figure used was for the month of February 2022 except for Hong Kong, China; Malaysia; and Singapore (January 2022).
Source: *AsianBondsOnline* calculations based on Bloomberg LP data.

accommodative monetary stances. Real interest rates remained relatively high in the region compared to the US and were positive in some regional markets (**Figure E**).

Negative sentiment generated by the Russian invasion of Ukraine on 24 February softened the bullish momentum in regional equity markets during the review period. The Association of Southeast Asian Nations (ASEAN) markets collectively rose, exhibiting a weighted average return of 3.3% between 30 November 2021 and 9 March 2022 on stronger GDP growth in the fourth quarter of 2021 compared to the previous quarter (**Figure F**). Hong Kong, China witnessed the region's largest retreat, with its equity market contracting 12.1% on soured investment sentiment over the Russian invasion of Ukraine as well as the rapid climb of local COVID-19 cases in February. A collective decline among regional equity markets was observed around the Federal Reserve's meeting on 25–26 January amid widespread expectations of tightening, as well as immediately after 24 February when the Russian invasion of Ukraine started.

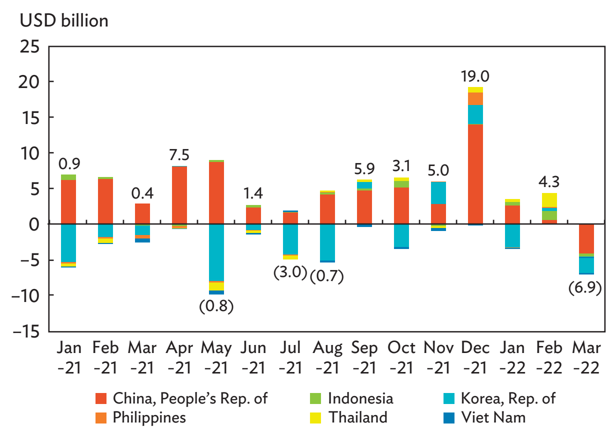
Solid economic fundamentals, relatively higher real interest rates, and modest inflation make ASEAN assets attractive to foreign investors. Foreign equity portfolio flows remained sound in ASEAN markets on stronger economic performances during the review period (**Figure G**). Net equity foreign portfolio flows into

Figure F: Equity Indexes in Emerging East Asia



ASEAN = Association of Southeast Asian Nations, FOMC = Federal Open Market Committee.
Notes:
1. ASEAN6 comprises the markets of Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Viet Nam.
2. Data as of 9 March 2022.
Source: *AsianBondsOnline* computations based on Bloomberg LP data.

Figure G: Capital Flows into Equity Markets in Emerging East Asia

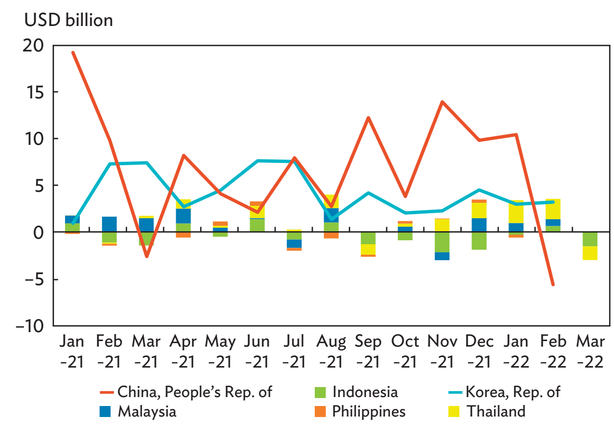


( ) = outflows, USD = United States dollar.
Notes:
1. Data coverage is from 1 January 2021 to 9 March 2022.
2. Numbers on the chart refer to net inflows (net outflows) for each month.
Source: Institute of International Finance.

ASEAN markets recorded USD2.4 billion in December, reversing net outflows of USD0.9 billion in November. This was followed by net inflows of USD0.7 billion and USD3.3 billion in January and February, respectively. Thailand's equity market was the largest recipient of foreign capital flows in February, buoyed by optimism over its economic recovery due to the lifting of border restrictions effective 1 February. Its quarantine-free visa program for the fully vaccinated is expected to revive its tourism industry. Due to heightened risk aversion during the first 9 days of March following the Russian invasion of Ukraine, the PRC and the Republic of Korea witnessed outflows of USD4.1 billion and USD2.3 billion, respectively. Furthermore, the ASEAN markets experienced outflows of USD553.7 million.

Foreign portfolio flows to LCY bond markets in ASEAN remained robust through February 2022. Portfolio inflows in ASEAN bond markets reached USD1.6 billion and USD2.8 billion in December and January, respectively, led by Thailand (USD4.1billion) and Malaysia (USD2.5 billion), reversing average monthly outflows of USD1.3 billion from September to November (**Figure H**). In January, all regional markets except for Indonesia and the Philippines recorded inflows. ASEAN portfolio flows into the bond market further improved in February to USD3.6 billion from USD2.8 billion in the previous month.

Figure H: Foreign Capital Flows in Local Currency Bond Markets in Emerging East Asia



USD = United States dollar.
Notes:
1. The Republic of Korea and Thailand provided data on bond flows. For the People's Republic of China, Indonesia, Malaysia, and the Philippines, month-on-month changes in foreign holdings of local currency government bonds were used as a proxy for bond flows.
2. Data are as of 9 March 2022 except for the People's Republic of China, the Republic of Korea, and Malaysia (28 February 2022); and the Philippines (31 January 2022).
3. Figures were computed based on 9 March 2022 exchange rates to avoid currency effects.

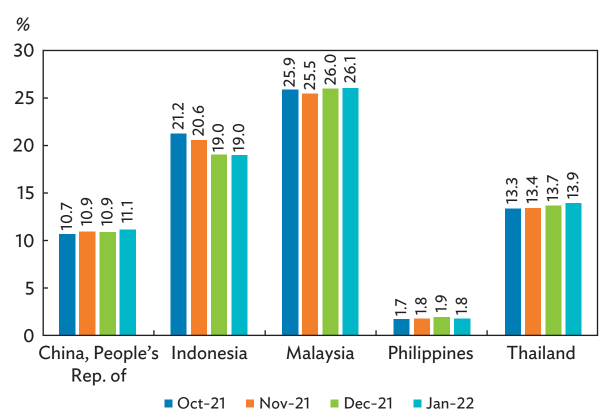
Sources: People's Republic of China (Bloomberg LP); Indonesia (Directorate General of Budget Financing and Risk Management, Ministry of Finance); Republic of Korea (Financial Supervisory Service); Malaysia (Bank Negara Malaysia); Philippines (Bureau of the Treasury); and Thailand (Thai Bond Market Association).

Indonesia witnessed continuous foreign outflows from its bond market during most of 2021, partly driven by government efforts to promote domestic investment and stabilize capital flows.

As a result of positive inflows to most regional bond markets during the fourth quarter of 2021, the share of foreign holdings increased as of December (**Figure I**). Similar patterns can be observed in changes in the investor profiles of regional bond markets (**Figure J**). During 2021, the share of foreign holdings increased in the PRC, the Republic of Korea, and Malaysia, while it declined in Indonesia from 24.9% in January to 19.0% in December, as the government aimed to boost the domestic investor base in the bond market. Domestic financing institutions—particularly banks, insurance companies, and pension funds and mutual funds—now account for more than 50% of the domestic LCY bond market in Indonesia. Similar developments also occurred in the markets of Thailand and the Philippines. **Box 1** further discusses foreign participation in Asian LCY bond markets and financial stability risks.

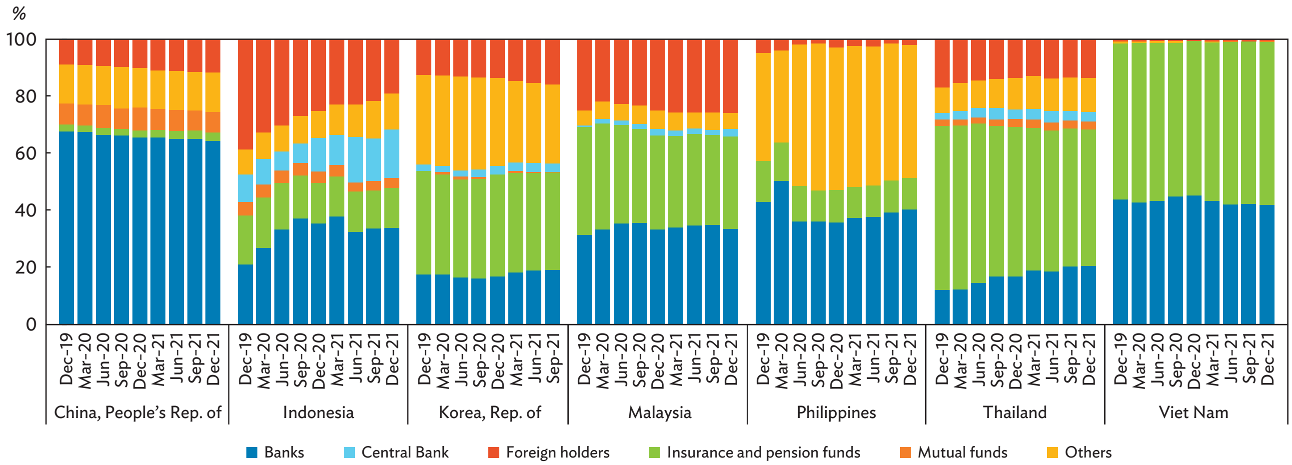
During the review period, a majority of regional currencies posted small exchange rate movements of less than 1% versus the US dollar (**Figure K**). The best performing currency was the Thai baht on a strengthened domestic economy and outlook, rising 2.2% versus the US dollar. The Korean won and Philippine peso weakened the most, depreciating 3.8% and 3.6%, respectively.

Figure I: Foreign Holdings of Local Currency Government Bonds in Select Emerging East Asian Markets (% of total)



Sources: People's Republic of China (Bloomberg LP and CEIC Data Company); Indonesia (Directorate General of Budget Financing and Risk Management, Ministry of Finance); Malaysia (Bank Negara Malaysia); Philippines (Bureau of the Treasury); and Thailand (Bank of Thailand).

Figure J: Investor Profiles of Local Currency Government Bonds in Select Emerging East Asian Markets



Notes:
1. Data coverage is from December 2019 to December 2021 except for the Republic of Korea (September 2021).
2. "Others" include government institutions, individuals, securities companies, custodians, private corporations, and all other investors not elsewhere classified.

Source: *AsianBondsOnline* computations based on local market sources.

Box 1: Foreign Participation in Asian Local Currency Bond Markets and Financial Stability Risks

Local currency (LCY) bond markets have continued to develop in emerging Asian economies since the early 2000s, helping to mitigate against currency and maturity mismatches and reducing reliance on cross-border, bank-based finance.[a] LCY bond market development can also help reduce exposure to global shocks by reducing reliance on foreign currency borrowing. The share of foreign currency debt in emerging Asia, while still pervasive, has declined since 2000 as a result (**Figure B1.1**). Focusing on emerging Asian economies, this box examines the potential financial stability implications of foreign investor participation in LCY bond markets.

While the development of LCY bond markets has helped to reduce the currency mismatch issue in emerging Asian markets by facilitating borrowing abroad in the domestic currency, the increased presence of foreign investors in these markets can amplify the risk of capital flow reversals during periods of heightened financial tension. Excess capital flow volatility can also be related to the so-called "original sin redux," whereby unhedged foreign investors in LCY bond markets are exposed to currency risks (Carstens and Shin 2019). In addition, while foreign investor participation in LCY bond markets can help lower bond yields, the volatility of yields tends to increase along with the foreign purchase of LCY bonds (e.g., Ebeke and Lu 2015). LCY bond markets also tend to be more susceptible to global financial shocks when foreign participation exceeds a given threshold, while the diversification benefits can be negatively affected by high exchange-rate volatility (Turner 2012). Foreign investors in LCY bond markets also tend to be more responsive than domestic investors to changes in global interest rates, which can amplify the exposure of LCY bond markets to foreign shocks.

A recent paper by Beirne, Renzhi, and Volz (2021) revisits this issue for a sample of 10 emerging Asian economies from 1999 to 2020. Drawing on structural panel vector autoregression techniques, they found that less-developed LCY bond markets are more susceptible to capital flow volatility due to foreign investor participation than those with more developed LCY bond markets (**Figure B1.2**).

[a] This box was written by John Beirne, research fellow at the Asian Development Bank Institute; Nuobu Renzhi, assistant professor at the Capital University of Economics and Business in the People's Republic of China; and Ulrich Volz, director of the Centre for Sustainable Finance at SOAS University of London and senior research fellow at the German Development Institute.

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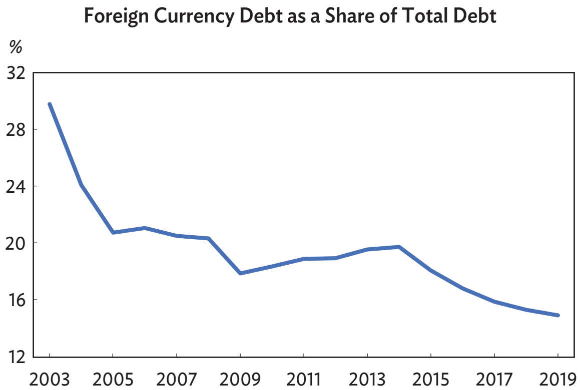
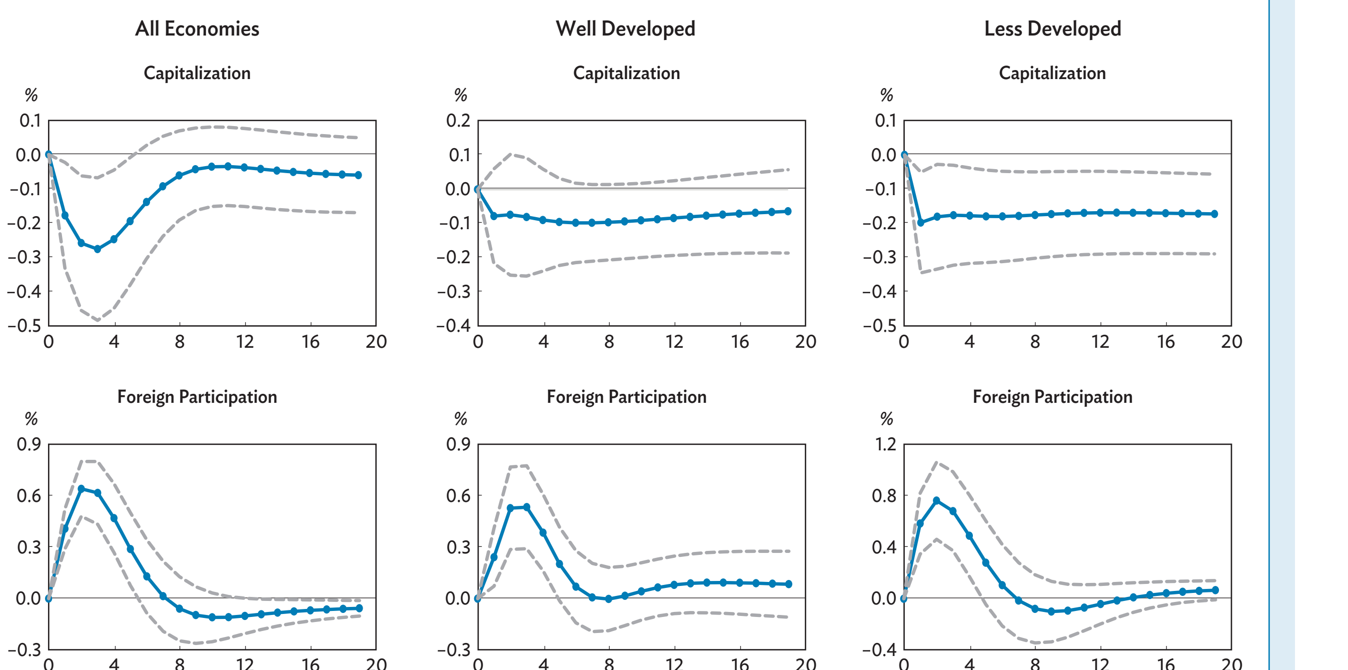
Box 1 *continued*

Figure B1.1: Foreign Currency Debt and Currency Mismatches in Emerging Asia



Notes: Emerging Asia comprises the People's Republic of China; Hong Kong, China; India; Indonesia; the Republic of Korea; Malaysia; the Philippines; Singapore; Thailand; and Viet Nam. The data are computed as gross-domestic-product-weighted averages for the 10 economies in the sample.
Sources: Authors' calculations based on data from the International Monetary Fund, Bank for International Settlements, Institute for International Finance, and China Economic Database.

Figure B1.2: Responses in Capital Flow Volatility to Shocks Imposed on Local Currency Bond Market Capitalization and Foreign Investor Participation in Local Currency Bond Markets



Notes: "Well developed" and "less developed" refer to economies with an average local currency bond market capitalization to gross domestic product ratio that is higher and lower, respectively, than the regional average over the period 1999–2020. Median responses with 95% confidence bands are shown as dashed lines. The vertical axes denote percentage points, while the horizontal axes refer to the number of months.
Source: Beirne, Renzhi, and Volz (2021).

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Box 1 *continued*

Whereas positive LCY bond market capitalization shocks help to stabilize capital flows, as expected, the opposite effect is found for foreign investor participation shocks. Moreover, the sharp increase in capital flow volatility from these latter shocks is much more pronounced for less-developed LCY bond markets. Specifically, a positive shock to foreign investor participation of 1 percentage point yields a rise in capital flow volatility in less-developed markets by around 0.8 percentage points at peak. This compares to around 0.5 percentage points for well-developed markets. Therefore, while foreign participation in LCY bond markets provides important risk-sharing and diversification benefits for LCY bond markets, domestic markets should be cautious of the potential financial stability risks. Strengthening the local investor base should remain key, as well as developing further currency-hedging capabilities to enable foreign investors to manage currency risks.

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Beirne, John, Nuobu Renzhi, and Ulrich Volz. 2021. "Local Currency Bond Markets, Foreign Investor Participation and Capital Flow Volatility in Emerging Asia." *Singapore Economic Review*. https://www.worldscientific.com/doi/10.1142/S0217590821410083 (published online 17 June 2021).

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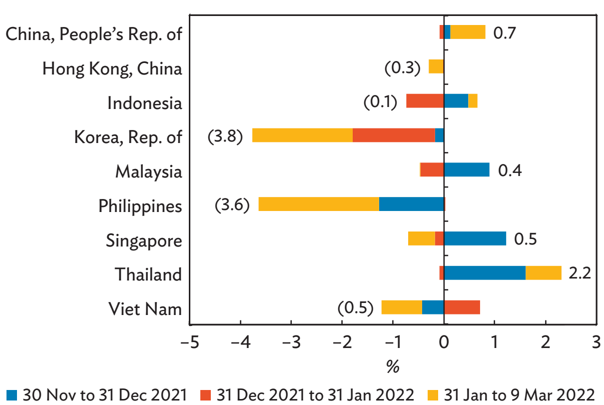
Figure K: Changes in Spot Exchange Rates versus the United States Dollar



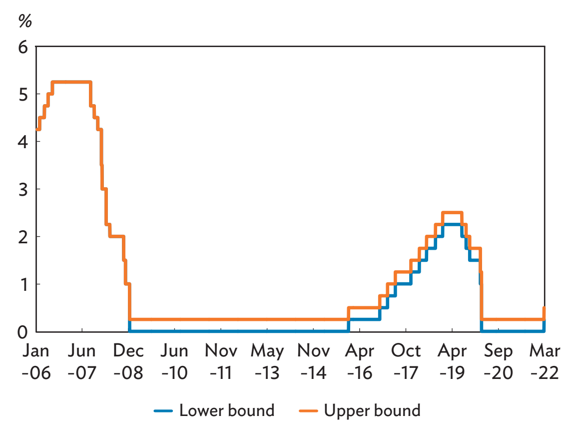
( ) = negative:
Notes:
1. Numbers on the chart refer to the net change for the three periods.
3. A positive (negative) value for the foreign exchange rate indicates the appreciation (depreciation) of the local currency against the United States dollar.
Source: *AsianBondsOnline* computations based on Bloomberg LP data.

Financial conditions in the region slightly weakened during the review period and the risk outlook to regional financial markets remains tilted toward the downside. Uncertainties include the fallout from the Russian invasion of Ukraine, expected tightening in US monetary policy, the trajectory of the COVID-19 pandemic, as well as continued inflationary pressure. **Box 2** shows evidence of the factors that drive sovereign LCY bond issuance in emerging markets.

Box 2: Determinants of Sovereign Local Currency Bond Issuance in Emerging Markets

In 2021, the aggregate size of local currency (LCY) bond markets in emerging East Asia reached 120% of the region's gross domestic product, of which more than 80% was in government bonds.[a] Emerging market LCY bond markets have grown rapidly since the global financial crisis (GFC). The governments of both advanced economies and emerging markets have expanded their borrowing since the GFC, when the United States (US) Federal Reserve forcefully cut interest rates to restore financial stability (**Figure B2**). The post-GFC, global low-interest-rate environment, which reduced the cost of borrowing, contributed to the growth of borrowing.

Figure B2: United States Federal Funds Rate, 1 January 2006–16 March 2022



Source: Bloomberg LP.

In the late 1990s and 2000s, many emerging markets adopted managed exchange rate flexibility, inflation-targeting policies, precautionary management of international reserves, and macroprudential policies. Since the GFC, a sharp drop in the yields on US bonds encouraged a global search for returns, thereby reducing the sovereign spreads of most emerging markets to single digits. Consequently, the institutional investors of advanced economies began to invest in the LCY bonds of many emerging markets, allowing them to borrow abroad in both foreign and domestic currencies. This was a game changer since emerging markets were traditionally unable to borrow abroad in their domestic currencies, a phenomenon known in economics as the "original sin."

A natural question that arises is when do emerging market governments choose to issue bonds in domestic currency rather than foreign currency? Zheng et al. (2021) empirically examine this issue, using 1970–2018 sovereign bond issuance data from the Thomson Reuters Eikon database. Their data cover eight major emerging market sovereign borrowers: Brazil, the People's Republic of China, India, Indonesia, Mexico, the Russian Federation, South Africa, and Turkey. Their analysis yields three main findings.

First, emerging market sovereign borrowers are more likely to issue LCY bonds when the domestic currency appreciates, but this only held before the GFC. Currency appreciation increases the prospective returns on LCY-denominated assets, which then increases investor demand. However, the association between currency appreciation and investor demand weakened after the GFC. One possible explanation is that issuers found it more attractive to borrow in US dollars because they expected the US low-interest-rate environment to persist for a long time.

Second, inflation-targeting economies tended to issue LCY bonds before but not after the GFC. These economies generally have more credible monetary policies and are less likely to inflate away their public debt burden. The insignificant role of inflation targeting after the GFC reflects fading global concerns about inflation.

Third, emerging markets that have offered higher sovereign yields since the GFC are more likely to issue LCY-denominated bonds. This finding is consistent with the global search for returns after the Federal Reserve cut interest rates to almost zero.

The evidence suggests that the search for yield by investors in advanced economies in the post-GFC period has made it possible for even emerging markets with less robust fundamentals to issue sovereign LCY bonds. Furthermore, the coronavirus disease (COVID-19) crisis is likely to significantly increase the borrowing requirements of emerging market governments. Therefore, potential sovereign overborrowing, facilitated by the post-COVID-19 global low-interest-rate environment and the ability to borrow abroad in one's domestic currency, poses a risk to the financial stability of emerging markets.

[a] This box is based on Zheng, Huanhuan, Joshua Aizenman, Yothin Jinjarak, and Donghyun Park. 2021. "Good-Bye Original Sin, Hello Risk On-Off, Financial Fragility, and Crises? *Journal of International Money and Finance"* 117 (2021): 1024–42; *AsianBondsOnline.* Data Portal. https://asianbondsonline.adb.org/data-portal/ (accessed October 29, 2021).