Developments in Regional Financial Conditions

Bond yields in emerging East Asia declined amid easing inflationary pressure and the moderating pace of monetary tightening.

From 1 March to 2 June 2023, bond yields in emerging East Asia mostly fell on easing inflationary pressure in the region and the slowing pace of monetary tightening in the United States (US) and across the region.[1] Financial conditions across the region remained stable amid uncertainty over the monetary policy path of the Federal Reserve. Regional equity markets and currencies slightly weakened, while risk premiums narrowed overall (**Table A**). The impact of banking sector turmoil in the US and Europe has been limited in emerging East Asian markets.

During the review period, long-term bond yields trended downward on easing inflationary pressure in both advanced economies and emerging east Asia. Since January, inflation has been trending downward globally on declining oil and food prices (**Figure A**). Most short-term bond yields also declined during the review period as the pace of monetary tightening moderated in both advanced and regional economies (**Table B**). Most central banks in the region have moderated their pace of rate hikes, raising interest rates by a total of 225 basis points (bps) through eight rate hikes across the region between 1 January and 2 June. This contrasts with a total increase of 850 bps from 19 rate hikes between 1 August and 31 December 2022.

The Federal Reserve hiked the federal funds rate by 25 bps at both its 21–22 March and 2–3 May Federal Open Market Committee (FOMC) meetings, bringing the target range to 5.00%–5.25%. While the market largely anticipated a pause in rate hikes in June to mitigate financial risks, there is some lingering uncertainty regarding the possibility of another rate hike in June (**Figure B**). In the March FOMC meeting statement, the Federal Reserve indicated that "some additional policy firming may be appropriate." Following the release of the March Core Consumer Price Index in the US on 12 April, which inched up to 5.6% from 5.5% in February, Federal Reserve Governor Christopher Waller

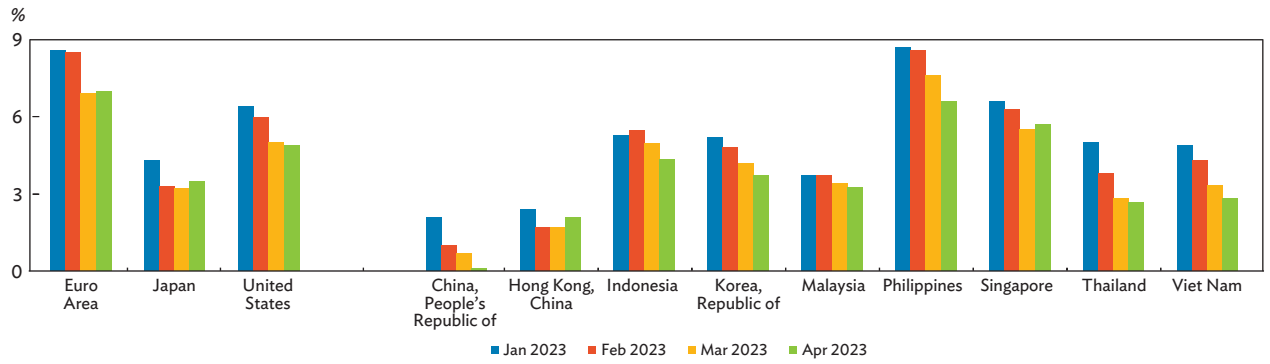
Table A: Changes in Financial Conditions in Major Advanced Economies and Select Emerging East Asian Markets from 1 March to 2 June 2023

	2-Year Government Bond Yield (bps)	10-Year Government Bond Yield (bps)	5-Year Credit Default Swap Spread (bps)	Equity Index (%)	FX Rate (%)
Major Advanced Economies					
Germany	(40)	(40)	0.02	4.9	0.4
Japan	(4)	(9)	(7)	10.2	(2.7)
United States	(38)	(30)	–	8.4	–
Select Emerging East Asian Markets					
China, People's Rep. of	(29)	(20)	(8)	(2.5)	(3.2)
Hong Kong, China	(44)	(43)	–	(8.1)	0.2
Indonesia	(82)	(49)	(6)	(3.1)	1.6
Korea, Rep. of	(35)	(27)	(7)	7.8	1.4
Malaysia	(7)	(23)	(10)	(4.8)	(2.3)
Philippines	23	(48)	(6)	(1.4)	(1.6)
Singapore	(32)	(43)	–	(2.7)	(0.6)
Thailand	23	(8)	5	(5.5)	0.7
Viet Nam	(136)	(133)	3	4.8	1.2

( ) = negative, – = not available, bps = basis points, FX = foreign exchange.
Note: A positive (negative) value for the FX rate indicates the appreciation (depreciation) of the local currency against the United States dollar.
Source: *AsianBondsOnline* calculations based on Bloomberg LP data.

[1] Emerging East Asia is defined to include member states of the Association of Southeast Asian Nations (ASEAN) plus the People's Republic of China; Hong Kong, China; and the Republic of Korea.

Figure A: Inflation in Advanced and Select Emerging East Asian Economies



Note: Data coverage is from January to April 2023.
Sources: Various local sources.

Table B: Changes in Monetary Stances in Major Advanced Economies and Select Emerging East Asian Markets

Economy	Policy Rate 1-Jun-2022 (%)	Rate Change (%)												Policy Rate 2-Jun-2023 (%)	Change in Policy Rates (basis points)
		Jun-2022	Jul-2022	Aug-2022	Sep-2022	Oct-2022	Nov-2022	Dec-2022	Jan-2023	Feb-2023	Mar-2023	Apr-2023	May-2023	Jun-2023	
Euro Area	(0.50)		↑0.50		↑0.75		↑0.75	↑0.50		↑0.50	↑0.50		↑0.25		3.25	↑ 375
Japan	(0.10)														(0.10)	
United Kingdom	1.00	↑0.25		↑0.50	↑0.50		↑0.75	↑0.50		↑0.50	↑0.25		↑0.25		4.50	↑ 350
United States	1.00	↑0.75	↑0.75		↑0.75		↑0.75	↑0.50		↑0.25	↑0.25		↑0.25		5.25	↑ 425
China, People's Rep. of	2.85			↓0.10											2.75	↓ 10
Indonesia	3.50			↑0.25	↑0.50	↑0.50	↑0.50	↑0.25	↑0.25						5.75	↑ 225
Korea, Rep. of	1.75		↑0.50	↑0.25		↑0.50	↑0.25		↑0.25						3.50	↑ 175
Malaysia	2.00		↑0.25		↑0.25		↑0.25						↑0.25		3.00	↑ 100
Philippines	2.25	↑0.25	↑0.75	↑0.50	↑0.50		↑0.75	↑0.50		↑0.50	↑0.25				6.25	↑ 400
Singapore	–		↑			↑									–	–
Thailand	0.50			↑0.25	↑0.25		↑0.25		↑0.25		↑0.25		↑0.25		2.00	↑ 150
Viet Nam	4.00				↑1.00	↑1.00						↓0.50	↓0.50		5.00	↑ 100

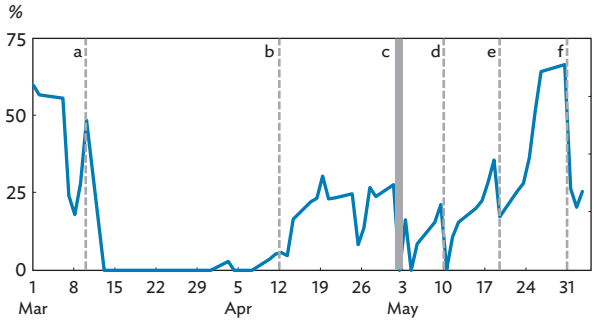
( ) = negative.

Notes:
1. Data coverage is from 1 June 2022 to 2 June 2023.
2. For the People's Republic of China, data used in the chart are for the 1-year medium-term lending facility rate. While the 1-year benchmark lending rate is the official policy rate of the People's Bank of China, market players use the 1-year medium-term lending facility rate as a guide for the monetary policy direction of the People's Bank of China.
3. The up (down) arrow for Singapore signifies monetary policy tightening (loosening) by its central bank. The Monetary Authority of Singapore utilizes the Singapore dollar nominal effective exchange rate to guide its monetary policy.

Sources: Various central bank websites.

on 14 April emphasized that much still needs to be done on inflation. Nevertheless, the hawkish phrasing in the FOMC's March statement was removed from its May statement. Thus, the probability of a 25 bps rate hike in June fell from 16.6% on 14 April to zero after the FOMC meeting announcement on 4 May. On 10 May, Minneapolis Federal Reserve Bank President Neel Kashkari noted that inflation had been surprisingly stubborn and therefore tight monetary policy might need to be maintained for quite some time. On 12 May, Federal Reserve Governor Michelle Bowman indicated that inflation remained high and further monetary tightening would be needed to lower inflation. On the same day, Chicago Federal Reserve Bank President Austan Goolsbee echoed that inflation remained too high. Meanwhile, the University of Michigan's survey of inflation expectations for the next 5–10 years rose to 3.2% in May 2023, marking a 12-year high. Comments by Federal Reserve Chairman Jerome Powell on 19 May that inflation was still too high led to an increase in the probability of a June rate hike from 10.7% on 11 May to as high as 66.6% on 30 May. The probability fell to 20.4%

Figure B: Probability of a 25 bps Rate Hike at the Federal Open Market Committee Meeting on 13–14 June 2023



bps = basis points, FOMC = Federal Open Market Committee.

Note: Data are as of 2 June 2023.

a Silicon Valley Bank placed under receivership.
b March Core Consumer Price Index in the United States inched up to 5.6%.
c FOMC May meeting.
d Minneapolis Federal Reserve Bank President Neel Kashkari comments that tight monetary policy may be needed for an extended period.
e Federal Reserve Chairman Jerome Powell noted that inflation is still too high.
f Federal Reserve Governor Philip Jefferson speech indicated a pause in rate hike in the next FOMC meeting.

Source: CME FedWatch Tool (accessed on 3 June 2023).

on 1 June after comments by Federal Reserve Governor Philip Jefferson on 31 May that a pause in June would give time for policymakers to assess recent economic data.

Recent US economic data contributed to the mixed views regarding the potential pause in rate hikes by the Federal Reserve in June. Annualized gross domestic product (GDP) growth weakened to 1.3% in the first quarter (Q1) of 2023, based on a revised estimate, from 2.6% in the fourth quarter (Q4) of 2022. Consumer Price Index inflation continued to trend down to 4.9% year-on-year (y-o-y) in April from 5.0% y-o-y in March, 6.0% y-o-y in February, and 6.4% y-o-y in January. Meanwhile, the labor market remained strong, as nonfarm payrolls added 339,000 jobs in May from a revised 294,000 in April. Higher-than-expected nonfarm payrolls in May, released on 2 June, led a to a small rise in Federal Reserve rate hike probability to 25.3% on the same day. As widely expected, the Federal Reserve left its monetary policy unchanged at its 13–14 June FOMC meeting. Updated economic forecasts, however, indicate future rate hikes are still possible.

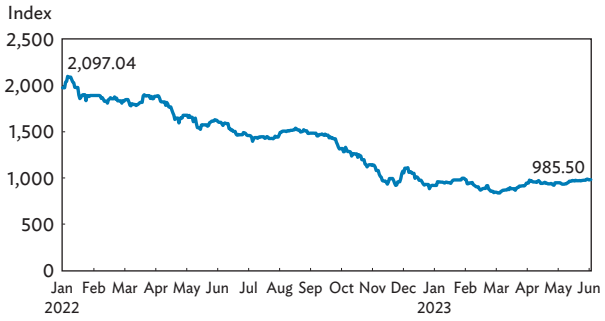
In the euro area, the European Central Bank (ECB) raised the policy rate by 25 bps on 4 May, which was smaller than the previous 50 bps rate hike on 16 March. This decision was partly influenced by the banking sector turmoil experienced in both the US and Europe in March. In the April Bank Lending Survey released on 2 May, the ECB cited its concern over tightening bank lending, which was causing monetary growth to decline, as one reason for the smaller 25 bps rate hike. Both the 2-year and 10-year yields in Germany fell during the review period, largely driven by easing inflationary pressure and expectations that the ECB might adopt similar measures as the Federal Reserve to safeguard financial stability. While still elevated, inflation in the euro area continued to trend downward to 6.1% y-o-y in May from April (7.0%), March (6.9%), February (8.5%), and January (8.6%). Annualized GDP growth weakened to 1.0% in Q1 2023 from 1.8% in Q4 2022. However, the ECB emphasized that inflationary pressure remains unacceptably high. At the ECB's monetary policy press conference on 4 May, ECB President Christine Lagarde indicated that they "are not pausing." The ECB eventually raised its policy rate by 25 bps on 15 June.

Unlike in the US and euro area, the Bank of Japan (BOJ) left its easy monetary policy unchanged during the review period. However, in its 28 April monetary policy statement, the BOJ removed the phrase "it also expects short- and long-term policy interest rates to remain at their present or lower levels," replacing it with a plan to review existing monetary policy in 1–1.5 years. This led to some expectations that the BOJ might eventually adjust its easy monetary policy. The BOJ's updated economic forecasts in April showed a weakening GDP outlook and slightly higher inflation forecasts from those made in January. The GDP growth forecast was revised down to 1.4% from 1.7% for fiscal year 2023, but inflation forecasts were revised up to 1.8% from 1.6% for fiscal year 2023.

The 2-year and 10-year bond yields fell in nearly all emerging East Asian markets during the review period on declining inflation and the easing pace of monetary tightening among regional central banks. The largest decline in yields came from Viet Nam, which was the first regional central bank to reverse its monetary stance in 2023. The State Bank of Vietnam reduced its discount rate by 100 bps, effective 15 March, and reduced its key policy rate by 50 bps on both 3 April and 25 May to spur economic growth, after lower-than-expected GDP growth of 3.3% y-o-y in Q1 2023, and to support financial stability, especially in the real estate market. Since the start of 2022, Viet Nam's real estate equity index has fallen by more than half (**Figure C**). Amid weaknesses in Viet Nam's economy, the State Bank of Vietnam further reduced key policy rates by 50 bps, effective 19 June.

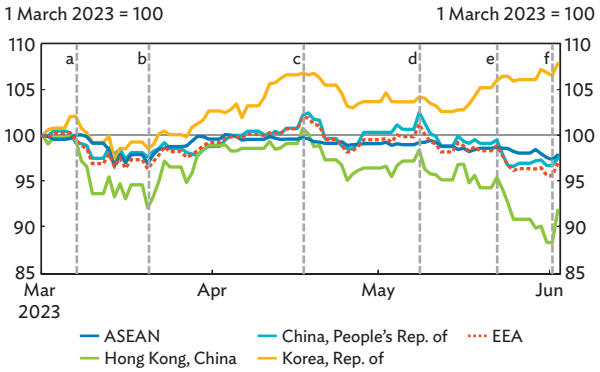
The Philippines and Thailand were the only two markets that saw an increase in the 2-year yield, due to relatively

Figure C: Viet Nam Real Estate Equity Index



Note: Data are as of 2 June 2023.
Source: Bloomberg LP.

Figure D: Movements in Equity Indexes in Select Emerging East Asian Markets



ASEAN = Association of Southeast Asian Nations, EEA = emerging East Asia, FOMC = Federal Open Market Committee, PRC = People's Republic of China, US = United States.

a Chairman Powell's semi-annual report to Congress noted that interest rates will likely be higher-than-expected.
b UBS takes control of Credit Suisse.
c Weaker-than-expected investment and manufacturing data in the PRC.
d US Treasury Secretary Yellen warns of consequences if debt ceiling is not raised.
e Heightened market jitters over US debt ceiling negotiations, Japan announces additional technology export curbs to the PRC.
f US Senate passes debt ceiling bill.

Notes:
1. ASEAN comprises the markets of Cambodia, Indonesia, the Lao People's Democratic Republic, Malaysia, the Philippines, Singapore, Thailand, and Viet Nam.
2. Data are as of 2 June 2023.

Source: *AsianBondsOnline* calculations based on Bloomberg LP data.

more aggressive monetary tightening since January 2023 compared with their regional peers (Table B). While inflation has been declining in the Philippines, it remained elevated at 6.6% y-o-y in April, the second highest across the region. The Bangko Sentral ng Pilipinas has raised policy rates twice for a cumulative total of 75 bps since the start of 2023. The Bank of Thailand raised the policy rate by 25 bps each in January, March, and May, as core inflation remained elevated. Thailand and the Philippines have tightened more than other regional central banks since the start of the year.

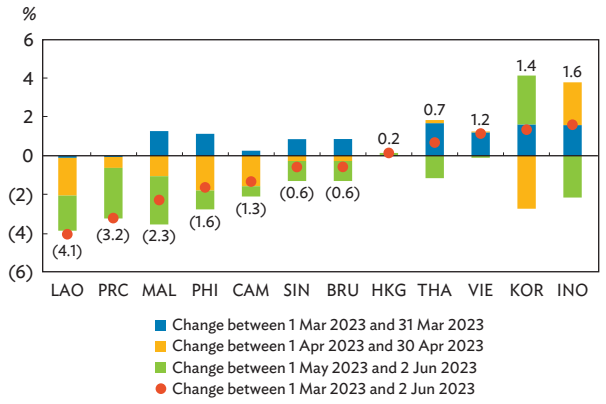
Uncertainties regarding ongoing US monetary tightening and headwinds to the regional economic outlook weighed on most emerging East Asian equity markets during the review period (**Figure D**). Between 1 March and 2 June, regional equity markets declined by 1.7% (simple average) and 3.0% (market-weighted). Weak economic data in the People's Republic of China (PRC) in April contributed to equity market losses in April and May. While the PRC's GDP growth accelerated to 4.5% y-o-y in Q1 2023 from 2.9% y-o-y in Q4 2022, April witnessed moderating industrial production and exports. Furthermore, both inflation and property investment have weakened in the PRC since January 2023.[2] The Republic of Korea posted a 7.8% gain in its equity market index during the review period, partly driven by portfolio inflows on easing foreign investor restrictions as the economy seeks inclusion in the Morgan Stanley Capital International Developed Market Index. Viet Nam's equity market rose by 4.8% during the same period on its easing monetary policy.

In May, negotiations over the debt ceiling in the US cast some uncertainty in global financial markets. US Treasury Secretary Janet Yellen warned on 1 May of the potential for the federal government to default on loan repayments by the first week of June if the debt ceiling was not raised. She later reiterated this on 7 May, citing that a failure to raise the debt ceiling could lead to "economic catastrophe." On 24 May, Fitch, one of the world's top credit rating agencies, placed the US' AAA long-term foreign-currency issuer default rating on "rating watch negative" over doubts that a debt ceiling deal would be negotiated in time. On 31 May, the US House of Representatives passed a bill to raise the government's borrowing limit and was followed by an approval in the Senate on 1 June. Despite the uncertainty around the US debt ceiling debate, it had minimal impacts on regional financial markets.

During the review period, emerging East Asian currencies generally weakened vis-à-vis the US dollar, with a slight depreciation of 0.7% (simple average) and 2.4% (GDP-weighted) (**Figure E**). In March, most regional currencies strengthened, following expectations of dovish monetary stances after Silicon Valley Bank was placed

[2] National Bureau of Statistics of China. 2023. "Investment in Real Estate Development for Jan-Apr." News release. 17 May. http://www.stats.gov.cn/english/PressRelease/202305/t20230519_1939833.html.

Figure E: Changes in Select Emerging East Asian Currencies versus the United States Dollar

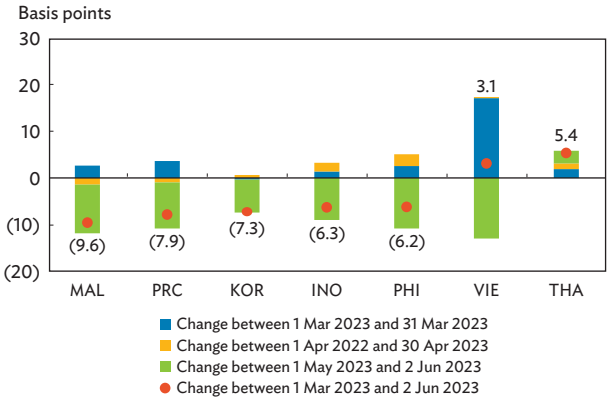


( ) = negative; BRU = Brunei Darussalam; CAM = Cambodia; HKG = Hong Kong, China; INO = Indonesia; KOR = Republic of Korea; LAO = Lao People's Democratic Republic; MAL = Malaysia; PHI = Philippines; PRC = People's Republic of China; SIN = Singapore; THA = Thailand; VIE = Viet Nam.

Notes:
1. A positive (negative) value for the foreign exchange rate indicates the appreciation (depreciation) of the local currency against the United States dollar.
2. The numbers above (below) each bar refer to the change between 1 March 2023 and 2 June 2023.

Source: *AsianBondsOnline* calculations based on Bloomberg LP data.

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

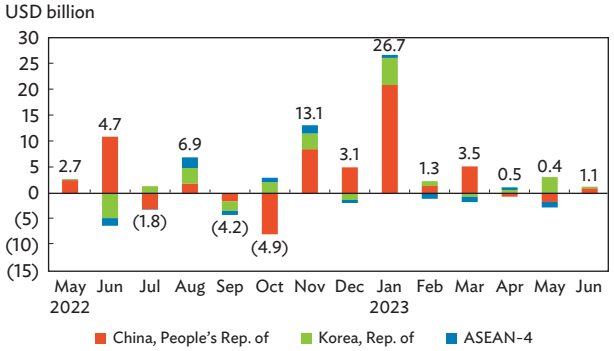


( ) = negative; INO = Indonesia; KOR = Republic of Korea; MAL = Malaysia; PHI = Philippines; PRC = People's Republic of China; THA = Thailand; VIE = Viet Nam.

Note: The numbers above (below) each bar refer to the change in spreads between 1 March 2023 and 2 June 2023.

Source: *AsianBondsOnline* calculations based on Bloomberg LP data.

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



( ) = outflows, USD = United States dollar.

Notes:
1. Data coverage is from 1 May 2022 to 2 June 2023.
2. The numbers above (below) each bar refer to net inflows (net outflows) for each month.
3. Emerging East Asia is defined to include member states of the Association of Southeast Asian Nations (ASEAN) plus the People's Republic of China; Hong Kong, China; and the Republic of Korea.
4. ASEAN-4 includes Indonesia, the Philippines, Thailand, and Viet Nam.

Source: Institute of International Finance.

under receivership on 10 March. The probability of a 50 bps rate hike by the Federal Reserve fell from 78.3% on 8 March to 40.2% on 10 March, then to zero on 13 March. However, in April and May, the US dollar strengthened again on signs of continued tightening. The biggest currency loss in emerging East Asia was recorded in the Lao People's Democratic Republic (Lao PDR) (4.1%) due to high inflation, a widening trade deficit, and debt stress.

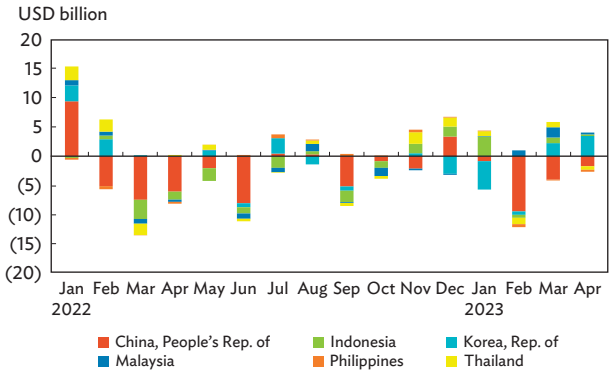
Meanwhile, with expectations of a pause in rate hikes at the June FOMC meeting and a deal in place to raise the US debt ceiling, credit default swap (CDS) spreads, a typical measure of the risk premium, narrowed by 4.1 bps (simple average) and 7.3 bps (GDP-weighted) during the review period (**Figure F**). In contrast, CDS spreads in Thailand widened by 5 bps amid uncertainties following the general elections. In Viet Nam, CDS spreads widened 17.2 bps in March over liquidity concerns in the property sector and rising defaults in the corporate bond market. Based on a FiinRatings report, 69 issuers had failed to make payment on time as of 17 March, with a total default value amounting to VND94.3 trillion, 83.6% of which was from the real estate sector. Viet Nam's CDS spreads eventually rose by only a total of 3.0 bps between 1 March and 2 June. While the government eased corporate bond regulations in March, banks remained cautious in providing credit to the sector.

The region witnessed uneven capital flows into equity markets during the review period. There were USD5.5 billion of net inflows into emerging East Asian equity markets from 1 March to 2 June, driven primarily by net inflows in the PRC (USD3.8 billion) and the Republic of Korea (USD3.4 billion) (**Figure G**). The Association of Southeast Asian Nations (ASEAN) recorded net outflows of USD1.7 billion from 1 March

to 2 June, with all ASEAN economies except Indonesia posting net outflows during the review period. Indonesia recorded net inflows of USD1.2 billion on the back of stable economic growth of 5.0% y-o-y in both Q1 2023 and Q4 2022. In the PRC, total net inflows of USD3.8 billion were buoyed by USD5.2 billion of net inflows in March after the PRC loosened visa restrictions on foreigners on 14 March. However, net outflows of USD0.7 billion in April and USD1.7 billion in May were recorded when weaker-than-expected economic data were released and the US announced plans to restrict investments in PRC technology companies. The Republic of Korea recorded monthly capital inflows in April and May over easing foreign investor restrictions as the economy seeks inclusion in the Morgan Stanley Capital International Developed Market Index.

On expectations of a more dovish monetary stance in the US resulting from turmoil in the banking sector, the region's local currency bond markets posted net foreign inflows of USD1.8 billion in March and USD1.5 billion in April, rebounding from net outflows of USD1.3 billion in January and USD11.2 billion in February (**Figure H**). ASEAN local currency bond markets recorded net inflows of USD3.2 billion in March–April.

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



( ) = negative, 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 30 April 2023.
3. Figures were computed based on 30 April 2023 exchange rates and do not include currency effects.

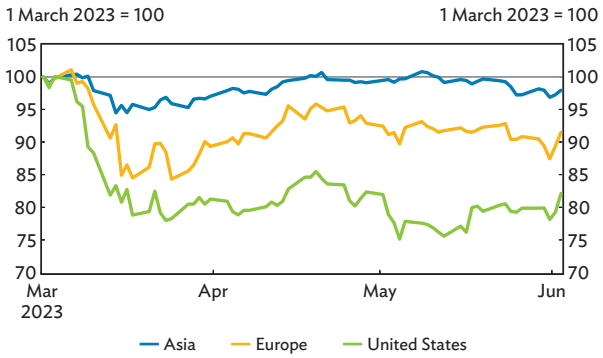
Sources: People's Republic of China (Bloomberg LP); Indonesia (Directorate General of Budget Financing and Risk Management, Ministry of Finance); Republic of Korea (Financial Supervisory Service); Malaysia (Bank Negara Malaysia); Philippines (Bureau of the Treasury); and Thailand (Thai Bond Market Association).

During this 2-month period, Malaysia and Indonesia both recorded relatively large net inflows on declining inflation and a sound economic outlook, while Thailand posted marginal net inflows of USD0.3 billion due to uncertainty over the general election. The Philippines recorded net outflows of USD0.5 billion in March–April amid elevated inflation. The PRC recorded USD5.7 billion of net outflows in March–April as the accommodative monetary stance made the PRC's yields less attractive compared with those of other economies in the region. **Box 1** discusses the economic outlook for emerging East Asia in 2023.

Overall, financial conditions in emerging East Asia remained stable despite uncertainty over ongoing US monetary tightening and headwinds to the global economic outlook. Financial conditions were supported, however, by reduced inflationary pressure and moderated monetary tightening domestically. The regional financial system has remained resilient amid amplified financial risks from banking sector turmoil in the US and Europe. Asian banks are generally robust with limited direct exposure to banks in advanced economies with solvency issues. From 1 March to 2 June, the S&P Broad Market Index for Banks in Asia fell only 2.0%, compared with declines of 17.7% and 8.4% in the US and Europe, respectively (**Figure I**).

Nevertheless, there remain some key downside risks to the outlook for regional financial conditions. In the short term, uncertainty over the moderating pace of monetary

Figure I: S&P Broad Market Indexes for Banking Stocks in Asia, Europe, and the United States



Notes:
1. Data are as of 2 June 2023.
2. S&P Global's Broad Market Indexes for banks are comprehensive benchmarks of bank stocks in Asia and the Pacific, Europe, and the United States, and are subindexes of the S&P Global BMI for Banks.

Source: S&P Global.

Box 1: Economic Outlook in Developing Asia

Developing Asia's economies are reopening with dynamism.[a] There has been a revival of private consumption, investment, and services—including tourism—now that the coronavirus disease (COVID-19) pandemic seems to have largely passed. The outlook for the region is improving after economies showed resilience last year amid weakened demand from advanced economies, COVID-19 lockdowns in the People's Republic of China (PRC), monetary policy tightening, and the Russian invasion of Ukraine.

The PRC's reopening after last year's stringent lockdowns is brightening the outlook for both the region and the global economy, with growth in the PRC forecast to rebound to 5.0% this year and 4.5% in 2024. Household demand is expected to recover as COVID-19 restrictions are lifted. Continued fiscal spending, notably infrastructure investment, will help spur the economic recovery, particularly against a backdrop of weakening global demand. In the rest of East Asia, Hong Kong, China is forecast to bounce back with growth of 3.6% in 2023, supported by the PRC's reopening, after contracting by 3.5% in 2022. In contrast, growth will be weaker in the Republic of Korea, as exports of memory chips and consumer electronics have been hit hard by plunging global demand. On balance, growth in East Asia will accelerate from 2.8% in 2022 to 4.6% in 2023 before moderating to 4.2% in 2024 (**Table B1**).

In Southeast Asia, growth is moderating after a sharp rebound in 2022 as economies reopened. The subregion is expected to grow by 4.7% in 2023, down from 5.6% last year. Economies will continue reopening but tighter monetary conditions amid persistent inflation will dampen growth prospects. Weak exports will also drag down growth as demand from advanced economies continues to shift away from goods, particularly electronics, and back to services. Countries where tourism accounts for a large share of gross domestic product—notably Cambodia, the Philippines, and Thailand—will benefit from the return of tourists from the PRC. Viet Nam is forecast to grow the fastest in the subregion, 6.5% in 2023 and 6.8% in 2024, as tourism, public investment, and stimulus programs keep domestic consumption strong.

Table B1: Gross Domestic Product Growth and Inflation Forecasts (% per year)

	GDP Growth			Inflation		
	2022	2023	2024	2022	2023	2024
Developing Asia	**4.2**	**4.8**	**4.8**	**4.4**	**4.2**	**3.3**
Caucasus and Central Asia	5.1	4.4	4.6	12.9	10.3	7.5
East Asia	2.8	4.6	4.2	2.3	2.3	2.0
South Asia	6.4	5.5	6.1	8.2	8.1	5.8
Southeast Asia	5.6	4.7	5.0	5.0	4.4	3.3
The Pacific	5.2	3.3	2.8	5.7	5.0	4.4

GDP = gross domestic product.
Source: *Asian Development Outlook* database (accessed 18 May 2023).

Overall, developing Asia's growth is expected to reach 4.8% both this year and in 2024, with South Asia, led by resilient growth in India, expected to grow faster than other subregions. Headline inflation in the region is gradually returning to pre-pandemic levels. Inflation in developing Asia is forecast at 4.2% this year and 3.3% in 2024, driven by muted inflation in the PRC. The decline in inflation will be supported by monetary tightening and easing supply chain and shipping bottlenecks.

The banking turmoil in Europe and the United States (US) is an indication that financial stability risks have heightened, especially since the overall effects of the crises in these economies remain uncertain. The effects of the banking turmoil on developing Asia have been limited so far as most Asian banks were not exposed to the failed US banks. Moreover, Asian banks are relatively healthy with higher capital buffers than their US counterparts and relatively low nonperforming loan ratios. Nevertheless, there are potential vulnerabilities in some regional economies with high credit risk, a poor institutional framework, or weak macroeconomic fundamentals. These fragilities should be monitored closely. More widespread banking sector turmoil, although a low-probability risk, could precipitate slower growth and financial instability, or even a financial crisis in the region. This would disproportionately affect more vulnerable groups, increase inequality and long-term unemployment, and cause persistent damage to the productive capacity of developing Asian economies.

Aside from increased financial stability risks, an array of immediate and emerging challenges could still hinder the region's recovery. Policy makers should stay vigilant with regard to higher interest rates and debt. Governments must continue supporting multilateralism and lean against the risks of global fracturing. And developing Asia must continue its strong regional cooperation to weather this uncertain environment.

[a] This box was written by Irfan Qureshi (economist) and David de Padua (economics officer) in the Economic Research and Regional Cooperation Department of the Asian Development Bank.

tightening in advanced economies will significantly shape financial conditions globally and within the region. Monetary policy transmission may also be affected by the degree of market corporate power (**Box 2**). Various headwinds to the regional economic outlook also contribute to ongoing risks to financial conditions.

Higher interest rates could challenge both governments and private sector firms, especially those with relatively high debt levels. Higher interest rates increase debt burdens. In the region, a high debt level in the Lao PDR—where public debt is forecast to reach 128.5% of GDP by 2022, with a majority of debt in foreign currency (104.5% of GDP)—has caused debt sustainability concerns. In May, the International Monetary Fund noted that the debt level in the Lao PDR is expected to remain high as the fiscal consolidation may be insufficient to pare down debt. Meanwhile, the Lao PDR's debt burden was exacerbated by the depreciation of the kip.

Moreover, higher interest rates reduce asset values and quality. Deteriorating asset quality and valuations have triggered liquidity concerns in advanced economies, which may also pose financial risks in the region. For example, rising private debt in Cambodia and stress in the corporate bond market in Viet Nam may make these economies more prone to such risks. Close monitoring and timely intervention can help support financial stability.

In the medium to longer term, climate-related risks will increasingly be a factor in monetary policy, given that both physical and transition risks can contribute to uncertainty in growth, inflation, and financial stability. This calls for more development of sustainable finance markets (**Box 3**).

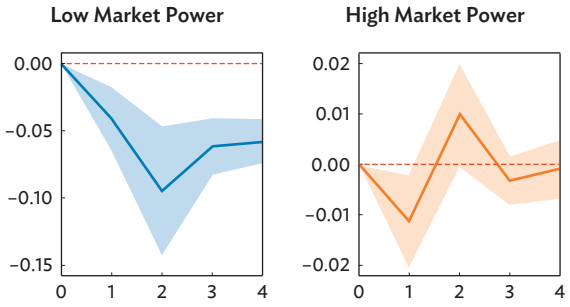
Box 2: Monetary Policy Transmission in an Era of Rising Corporate Market Power—What Can 3,000 Asian Firms Tell Us?

Corporate market power has increased in Asia during the past decade, which can compromise the effectiveness of monetary policy.[a] Although the trajectory of corporate mark-up levels in Asia over this period has been somewhat more muted than the global average, it has risen sharply (De Loecker and Eeckhout 2018). Market power has been a long-standing concern for many policymakers and academic researchers, as it greatly matters for economic welfare and resource allocation (e.g., De Loecker, Eeckhout, and Unger 2020).

A new paper from the Asian Development Bank Institute delves further into this issue by using firm-level data over the period 2013–2021 for more than 3,000 firms across 11 economies in Asia: Hong Kong, China; India; Indonesia; Japan; Malaysia; the People's Republic of China; the Philippines; the Republic of Korea; Singapore; Taipei,China; and Viet Nam. Renzhi and Beirne (2023) find strong empirical support that high corporate market power, as measured by the distribution of firms' mark-ups in the top quartile, weakens the effectiveness of monetary policy transmission.

Firm mark-ups in Asia have increased since 2013, driven by advances in technology-based production and sectoral productivity. In an environment where firms face fewer competitive pressures in the setting of prices, the results indicate that these financial frictions are compounded by an impairment in the monetary policy transmission mechanism. A tightening of monetary policy has the expected dampening effect on firms' real sales for those that have low market power—that is, firms that are in competitive markets with elastic demand for their products and services. For these firms, higher interest rates dampen real sales, thereby enabling

Figure B2: Impulse Responses of Real Sales to Monetary Policy Shocks—Low vs. High Market Power Firms



Notes: The figure plots the impulse responses of real sales to a 1 percentage point contractionary monetary policy shock at an annual frequency. Confidence bands (95%) are reported in shaded areas. The vertical axis unit is percentage points, and the horizontal axis refers to the number of years.
Source: Renzhi and Beirne (2023).

[a] This box was written by John Beirne (vice-chair of research and senior research fellow) of the Asian Development Bank Institute in Tokyo and Nuobu Renzhi (assistant professor) at the School of Economics of Capital University of Economics and Business in Beijing.

continued on next page

Box 2 *continued*

the central bank to affect the business cycle. Specifically, a 1 percentage point rise in interest rates leads to a drop in real sales of around 0.09 percentage points after 2 years, with the negative effect dampening somewhat thereafter but exhibiting persistence and statistical significance over the time horizon. For firms with high market power, however, the effect of monetary policy is significant only for the first year and at a magnitude much lower than for firms with low market power (by a factor of around 5). Moreover, the response to the monetary policy shock becomes insignificant after the first year (**Figure B2**).

It is evident, therefore, that where market power is high the monetary policy transmission mechanism is disrupted. The results are robust to several robustness tests, including alternative monetary policy measures, alternative mark-up definitions, and concerns about additional factors that may affect the estimates. Renzhi and Beirne (2023) also find no material difference in the result for emerging versus advanced economies in Asia. In the case of the former, however, the elasticity of real sales is more pronounced and more persistent. This could be related to a higher natural rate of interest in emerging compared to advanced economies and a greater scope for countercyclical monetary policy. Additionally, heterogeneity in the degree of economic freedom, sectoral composition, and financial leverage does not eliminate the heterogeneous effects of monetary policy concerning firms' market power.

Policy Implications for Central Bankers and Financial Supervisors

Policymakers in central banks need to be aware that rising market power has made monetary policies less effective, as dominant firms have fewer incentives to adjust their output when the cost of inputs changes. They are also more immune to shifts in external financing conditions. Excessive growth in corporate market power could lead to higher inflation during economic downturns, with high-markup firms turning negative shocks into higher prices, thereby further impairing effective monetary policy transmission.

Maximizing the effective implementation of monetary policy requires a more level playing field with regard to competition. Policymakers and competition authorities should closely monitor financial stability risks and negative economic repercussions related to the abuse of a dominant position through merger control. Competition policy should be aimed at fostering an efficient market mechanism across all sectors of the economy and competitive price-setting behavior by firms. This helps to compress heterogeneity in market power dynamics and, therefore, enhances the effectiveness of monetary policy transmission. Policies also need to be balanced to continue to encourage innovation and productivity, underscoring the importance of policy coordination across fiscal, industrial, and competition policies.

References

De Loecker, Jan, and Jan Eeckhout. 2018. "Global Market Power." National Bureau of Economic Research Working Paper.

De Loecker, Jan, Jan Eeckhout, and Gabriel Unger. 2020. "The Rise of Market Power and the Macroeconomic Implications." *The Quarterly Journal of Economics* 135 (2): 561–644.

Renzhi, Nuobu, and John Beirne. 2023. "Corporate Market Power and Monetary Policy Transmission in Asia." Asian Development Bank Institute Working Paper No. 1635.

Box 3: Developing Sustainable Finance Markets Requires Proactive Climate Actions from Central Banks

It is becoming increasingly clear that climate risks will exert a major impact on inflation, economic growth, and financial systems.[a] Meanwhile, the global financial system is facing the problem of mispricing due to the presence of low carbon prices that do not adequately reflect the social cost of emitting greenhouse gases. To accelerate the attainment of carbon neutrality, financial institutions need to improve their understanding of climate risks and related risk management. This is essential to foster a sustainable finance market since realizing a carbon-neutral economy requires a large amount of investment and the mobilization of funds for that purpose. If these issues are left unaddressed, the transition process will remain too slow to achieve carbon neutrality. Moreover, climate risks may destabilize financial systems as climate-related physical, transition, and liability risks materialize over time.

Central banks and financial regulators have realized that they can no longer take neutral positions and ignore climate change and other environmental issues. There are several climate-related actions that central banks and financial regulators can take, while climate and other environmental factors can be incorporated into financial stability frameworks, macro climate modeling, and monetary policy operations.

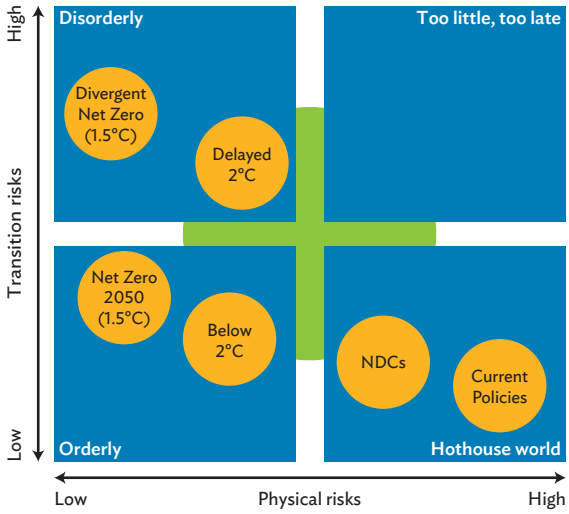
Coping with Climate-Related Financial Risks to Maintain Financial Stability

Among authorities' possible actions, there is a growing global consensus that central banks and financial regulators should view climate risks as a major financial risk. The Financial Stability Board's roadmap on this subject stressed the need to improve companies' and financial institutions' disclosure and data collection, push financial institutions to perform climate scenario analysis, and encourage financial authorities to improve their surveillance (Financial Stability Board 2021). An increasing number of financial authorities have started to incorporate climate risks into financial stability frameworks as part of their prudential policies. In particular, encouraging banks and other financial institutions to conduct climate scenario analysis and/or stress tests, which has implications for capital adequacy levels, is central to deepening financial institutions' understanding of climate risks and improving their risk management.

The Network of Central Banks and Supervisors on Greening the Financial System, which comprises more than 100 central banks and financial supervisors, provides reference climate scenarios that can be used by financial authorities when performing bottom-up exercises for financial institutions in their jurisdictions. There are possible climate scenarios: (i, ii) orderly (net zero [1.5°C] and below 2°C); (iii, iv) disorderly (delayed 2°C and divergent net zero); and (v, vi) hothouse world (nationally determined contributions scenario and current policies). Compared to the hothouse world scenarios, transition risks are somewhat higher but physical risks are much lower under the orderly scenarios (**Figure B3**). Among them, the three main scenarios are net zero, delayed 2°C, and current policies. More than 30 jurisdictions are implementing climate-scenario analysis. Financial authorities use these scenarios as a baseline and make adjustments by adding country- or region-specific factors. Such analysis can enable financial regulators to examine the potential impact on financial institutions under various climate scenarios. Financial regulators could also use these exercises to promote financial institutions' awareness about potential deficiencies in their climate risk management frameworks, thereby requiring them to improve their risk management practices.

Beyond climate scenario analysis, discussions have emerged in recent years, mainly in Europe, on how to include

Figure B3: NGFS' Six Types of Climate Scenarios



NDC = nationally defined contribution, NGFS = Network of Central Banks and Supervisors on Greening the Financial System.
Source: NGFS (2022).

[a] This box was written by Sayuri Shirai, a visiting fellow and advisor for sustainable policies at the Asian Development Bank Institute, a professor at the Faculty of Policy Management of Keio University, and a former policy board member of the Bank of Japan.

continued on next page

Box 3 *continued*

climate-related financial risks in the capital adequacy requirements applied to banks under the Basel framework—particularly, the standard Pillar 1 and Pillar 2 capital requirements. Rigorous investigations have been undertaken by the Bank of England, the European Central Bank, various European Union financial regulators, the Basel Committee on Banking Supervision, and the Bank for International Settlements (Shirai 2023a). As it takes time to collect reliable, consistent data from financial institutions (and from their corporate counterparties) and to refine methodological approaches, the adoption of the Pillar 1 framework may not be feasible in the near future. Adjusting the standard Pillar 1 instruments for the sake of incorporating climate risks could be challenging since credit risks, for example, are calibrated for a 1-year time horizon based on historical loss data that are not available for climate risks. More forward-looking approaches are necessary when calibrating capital requirements related to climate risks that tend to materialize nonlinearly over time. Thus, the Pillar 2 approach could be more feasible as capital assessments can be made using climate scenario analysis and stress tests more flexibly. Meanwhile, some central banks, such as the People's Bank of China, have already conducted climate stress tests that consider the implications for capital adequacy ratios.

Central Banks' Monetary Policy Responses to Climate Risks

There are several possible monetary policy options for central banks to take in contributing to greening the financial market and achieving carbon neutrality goals (Network of Central Banks and Supervisors on Greening the Financial System 2022). **Table B3** shows that these options include asset purchases, credit operations, and collateral utilized in central banks' lending operations for financial institutions.

Asset purchases could take a tilting approach (i.e., increasing the weight of greener assets in total assets purchased) and in some cases a negative screening approach (i.e., divesting assets in case the bond issuer fails to meet climate criteria). Currently, the European Central Bank is the only central bank that incorporates climate criteria into the reinvestment corporate bond framework through a tilting approach, which it has done since October 2022. The reinvestment framework has been used since the net purchasing of financial assets was terminated in early July 2022. Meanwhile, the Bank of England was the first central bank that adopted a tilting approach in its reinvestment corporate bond framework by setting an emissions reduction target on its holdings of corporate bonds—before the decision to sell all the holdings

Table B3: Green Monetary Policy Actions for Central Banks

Asset Purchases	
(1) Tilting purchases	Skew asset purchases according to climate-related risks and/or criteria applied at the issuer or asset level.
(2) Negative screening	Exclude some assets or issuers from purchases if they fail to meet climate-related criteria.
Credit Operations	
(3) Adjust pricing to reflect counterparties' climate-related lending	Make the interest rate for central bank lending facilities conditional on the extent to which a counterparty's lending (relative to a relevant benchmark) is contributing to climate change mitigation and/or the extent to which they are decarbonizing their business model.
(4) Adjust pricing to reflect the composition of pledged collateral	Charge a lower (or higher) interest rate to counterparties that pledge a higher proportion of low-carbon (or carbon-intensive) assets as collateral or set up a credit facility (potentially at concessional rates) accessible only against low-carbon assets.
(5) Adjust counterparties' eligiblity	Make access to (some) lending facilities conditional on a counterparty's disclosure of climate-related information or on its carbon-intensive, low-carbon, and green investment.
Collateral	
(6) Adjust haircuts	Adjust haircuts to better account for climate-related risks. Haircuts could also be calibrated such that they go beyond what might be required from a purely risk mitigation perspective in order to incentivize the market for sustainable assets.
(7) Negative screening	Exclude otherwise eligible collateral assets based on their issuer-level, climate-related risk profile for debt securities or on the analysis of the carbon performance of underlying assets for pledged pools of loans or securitized products. This could be done in different ways, including adjusting eligibility requirements, tightening risk tolerance, and introducing tighter or specific mobilization rules.
(8) Positive screening	Accept sustainable collateral to incentivize banks to lend or capital markets to fund projects and assets that support environmentally friendly activities (e.g., green bonds or sustainability linked assets). This could be done in different ways, including adjusting eligibility requirements, increasing risk tolerance on a limited scale, and relaxing some mobilization rules.
(9) Align collateral pools with a climate-related objective	Require counterparties to pledge collateral such that it complies with a climate-related metric at an aggregate pool level.

Source: Author's compilation based on NFGS (2021).

continued on next page

Box 3 *continued*

of assets, including corporate bonds, was made. A tilting approach appears desirable if it is important to encourage emissions-intensive sectors and companies to make greater efforts to reduce greenhouse gas emissions.

While many central banks conduct short-term credit operations for financial institutions, only a few central banks provide long-term credit operations (i.e., maturity of 1 year or longer). If credit operations are considered as a green monetary policy tool, providing longer-term finance to financial institutions is desirable. Credit operations could take the form of lowering interest rates, conditional upon such financial institutions having a good climate-related lending performance. Central banks could also lower lending rates for financial institutions whose composition of low-carbon assets accepted as collateral is greater. Providing greater access to central banks' lending facilities conditional on financial institutions' climate-related lending performance can also be a policy tool. In this regard, central banks could launch new long-term credit facilities by providing long-term, low-interest finance based on the volume of green loans extended and/or green bond investments. The central bank of Brazil, the Bank of Japan, and the People's Bank of China have adopted environmental criteria into their lending programs (Shirai 2023a, 2023b).

As for foreign reserves, a number of central banks have already begun to integrate climate and other sustainability criteria into their foreign asset management frameworks. One crucial difference between foreign reserve management and domestic asset management—from the perspective of promoting the sustainable finance market—is that the former supports sustainable foreign markets, including green bond markets, while the latter helps to foster domestic markets. The Monetary Authority of Singapore was one of the first central banks in Asia to adopt emissions targets for its investment portfolio, which mostly comprises foreign reserves. The targets are calculated based on the carbon intensity of its equities and corporate bonds portfolio using greenhouse gas emission data (Scopes 1 and 2 emissions).

Conclusions

In general, central banks are responsible for achieving price stability under their monetary policy mandate and financial stability under their prudential policy mandate. Therefore, it may be possible for central banks to consider climate risks within their existing mandates. As shown above, central banks increasingly focus on financial stability and have been exploring how to measure climate-related financial risks and improve surveillance. On the other hand, a consensus has not yet emerged as to whether central banks should incorporate climate risks in their price stability mandates and, thus, in their monetary policy frameworks. Some central banks appear to place more emphasis on climate-related financial risks and prudential perspectives in supervising financial institutions rather than relating climate risks to price stability and monetary policy (Shirai 2023a). For this reason, there are still only a limited number of central banks that conduct green monetary policy.

As governments are expected to accelerate their climate and energy policies to achieve climate neutrality goals, fostering effective green and sustainable financial markets that support a transition toward carbon neutrality will be increasingly pursued in partnership with financial institutions, companies, and other stakeholders. As such viewpoints become widespread, central banks may find it more comfortable to take proactive monetary policy actions to encourage financial institutions to improve climate-related risk management and help to develop sustainable financial markets. Currently, central banks in Europe are taking the lead with these efforts, reflecting their governments' more active climate policy actions. Nonetheless, some central banks in Asia and other emerging market economies are also becoming more visible in this regard.

References

Financial Stability Board (FSB). 2021. *FSB Roadmap for Addressing Climate-Related Financial Risks*. https://www.fsb.org/wp-content/uploads/P070721-2.pdf.

Network of Central Banks and Supervisors for Greening the Financial System (NGFS). 2021. "Adapting Central Bank Operations to a Hotter World: Reviewing Some Options." NGFS Technical Document. https://www.ngfs.net/sites/default/files/media/2021/06/17/ngfs_monetary_policy_operations_final.pdf.

_____. 2022. "Climate Scenarios for Central Banks and Supervisors." 6 September. https://www.ngfs.net/en/ngfs-climate-scenarios-central-banks-and-supervisors-september-2022.

Sayuri Shirai. 2023a. "Green Central Banking and Regulation to Foster Sustainable Finance." Asian Development Bank Institute Working Paper No. 1361. https://www.adb.org/publications/green-central-banking-and-regulation-foster-sustainable-finance.

_____. 2023b. "Central Bank Initiatives Essential for Developing Effective Sustainable Finance Markets."*Asia Pathways*. Asian Development Bank Institute. 2 March. https://www.asiapathways-adbi.org/2023/03/central-bank-initiatives-essential-for-developing-effective-sustainable-finance-markets/.