Global and Regional Market Developments

Bond yields were mixed in emerging East Asia amid divergent recovery paths and looming uncertainties.

Between 28 February and 21 May, government bond yields posted divergent patterns across both advanced economies and emerging East Asian markets.[1] Most emerging East Asian markets witnessed a continued decline in yields on 2-year local currency government bonds as liquidity conditions remained accommodative, supported by easy monetary stances. Yields on 10-year government bonds presented a mixed picture, tracking uneven recovery paths and market-specific economic fundamentals. Overall investment sentiment in the region remained subdued during the review period amid looming uncertainties in the fight against COVID-19 and inflationary pressure in the United States (US), as well as the related implications for monetary stances and financial conditions (**Table A**).

From 28 February to 21 May, 10-year government bond yields inched up in all major advanced economies except for Japan (**Figure A**). Long-term bond yields rose significantly in the US over an improved economic outlook and additional fiscal stimulus. In addition, concerns over inflationary pressure introduced volatility into financial markets.

In the US, the Federal Reserve acknowledged that the domestic economy has strengthened but risks remain and the future direction of the economy will be shaped by the ongoing pandemic. The US posted an annualized GDP growth rate of 6.4% in the first quarter (Q1) of 2021, up from 4.3% in the fourth quarter (Q4) of 2020. In June, the Federal Reserve upgraded its economic forecasts to 7.0% and 2.4% for 2021 and 2023, respectively, from 6.5% and 2.2% in March. The forecast for 2022 remained unchanged at 3.3%. The US labor market has so far been stable. Nonfarm payroll additions improved to 559,000

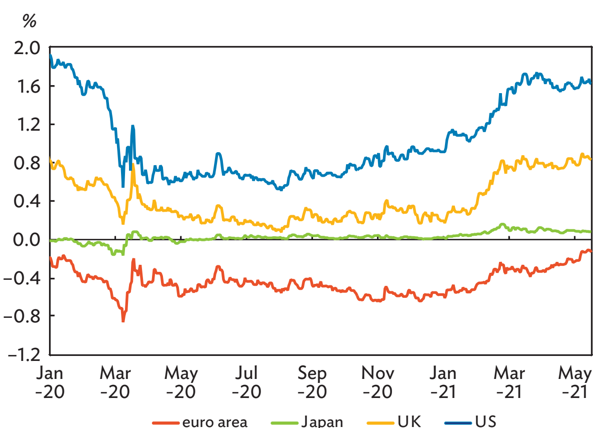
Table A: Changes in Global Financial Conditions

	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	3	22	–	9.0	–
United Kingdom	(9)	1	(4)	8.2	1.6
Japan	(1)	(8)	2	1.6	(2.2)
Germany	0.9	13	0.4	12.0	0.9
Emerging East Asia					
China, People's Rep. of	(18)	(21)	7	(0.6)	0.6
Hong Kong, China	(4)	(12)	–	(1.8)	(0.1)
Indonesia	(22)	(15)	(0.5)	(7.5)	(0.8)
Korea, Rep. of	5	15	(5)	4.8	(0.3)
Malaysia	22	13	6	(1.0)	(2.2)
Philippines	5	23	6	(8.8)	1.3
Singapore	(2)	19	–	5.7	0.05
Thailand	(13)	6	2	3.7	(3.0)
Viet Nam	(8)	(2)	8	9.9	(0.1)

( ) = negative, – = not available, bps = basis points, FX = foreign exchange.
Notes:
1. Data reflect changes between 28 February 2021 and 21 May 2021.
2. A positive (negative) value for the FX rate indicates the appreciation (depreciation) of the local currency against the United States dollar.
Sources: Bloomberg LP and Institute of International Finance.

[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.

Figure A: 10-Year Government Bond Yields in Major Advanced Economies (% per annum)



UK = United Kingdom, US = United States.
Note: Data coverage is from 1 January 2020 to 21 May 2021.
Source: Bloomberg LP.

in May from 278,000 in April but was lower than the 785,000 in March. The unemployment rate fell slightly to 5.8% in May from 6.1% in April and 6.0% in March.

The Federal Reserve left its monetary policy unchanged during its meeting on 27–28 April. The federal funds target range was kept at between 0% and 0.25%, and monthly asset purchases were maintained at a minimum of USD80 billion per month for US Treasuries and USD40 billion for agency mortgage-back securities. Consumer price inflation accelerated to 5.0% year-on-year (y-o-y) in May from 4.2% y-o-y in April and 2.6% y-o-y in March. On 4 May, US Treasury Secretary Janet Yellen said that interest rates may need to rise to prevent overheating due in part to government stimulus spending measures. She later walked back her comments, saying she does not see an inflation problem in the US. Adding to the concerns over inflation, additional economic stimulus measures have been passed or are being contemplated for later this year. On 11 March, President Biden signed a USD1.9 trillion stimulus package. On 15 April, President Biden unveiled plans for a USD2.0 trillion infrastructure bill. While the Federal Reserve noted that inflation has risen largely due to transient factors, markets are increasingly concerned by possible early changes to the easy monetary stance and new stimulus packages. More recently, while the Federal Reserve largely left monetary policy unchanged during its 15–16 June meeting, the updated forecasts showed that it expects two policy rate hikes in 2023, which is earlier than the dot plot indicated in the April FOMC meetings. In addition, during the press conference, Chairman Powell indicated that the Federal Reserve would begin discussions on scaling back its asset purchases.

In the euro area, GDP recorded consecutive declines of −4.7% y-o-y in Q4 2020 and −1.3% y-o-y in Q1 2021, partly driven by rising COVID-19 cases and subsequent containment measures. The European Central Bank (ECB) noted that the euro area's short-term outlook was affected by rising COVID-19 cases, but it expects the economy to recover later in 2021. In June, the ECB updated its economic forecasts to 4.6% and 4.7%, respectively, for 2021 and 2022, from 4.0% and 4.1% in March. The 2023 forecast was left unchanged at 2.1%. On 22 April, the ECB maintained its current monetary policy—leaving key policy rates unchanged at 0% (main refinancing rate), −0.5% (deposit facility rate), and 0.25% (marginal lending facility rate)—and continued its asset purchase program at a total amount of EUR1,850 billion until at least the end of March 2022. The ECB indicated that it would accelerate the pace of bond purchases in the second quarter of this year to boost the economy given a weak performance in Q1 2021. It also noted a rise in inflation due to temporary factors. Subsequenly, the ECB again left monetary policy unchanged on 10 June.

In Japan, the economy is expected to recover as the pandemic abates. However, rising COVID-19 cases led the government to extend its state of emergency several times, with the latest extension lasting until 20 June. This weighed on Japan's recovery, with annualized GDP contracting 3.9% in Q1 2021 after a gain of 11.7% in Q4 2020. The Bank of Japan (BOJ) noted in its April meeting that the domestic economic outlook has improved, although it remains in a "severe" situation. The BOJ also updated its GDP forecasts for fiscal years 2021 and 2022 to 4.0% and 2.4%, respectively, from forecasts made in January of 3.9% and 1.8%. During its 27 April meeting, the BOJ left its monetary policy unchanged, with the policy rate balance held at −0.1% and the target yield on 10-year Japanese Government Bonds at zero. The BOJ's asset purchase program was also continued through the end of September, with annual purchases of JPY12.0 trillion of exchange-traded funds, JPY180.0 billion of real estate investment trusts, and JPY20.0 trillion of commercial paper and corporate bonds. The BOJ indicated that risks remain tilted to the downside and that it will continue to monitor the effects of the pandemic and undertake additional easing as needed. On 18 June, the BOJ left monetary its policy rates unchanged but extended the duration of its purchases of

Table B: Policy Rate Changes

Economy	Policy Rate 1-Jun-2020 (%)	Rate Change (%)												Policy Rate 21-May-2021 (%)	Change in Policy Rates (basis points)
		Jun-2020	Jul-2020	Aug-2020	Sep-2020	Oct-2020	Nov-2020	Dec-2020	Jan-2021	Feb-2021	Mar-2021	Apr-2021	May-2021		
United States	0.25													0.25	0
Euro Area	(0.50)													(0.50)	0
Japan	(0.10)													(0.10)	0
China, People's Rep. of	2.95													2.95	0
Indonesia	4.50	↓0.25	↓0.25				↓0.25			↓0.25				3.50	↓ 100
Korea, Rep. of	0.50													0.50	0
Malaysia	2.00		↓0.25											1.75	↓ 25
Philippines	2.75	↓0.50					↓0.25							2.00	↓ 75
Thailand	0.50													0.50	0
Viet Nam	4.50					↓0.50								4.00	↓ 50

( ) = negative.
Notes:
1. Data coverage is from 1 June 2020 to 21 May 2021.
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.

Sources: Various central bank websites.

securities other than Japanese Government Bonds from September 2021 to March 2022.

Emerging East Asia witnessed divergent bond yield movements that tracked market-specific factors, including uneven economic recoveries, varying vaccine rollout progress, and different monetary and fiscal policy measures.

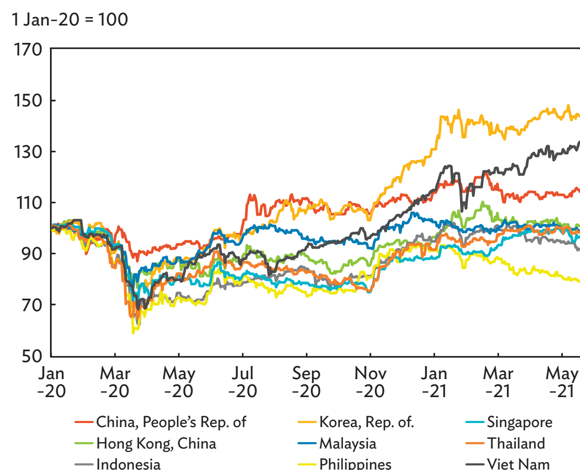
The largest decline in 2-year bond yields was in Indonesia, which posted a decline of 22 basis points (bps). This was supported by a rate cut of 25 bps by Bank Indonesia on 18 February to further boost liquidity (**Table B**) . The yield for Indonesian 10-year bonds also declined by 15 bps during the review period amid ample liquidity and the return of foreign capital inflows into the bond market following outflows in February and March. The People's Republic of China (PRC) had the second-largest decline in short-term yields in the region, with its 2-year bond yield falling 18 bps and its 10-year yield falling 21 bps. The PRC's strong economic recovery continued in Q1 2021, with GDP growing 18.3% y-o-y after expanding 6.5% y-o-y in the previous quarter. Foreign investment in the PRC bond market increased on the strong economic performance and attractive yields. In addition, as part of measures to mitigate a possible build-up of credit risk in the financial system, the PRC has taken steps to slow the issuance of bonds by local governments, which weighed on bond yields through supply-side pressure. Hong Kong, China and Viet Nam both experienced a decline in their respective 2-year and 10-year bond yields during the review period.

In the Republic of Korea, Malaysia, and Singapore, increases in 10-year bond yields reflected positive economic outlooks. The Republic of Korea recorded GDP growth of 1.9% y-o-y in Q1 2021, reversing a contraction of 1.1% y-o-y in Q4 2020. Singapore posted a 1.3% GDP growth rate in Q1 2021, reversing a contraction of 2.4% in Q4 2020. In Malaysia, Bank Negara Malaysia expects the economy to recover to pre-COVID-19 levels by the middle of 2021 and is forecasting 2021 GDP growth in the range of 6.0%–7.5%. In Q1 2021, Malaysia recorded negative GDP growth of −0.5% y-o-y, which was an improvement from the −3.4% y-o-y growth recorded in Q4 2020. Malaysia's economic recovery may be impacted by the latest 2-week mobility restrictions starting in June due to a rise in COVID-19 cases.

The Philippines posted the region's largest increase in the 10-year bond yield, which gained 23 bps. In March, rising COVID-19 cases and containment measures weighed down the economic recovery. In Q1 2021, the Philippines' GDP contracted 4.2%, the largest quarterly decline in emerging East Asia. The rise in bond yields was also driven by inflation concerns as the average inflation rate of 4.4% y-o-y in January–May exceeded the Bangko Sentral ng Pilipinas' 2021 target of 2.0%-4.0%. The Philippines reported y-o-y inflation of 4.5% each in March, April, and May.

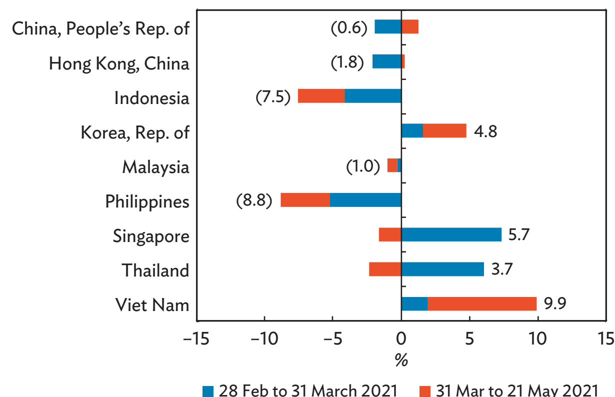
Consistent with bond market performances, other key indicators of regional financial conditions posted mixed patterns during the review period of 28 February to 21 May. Among equity markets, five out of nine markets recorded

Figure B.1: Equity Indexes in Emerging East Asia



Note: Data coverage is from 1 January 2020 to 21 May 2021.
Source: *AsianBondsOnline* computations based on Bloomberg LP data.

Figure B.2: Changes in Equity Indexes in Emerging East Asia



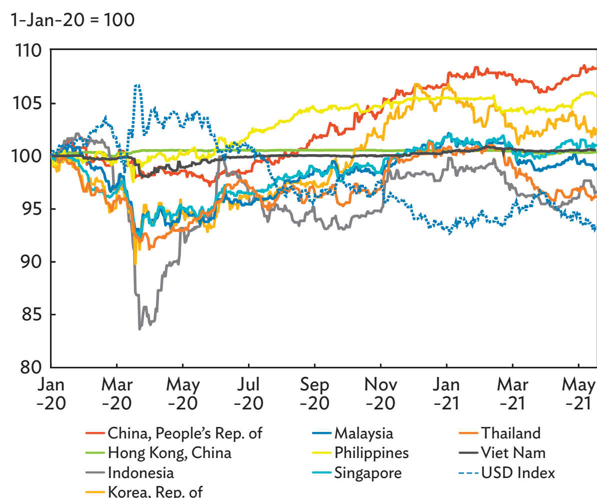
( ) = negative.
Notes:
1. Changes from 28 February to 31 March 2021 and from 31 March to 21 May 2021.
2. Figures on the chart refer to the net change between the two periods.
Source: *AsianBondsOnline* computations based on Bloomberg LP data.

declines, while the other four posted gains. Equity market movements diverged across emerging East Asia beginning in March, as some markets experienced a resurgence of COVID-19 cases (**Figure B.1**). The equity market of Viet Nam recorded the largest gain, rising 9.9% on the back of positive GDP growth in Q1 2021. This was followed by Singapore (5.7%) and the Republic of Korea (4.8%). Although Thailand's equity market was up 3.7% during the review period, this was largely due to gains through the end of March before the market retreated in April and May as COVID-19 cases surged and additional containment measures were declared (**Figure B.2**). Thailand posted negative GDP growth of –2.6% y-o-y in Q1 2021, up from -4.2% y-o-y in Q4 2020.

The equity market in the Philippines posted the region's largest decline during the review period, falling 8.8% on a weaker economic outlook, as rising COVID-19 cases led to the re-imposition of mobility restrictions starting in March, and on the GDP contraction of 4.2% y-o-y in Q1 2021. Rising inflation in the Philippines also limited additional easing measures by the Bangko Sentral ng Pilipinas. Indonesia's equity market fell 7.5% on the back of the weak economic performance in Q1 2021 when GDP contracted 0.7% y-o-y.

Regional currencies were largely stable between 28 February and 21 May, posting divergent patterns that followed market-specific factors (**Figure C.1**). Between 28 February and 31 March, regional currencies weakened against the dollar on the back of a strengthening

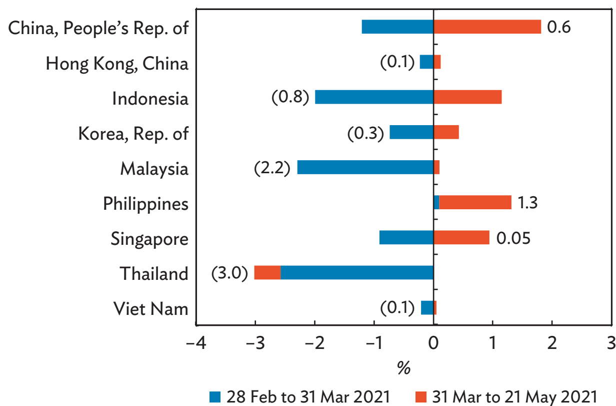
Figure C.1: Currency Indexes in Emerging East Asia and the United States



USD = United States dollar.
Note: Data coverage is from 1 January 2020 to 21 May 2021.
Source: *AsianBondsOnline* computations based on Bloomberg LP data.

US economy and the impact of inflation concerns on monetary stances. From 31 March to 21 May, most regional currencies recovered as the Federal Reserve indicated that US inflation was largely transitory, reducing the likelihood of either tapering or tightening (**Figure C.2**). The Philippine peso gained 1.3% versus the US dollar from 28 February to 21 May, as the weak domestic economic performance reduced demand for US dollars. The peso was also buoyed by strong

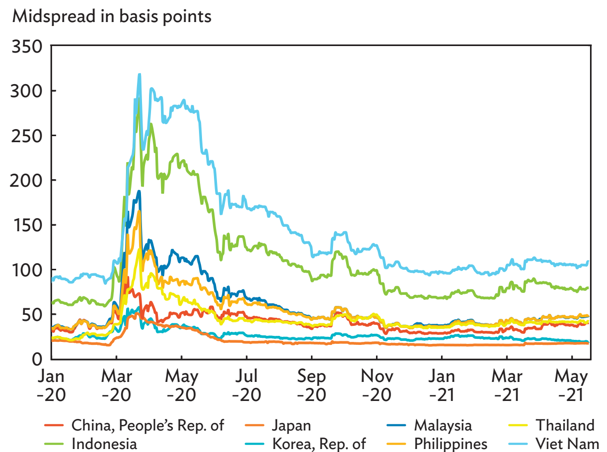
Figure C.2: Changes in Spot Exchange Rates vs. the United States Dollar



Notes:
1. Changes from 28 February to 31 March 2021 and from 31 March to 21 May 2021.
2. Figures on the chart refer to the net change between the two 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: Bloomberg LP.

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



USD = United States dollar.

Notes:
1. Based on USD-denominated sovereign bonds.
2. Data coverage is from 1 January 2020 to 21 May 2021.

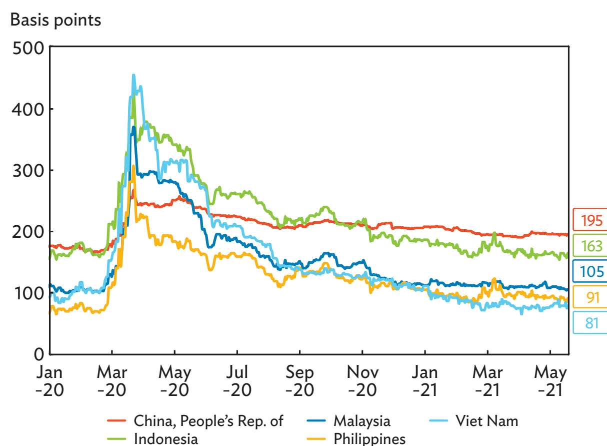
Source: Bloomberg LP.

overseas Filipino worker remittances, which grew 12.7% y-o-y in April and 4.9% y-o-y in March. The region's largest currency depreciation was in Thailand where the baht declined 3.0% over growth concerns as the economic recovery was derailed by the resurgence of COVID-19 cases.

Risk sentiment, as captured by credit default swap spreads and sovereign stripped spreads, rose across the region in March due to heightened risk aversion on global inflationary pressure and rising US yields, before declining in April. A few markets witnessed only slightly higher credit default swap spreads by the end of the review period and sovereign stripped spreads were largely calm after a spike in March (**Figures D, E**).

Foreign capital flows into the region's bond markets were volatile in March and April 2021 (**Figure F**). While the PRC market attracted a sizable share of the region's foreign capital inflows, it experienced outflows in March on heightened concerns of a possible "Taper Tantrum" effect over inflation concerns and rising interest rates in the US. As the region's current account performance remained fundamentally solid, foreign reserve buffers were maintained, currency valuations were relatively stable, and with the Federal Reserve indicating that US inflation was mostly transitory, risk sentiment partly recovered, and most regional bond markets recorded positive capital inflows in April.

Figure E: JP Morgan Emerging Markets Bond Index Sovereign Stripped Spreads



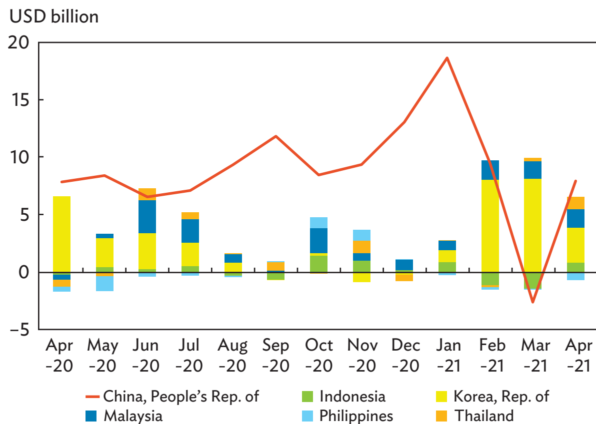
USD = United States dollar.

Notes:
1. Based on USD-denominated sovereign bonds.
2. Data coverage is from 1 January 2020 to 21 May 2021.

Source: Bloomberg LP.

Foreign holdings as a share of regional bond markets were lower at the end of March compared with the end of January in a few markets, resulting from heightened risk aversion amid inflation concerns (**Figure G**). After hitting a high of 10.6% in February, the foreign holdings share in the PRC's bond market slipped to 10.1% at the end of March, as rising US yields limited regional bonds' attractiveness to foreign investors. The delay in the

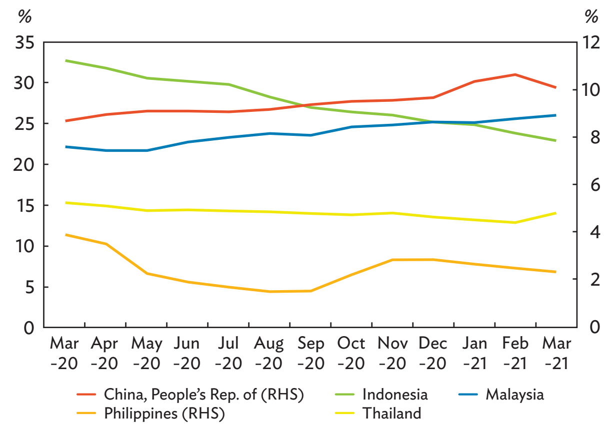
Figure F: Foreign Bond Flows in Select Emerging East Asian Economies



USD = United States dollar.
Notes:
1. The Republic of Korea and Thailand provided data on bond flows. For the PRC, Indonesia, Malaysia, and the Philippines, month-on-month changes in foreign holdings of LCY government bonds were used as a proxy for bond flows.
2. Data as of 30 April 2021.
3. Figures were computed based on 30 April 2021 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).

Figure G: Foreign Holdings Share in Select Emerging East Asian Markets

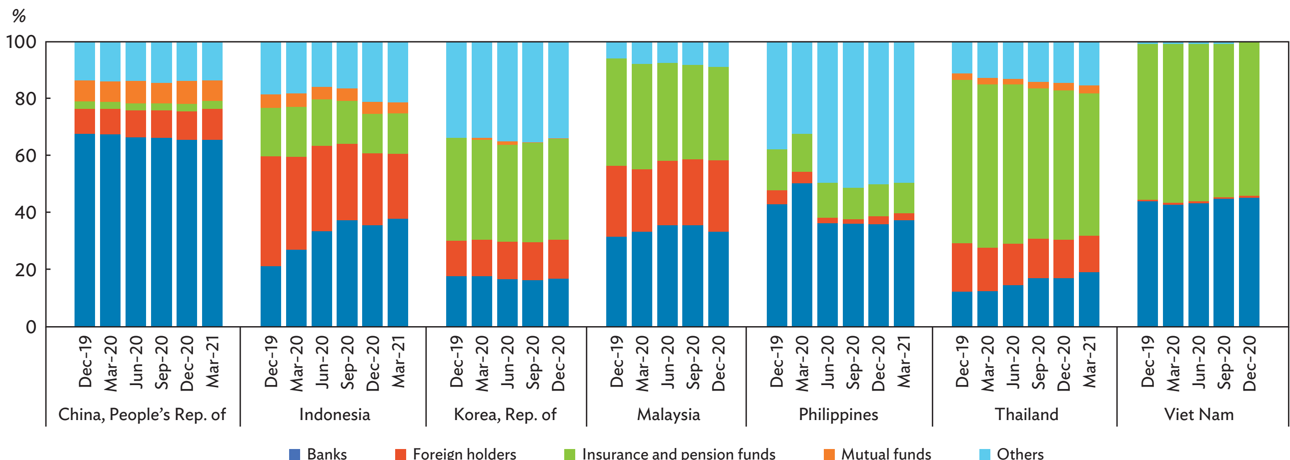


RHS = right-hand side.
Source: *AsianBondsOnline*.

inclusion of Chinese bonds in the World Government Index of FTSE Russell and JP Morgan also contributed to the decline in foreign holdings. The foreign holdings share has steadily declined in both the Philippines and Indonesia since January on weak domestic economic performances. Malaysia's bond market recorded steady gains in its foreign holdings share, buoyed by its removal from the FTSE Russell watch list in March 2021.

A diversified investor base is very important to the resilience of regional bond markets. Many regional markets—including the Republic of Korea, Thailand, Malaysia, and Viet Nam—enjoy sizable participation by long-term domestic investors such as insurance companies and pension funds (**Figure H**). Banks are the

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



Notes:
1. Data coverage is from December 2019 to March 2021 except for the Republic of Korea, Malaysia, and Viet Nam (December 2020).
2. Others include central banks, governments, individuals, securities companies, custodians, private corporations, and all other investors not elsewhere classified.

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

major market player in the PRC's bond market. However, a number of bond markets in emerging East Asia are dominated by only a few investor groups. Greater diversification of the investor base is needed in the region's bond markets. This was also evident in the results of the annual *AsianBondsOnline* bond market liquidity survey conducted in late 2020, where survey participants cited the importance of greater diversity of the investor profile among the structural issues that need further development in the region's bond markets.

Economic Outlook

Let us now turn to the regional economic outlook, which affects the outlook for regional financial markets. A number of safe and effective COVID-19 vaccines arrived in late 2020, giving rise to hopes that the world would soon return to pre-pandemic normal. Those hopes proved too sanguine because the pace of vaccination has been substantially slower than expected in not only developing economies but also in some advanced economies. As of 17 June, over 2.5 billion vaccine doses had been administered, representing 16.1% of the global population.[2] Furthermore, vaccination rates varied widely across the world, with advanced economies generally performing better than developing economies.

Although global COVID-19 vaccination has been slow and uneven, the world is gradually moving toward global herd immunity. Notwithstanding the slower-than-expected progress of vaccination, both business and consumer confidence are gradually improving. Furthermore, even when there are renewed pandemic outbreaks, governments have generally not resorted to lockdowns or other draconian measures. The world has learned to live with COVID-19, which explains why economies remain open to varying degrees even in the face of fresh COVID-19 case surges.

The improvement of business and consumer confidence around the world due to the slow but steady progress on vaccination has lifted economic activity. Greater mobility due to less stringent restrictions is also having a positive effect. In light of these favorable developments, the International Monetary Fund (IMF) upgraded its projected 2021 growth for the world economy to 6.0% in its latest *April 2021 World Economic Outlook* from 5.5% in its January 2021 forecast and 5.2% in its October 2020 forecast. The IMF also upgraded its projected 2022 global growth forecast to 4.4% from 4.2% in both its January 2021 and October 2020 forecasts. In its April report, the IMF estimated that the world economy shrank by 3.3% in 2020, a tad smaller than its estimate of a 3.5% contraction in January. The growth forecast upgrade was more pronounced for advanced economies, which the IMF expects to expand by 5.1% in 2021 and 3.6% in 2022, following a contraction of 4.7% in 2020. Growth forecasts for emerging markets and developing economies are –2.2%, 6.7%, and 5.0% for 2020, 2021, and 2022, respectively. A powerful engine of global economic recovery is world trade, which is forecast to expand 8.4% in 2021 and 6.5% in 2022 after contracting 8.5% in 2020.

In its *April 2021 Asian Development Outlook*, the Asian Development Bank predicted that developing Asia will also stage a robust recovery from the COVID-19 crisis. Despite limited progress on vaccination and major COVID-19 outbreaks in India and elsewhere, the region is projected to grow by 7.3% in 2021 and 5.3% in 2022, following a marginal contraction of 0.2% in 2020. Developing Asia's turnaround is broad-based and well-balanced, with both domestic demand and exports contributing to the growth momentum. The projected 2021 growth figures for the PRC; the Association of Southeast Asian Nations (ASEAN); the Republic of Korea; and Hong Kong, China are 8.1%, 4.4%, 3.5%, and 4.6%, respectively. The corresponding figures for 2022 are 5.5%, 5.1%, 3.1%, and 4.5%.

To conclude, the economic outlook for both the world and for emerging East Asia is clearly positive. Although progress on global vaccination has been slow and uneven, vaccination campaigns have nevertheless given a fillip to business and consumer confidence, lifting economic activity. As vaccinations proceed and the world gradually moves toward global herd immunity, we can expect the global growth momentum to further strengthen.

There is increasing awareness within the region of the importance of a green and inclusive recovery. Many innovative financing solutions can contribute to a sustainable recovery. **Box 1** discusses how regional markets and policy makers have been using green *sukuk* (Islamic bonds) to finance environment-friendly investments.

[2] Bloomberg. 2021. More Than 2.51 Billion Shots Given: Covid-19 Tracker. https://www.bloomberg.com/graphics/covid-vaccine-tracker-global-distribution/.

Box 1: Green *Sukuk* Market

Green *Sukuk* Issuance

Similar to green bonds, proceeds of green *sukuk* (Islamic bonds) can be used to fund environment-friendly projects; but unlike green bond, green *sukuk* are Shari'ah-compliant securities backed by a specific pool of assets (Azhgaliyeva 2021).[a] Green *sukuk* have two labels: Islamic and green. Similar to conventional bonds, green *sukuk* are usually labeled green following the International Capital Market Association's Green Bond Principles and the Association of Southeast Asian Nations Capital Market Forum's Green Bonds Standards.

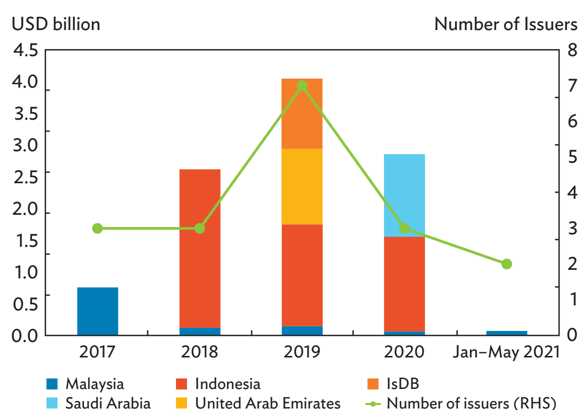
Most green *sukuk* in the world are issued in Southeast Asia, led by issuances in Malaysia and Indonesia. Global issuance of green *sukuk* grew from 2017 to 2019. However, there was a large decline beginning in 2020, probably due to the outbreak of COVID-19 (**Figure B1.1**). The issuance of green *sukuk* is not yet as well established as the issuance of conventional *sukuk* or green bonds. At the time of writing, there were only 16 green *sukuk* issuers around the world.

As of 21 May 2021, over USD10 billion of green *sukuk* had been issued by 16 entities from four countries—Indonesia, Saudi Arabia, the United Arab Emirates, and Malaysia (in descending order)—and the Islamic Development Bank (**Figure B1.2**).

Green *Sukuk* Policy Support in Malaysia

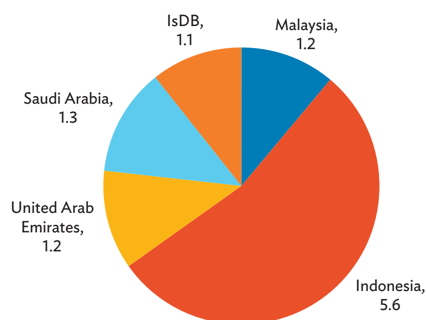
The Securities Commission Malaysia introduced national green *sukuk* standards in 2019 in the form of the Sustainable and Responsible Investment *Sukuk* Framework. The list of eligible green *sukuk* projects is provided in **Table B1.1**. Issuers of green *sukuk* that are compliant with the framework receive a subsidy of 90% of the cost of an external reviewer (up to MYR300,000), income tax exemption, and a tax deduction (Azhgaliyeva, Kapoor, and Liu 2020). Although comprising only 11% (USD1.2 billion) of global total green *sukuk* issuance, Malaysia has the largest number of private green *sukuk* issuers in the world, and they are supported by green bond grant and tax incentives.

Figure B1.1: Green *Sukuk* Issuance



IsDB = Islamic Development Bank, RHS = right-hand side, USD = United States dollar.
Note: Data as of 21 May 2021.
Source: Author's compilation based on data from Bloomberg.

Figure B1.2: Green *Sukuk* Issuance by Country (USD billion)



IsDB = Islamic Development Bank, USD = United States dollar.
Note: Data as of 21 May 2021.
Source: Author's compilation based on data from Bloomberg.

[a] This box was written by Dina Azhgaliyeva, research fellow of the Asian Development Bank Institute.

continued on next page

Box 1: Green *Sukuk* Market *continued*

Table B1.1: Green *Sukuk* National Policies in Malaysia

Policy	Description
SRI *Sukuk* Framework, 2014	Eligible projects include natural resources, renewable energy and energy efficiency, and community and economic development or *waqf* (donated properties and assets)
SRI *Sukuk* and Bond Grant Scheme, 2018–2025	The cost of an external reviewer for issuing green bonds compliant with the SRI *Sukuk* Framework or ASEAN Green, Social, or Sustainability Bond Standards is subsidized at 90% (up to MYR300,000)
Tax Deduction, 2016–2023	Tax deductions for expenditures incurred on issuances that are compliant with the SRI *Sukuk* Framework and approved or authorized by, or lodged with, the Securities Commission Malaysia through 2023
Income Tax Exemption, 2018–2025	Income tax exemptions for recipients of the SRI *Sukuk* and Bond Grant Scheme

ASEAN = Association of Southeast Asian Nations, MYR = Malaysian ringgit, SRI = Sustainable and Responsible Investment *Sukuk* Framework.
Sources: Azhgaliyeva, Kapoor, and Liu (2020); Securities Commission Malaysia (2019); and https://www.sc.com.my/development/sri.

Green *Sukuk* Policy Support in Indonesia

Indonesia also has a national regulatory framework for green bond issuance and, specifically, a national Green Bond and Green *Sukuk* Framework. The list of eligible and excluded projects is provided in **Table B1.2**. Since 2018, more than half (USD5.5 billion) of all green *sukuk* issuance globally has come from a public issuance by the Government of Indonesia.

Table B1.2: National Green *Sukuk* Policies in Indonesia

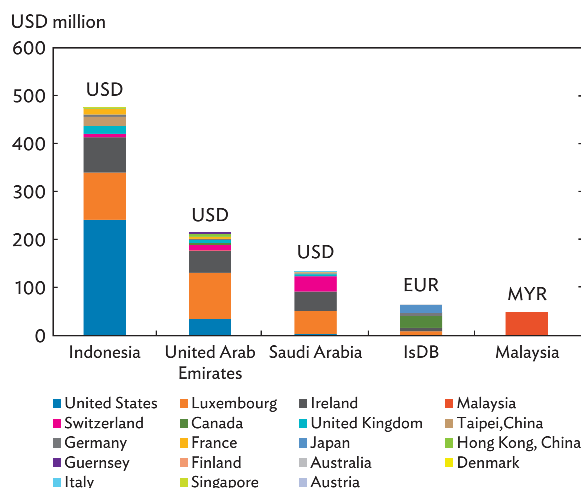
Policy	Description
Green Bond and Green *Sukuk* Framework, 2017	Eligible projects include renewable energy, energy efficiency, resilience to climate change and disaster risk reduction, sustainable transport, waste-to-energy and waste management, sustainable management of natural resources, green tourism, green buildings, and sustainable agriculture. Excluded projects include new fossil-fuel-based electric power generation capacity, large-scale hydro plants, and nuclear and nuclear-related assets.
Sovereign Green *Sukuk*, 2018	From March 2018 to May 2021, Perusahaan Penerbit SBSN Indonesia III issued USD5.5 billion of sovereign green *sukuk*, or more than half of total global green *sukuk* issuance.

Note: Perusahaan Penerbit SBSN Indonesia III is a special purpose vehicle incorporated by the Government of Indonesia.
Source: Azhgaliyeva, Kapoor, and Liu (2020).

Demand for Green *Sukuk*

Green *sukuk* help investors meet their targets of investing in environment-friendly projects. Although the supply of green *sukuk* comes entirely from markets in Southeast Asia (Malaysia and Indonesia) and the Middle East (Saudi Arabia and the United Arab Emirates), investors in green *sukuk* come from 19 economies, led by the United States (US), the European Union, Canada, and the United Kingdom (**Figure B1.3**).

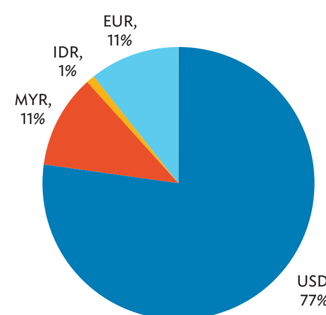
Figure B1.3: Demand for Green *Sukuk* across Issuing Economies and Currencies



EUR = euro, IsDB = Islamic Development Bank, MYR = Malaysian ringgit, USD = United States dollar.
Note: Data as of 21 May 2021.
Source: Author's compilation based on data from Bloomberg.

Most issuers of green *sukuk* rely on international demand, which is why 88% of green *sukuk* are issued in either US dollars or euros. US dollar-denominated issuance has comprised 77% of total green *sukuk* issuance since 2017, followed by the euro (11%), Malaysian ringgit (11%), and Indonesian rupiah (1%) (**Figure B1.4**).

Figure B1.4: Green *Sukuk* Issuance by Currency



EUR = euro, IDR = Indonesian rupiah, MYR = Malaysian ringgit, USD = United States dollar.
Note: Data as of 21 May 2021.
Source: Author's compilation based on data from Bloomberg.

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Box 1: Green *Sukuk* Market *continued*

Malaysia and Indonesia dominate local-currency-denominated green *sukuk* issuance. Green *sukuk* denominated in US dollars and euros attract international investors, while green *sukuk* denominated in Malaysian ringgit so far have attracted local investors only. A green *sukuk* issuance in Indonesian rupiah in November 2019 has yet to attract investors.

From the first issued green *sukuk* in June 2017 until 2019, green *sukuk* issuance grew steadily. Last year was challenging for green *sukuk* issuers as annual issuance declined in 2020 and continued to fall in the first 5 months of 2021. Green *sukuk* issuance in Malaysia and Indonesia is driven by supply-side policy support. Policies supporting green *sukuk*—national standards, grants, sovereign bonds—are similar to green bond supporting policies.

References

Azhgaliyeva, D. 2021. Green Islamic Bonds. *Asian Development Outlook 2021 Background Paper*. https://www.adb.org/documents/asian-development-outlook-2021-background-papers.

Azhgaliyeva, D., A. Kapoor, and Y. Liu. 2020. Green Bonds for Financing Renewable Energy and Energy Efficiency in South-East Asia: A Review of Policies. *Journal of Sustainable Finance & Investment*. 10 (2). pp. 113–40.

Securities Commission Malaysia. 2019. *Sustainable and Responsible Investment Sukuk Framework: An Overview*. https://www.sc.com.my/api/documentms/download.ashx?id=84491531-2b7e-4362-bafb-83bb33b07416.

World Bank. 2020. *Pioneering the Green Sukuk: Three Years On*. https://openknowledge.worldbank.org/handle/10986/34569.

Risks to Economic Outlook and Financial Stability

Both downside and upside risks loom on the horizon. The risks to emerging East Asia's economic outlook and financial stability are broadly balanced. The COVID-19 pandemic is the source of both the biggest upside risk and the biggest downside risk. It is true that an elevated degree of uncertainty surrounds the future trajectory of the pandemic. But it is also true that economies around the world and the region have learned to live with the virus. Governments now largely avoid automatically imposing lockdowns or other stringent restrictions at the first sign of a renewed outbreak. Instead, they allow their economies to remain open to varying degrees even when there is a fresh resurgence of new cases. Somewhat paradoxically, although developing Asia has lagged the rest of the world in vaccination progress and is a long way from reaching herd immunity, it is projected to grow strongly by 7.3% this year. The paradox fades once we recognize that mobility restrictions have been eased out of sheer economic necessity. COVID-19 or not, governments in the region and elsewhere are realizing that they cannot shut down their economies forever. Put differently, in the tradeoff between lives versus livelihoods, governments are increasingly favoring livelihoods.

However, governments have little choice but to reimpose stringent restrictions in the face of virulent new waves of the pandemic, such as the one that has ravaged India since March. At a broader level, a resurgence of the pandemic remains the single biggest negative risk facing emerging East Asia's economy and financial markets. An especially worrisome trend is the emergence of new COVID-19 variants that may potentially be resistant to vaccines. This makes it all the more imperative for the global community to work closely together to produce and distribute as many vaccines as possible and vaccinate as many people as possible. As long as a large share of the global population remains unvaccinated, new vaccine-resistant COVID-19 strains might continue to emerge, frustrating efforts to bring the pandemic under control. Protracted delays in the production and distribution of vaccines thus pose a major downside risk, especially in developing countries with weaker medical infrastructures.

At the same time, COVID-19 poses the single biggest positive risk to economic growth and financial stability. As noted earlier, vaccine rollout has been slow and uneven, not only in developing countries but also in some advanced economies such as Japan. However, the weakness that has been hindering global recovery could unleash global recovery. Specifically, accelerated production and rollout of vaccines would move the world much closer to its pre-COVID-19 status of 2019 or something reasonably close to that. Even the limited progress on global vaccination so far has tangibly improved business and investor confidence, lifting both investment and consumption. This implies that the acceleration of global vaccination campaigns, and hence

the acceleration of progress toward global herd immunity, would provide a huge boost to global consumption, investment, and growth. In this optimistic scenario, the light at the end of the COVID-19 tunnel would no longer remain a hope but a reality, and growth could surpass forecasts by a wide margin.

While the overarching upside and downside risk is both closely related to the evolution of COVID-19 and global vaccination campaigns, a number of other risks loom. In particular, geopolitical tension between the PRC and the US remains at elevated levels despite the advent of a new administration in Washington, DC. Given the structural and multifaceted nature of the tension between the world's two biggest economies, it is unclear if relations will improve substantially in the near future. This is not only harmful for the PRC's growth prospects but also those of its neighbors that have close trade, investment, and other economic links with both giants. On the other hand, if PRC–US relations were to suddenly improve, the regional and global economies stand to gain from the mitigation of a major source of uncertainty in the economic landscape.

A low-probability risk to emerging Asia's financial stability arises from a possible tightening of global financial conditions. The region currently enjoys relatively benign financial conditions relative to 2013, as evident in robust current account balances, foreign reserve levels, currency valuations, and relatively low inflation rates. However, given that the robust US economy is showing signs of incipient inflationary pressure, the Federal Reserve might react by suddenly and sharply raising interest rates. Such a monetary policy shock from the US could trigger capital outflows from the region and destabilize regional financial markets. However, given the strong fundamentals of emerging East Asian economies, evident in healthy current account positions, large foreign exchange reserves, and macroeconomic stability, a repeat of something like the 2013 Taper Tantrum is highly unlikely. To sum up, the primary upside and downside risks to the region's growth and financial stability both stem from COVID-19 and are broadly in balance.

While there have been discussions on the rapid buildup of debt in many emerging markets during the pandemic, it is important to mobilize more domestic resources to broaden funding sources. **Box 2** analyzes how technological advances such as digital finance can help mobilize more domestic resources to finance needed investments.

Box 2: Scaling Up Sustainable Investments through Fintech

Although the international discourse on financing for development has highlighted the need for unlocking domestic resources, much of the discussion has centered around incentivizing private capital from advanced countries to finance investment in developing and emerging economies.[a] While foreign aid and foreign private capital can play an important role in financing development, it is important to acknowledge the limits of foreign investment in financing infrastructure, as well as the financial vulnerability risks associated with foreign finance. It is also important to make better use of domestic savings in developing and emerging economies, many of which invest significant amounts of their savings in low-yielding assets in the financial centers of advanced economies due to underdeveloped capital markets at home and a scarcity of "safe" assets denominated in local currency (LCY). Strengthening domestic resource mobilization is therefore crucial, and concerted efforts to this effect are needed.

Financial technologies, or fintech, can complement conventional banking and capital markets, and facilitate domestic resource mobilization for sustainable investments (Chen and Volz 2021). Fintech, which is also known as digital finance, is a business approach dedicated to making financial services more efficient through internet-related technologies. Fintech comprises different applications, including lending, blockchain and cryptocurrency, regulatory technology (regtech), personal finance, payment service and billing, insurance, capital market solutions, wealth management, money transfer and remittances, and mortgage and real estate financing (**Table B2.1**).

The G20 Sustainable Finance Study Group (2018) highlighted the emerging practice and opportunities of applying digital technologies to sustainable finance. As pointed out by the Sustainable Digital Finance Alliance (2018), digital finance can help overcome challenges to connecting the financial

[a] This box was written by Yushi Chen, doctoral researcher of the Science Policy Research Unit at the University of Sussex, 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 2: Scaling Up Sustainable Investments through Fintech *continued*

Table B2.1: Overview of Fintech Solutions

Category	Example
Lending solutions	Online marketplace lending and alternative underwriting platforms such as peer-to-peer lending platforms and digital crowdfunding platforms
Blockchain and cryptocurrency	Companies leveraging blockchain technologies for financial services
Regulatory technology (regtech)	Audit, risk, and regulatory compliance software
Personal finance	Tools to manage bills and track personal and/or credit accounts
Payment service and billing	Payments processing, payments transferring, card developers, and subscription billing software tools (a major function of mobile banking)
Insurance solutions	Online insurance services or data analytics and software for (re)insurers
Capital market solutions	Sales and trading, analysis, and infrastructure tools for financial institutions
Wealth management	Investment and wealth management platforms and analytics tools
Money transfer and remittances	International money transfer and tracking software
Mortgage and real estate financing	Mortgage lending and financing platforms

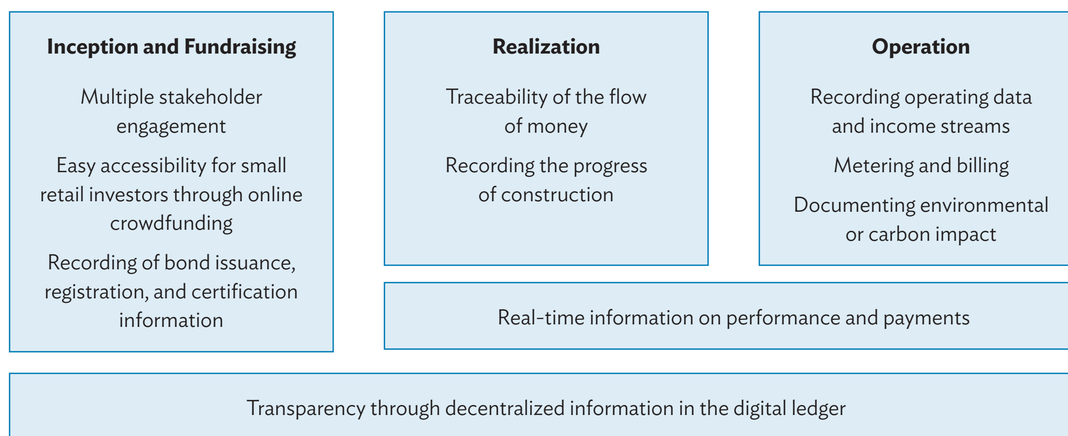
Source: Chen and Volz (2021) based on CB Insights (2019).

sector with the real economy by improving information flows and the efficiency of financial services, and by overcoming information asymmetries through better systems and data. It can foster inclusion and innovation in the real economy by broadening sustainability choices and providing new sources of finance. Digital finance can also help to unlock the full potential of sustainable finance by facilitating better use of sustainability-related data for financial decision-making and by supporting nascent business models by enabling better access to funding. The United Nations Secretary General's Task Force on Digital Financing of the Sustainable Development Goals recently emphasized the development of financial inclusion into citizen-centric finance as one of the transformational opportunities brought about by digitalization (Digital Financing Task Force 2020).

Chen and Volz (2021) show how fintech and blockchain-based solutions can facilitate domestic resource mobilization for sustainable infrastructure investments and at the same time improve the implementation of infrastructure projects throughout the entire life cycle by facilitating processes and enhancing transparency. Blockchain technology, which is based on distributed ledger technology, provides an encrypted, tamper-proof, and transparent system that can be used to implement innovative solutions for financing sustainable infrastructure.

Chen and Volz (2021) propose a comprehensive blockchain-based approach that integrates multiple fintech applications to mobilize domestic financing for sustainable infrastructure investment. In particular, blockchain-based project bonds could be issued through a digital crowdfunding platform that transparently records and certifies the use of proceeds, sustainability impact, and revenue streams of the project by combining timestamp, public and private key mechanisms, and smart contract technologies. Blockchain technology could be used to address key concerns in the three key phases of an infrastructure project's life cycle: (i) inception and fundraising, (ii) realization, and (iii) operation (**Figure B2**).

Figure B2: Key Phases of the Infrastructure Project Life Cycle and Advantages of a Blockchain-Based Finance Approach



Source: Chen and Volz (2021).

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Box 2: Scaling Up Sustainable Investments through Fintech *continued*

In the inception and fundraising phase, blockchain can be coupled with a digital crowdfunding platform to mobilize domestic savings for investment in LCY project bonds. Mobile-based fintech solutions could enable small-scale retail investors to buy bonds on their phone, providing investment opportunities for people who would traditionally have neither the means nor the expertise and access to invest in securities. By applying blockchain technology, the bond issuing entity can record the bond issuance, registration, and certification information in the blockchain network, which enhances the credibility of the project.

In the realization phase, the blockchain can record information on the flow of money and the progress of construction in the digital ledger, enabling investors and other stakeholders to trace the use of proceeds and obtain information on the construction status in a transparent way in real time. The International Monetary Fund (2020) estimates that globally around one-third of funds dedicated to public infrastructure investment is lost to inefficiencies or corruption. Enhanced transparency can reduce the risk of misappropriation of proceeds and help identify problems early on.

Last but not least, blockchain can also facilitate project management once the project is operational, e.g., through metering and billing. By recording operating data on the blockchain, stakeholders can receive transparent information on project revenue streams and reduce the risk for investors. It also provides the option of documenting environmental or carbon impacts, which could be used for receiving carbon credits through carbon emission trading schemes. The issuing entity can leverage the blockchain to build an impact investing information platform, which documents the carbon certification or emission reductions, or any other positive impacts—be they ecological or social—that the project may have.

Overall, such a fintech approach would not only provide investors of different sizes the opportunity to purchase LCY assets and issuers such as municipalities to raise funds for sustainable infrastructure investment. It would also facilitate project management once the project is operational and create full transparency across the life cycle of the investment, reducing problems with misuse of funds. This approach could be configured in multiple ways to suit different situations. The main idea is to leverage the strength of a decentralized governance model backed by blockchain to achieve project-level financial inclusion. By replicating this approach, multiple projects could be aggregated to create a larger portfolio that would be attractive to institutional investors, including impact investors.

References

CB Insights. 2019. *FinTech Trends to Watch*. https://www.cbinsights.com/research/report/fintech-trends-2019/.

Chen, Y. and U. Volz. 2020. Scaling Up Sustainable Investment through Blockchain-Based Project Bonds. *ADBI Working Paper* No. 1247. Tokyo: Asian Development Bank Institute. https://www.adb.org/sites/default/files/publication/696276/adbi-wp1247.pdf

Digital Financing Task Force. 2020. *People's Money: Harnessing Digitalization to Finance a Sustainable Future. Final Report of the UN Secretary General's Task Force on Digital Financing of the Sustainable Development Goals*. New York: United Nations.

G20 Sustainable Finance Study Group. 2018. *Sustainable Finance Synthesis Report*. New York.

International Monetary Fund. 2020. *Fiscal Monitor: Policies to Support People during the Covid-19 Pandemic*. Washington, DC: International Monetary Fund.

Sustainable Digital Finance Alliance. 2018. *Digital Technologies for Mobilizing Sustainable Finance: Applications of Digital Technologies to Sustainable Finance*. Geneva.