

Global and Regional Market Developments

Financial conditions improve in emerging East Asia.

From 15 June to 11 September 2020, financial conditions in emerging East Asia improved and global investor sentiment gradually recovered.¹ The yields on 2-year and 10-year local currency (LCY) government bonds fell in most emerging East Asian economies amid lower interest rates and slowing economic growth. Despite a dim global economic outlook that is being weighed down by the coronavirus disease (COVID-19), a combination of easing global monetary stances, relatively better containment of COVID-19 in the region, and higher returns on emerging market assets buoyed the recovery in emerging East Asia's financial conditions (**Table A**).

In emerging East Asia, the overall decline in 2-year government bond yields was driven by expectations that most central banks in the region would maintain accommodative monetary policy stances to support

economic recovery. During the review period, regional central banks collectively maintained easy monetary policies, with a few central banks further lowering policy rates. The Bangko Sentral ng Pilipinas and Bank Indonesia lowered their respective policy rates by 50 basis points (bps) each, while Bank Negara Malaysia reduced its policy rate by 25 bps (**Table B**). Four regional central banks have lowered rates by at least 100 bps since the beginning of 2020. The largest decline in the 2-year bond yield occurred in Indonesia, which shed 134 bps, driven by a cumulative 50-bps policy rate cut during the review period that brought its 7-day reverse repurchase rate to a 4-year low of 4.00%.

Partly driven by weak economic performances that were weighed down by the COVID-19 pandemic, 10-year government bond yields also fell in most emerging East Asian markets. Except for the People's Republic of China (PRC) and Viet Nam, all emerging East Asian markets reported contractions in gross

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	(6)	(6)	-	8.9	-
United Kingdom	(9)	(2)	(11)	(0.5)	1.5
Japan	4	2	(2)	6.9	1.1
Germany	(3)	(4)	(6)	10.8	4.6
Emerging East Asia					
China, People's Rep. of	31	34	(17)	12.8	3.7
Hong Kong, China	(9)	(4)	-	3.1	0.001
Indonesia	(134)	(28)	(46)	4.2	(5.2)
Korea, Rep. of	3	11	(6)	18.0	2.5
Malaysia	(35)	(29)	(34)	0.4	3.1
Philippines	(35)	(40)	(25)	(3.2)	3.7
Singapore	(11)	(0.1)	-	(4.7)	1.8
Thailand	0.6	16	(9)	(4.6)	(0.8)
Viet Nam	(46)	(16)	(70)	6.8	0.2

() = negative, - = not available, bps = basis points, FX = foreign exchange.

Notes:

1. Data reflect changes between 15 June and 11 September 2020.

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.

Table B: Policy Rate Changes

Economies	Policy Rate 31-Dec-2019 (%)	Rate Changes (%)									Policy Rate 11-Sep-2020 (%)	Year-to-Date Change in Policy Rates (basis points)
		Jan- 2020	Feb- 2020	Mar- 2020	Apr- 2020	May- 2020	Jun- 2020	Jul- 2020	Aug- 2020	Sep- 2020		
United States	1.75			↓ 1.50							0.25	↓ 150
Euro Area	(0.50)										(0.50)	
Japan	(0.10)										(0.10)	
China, People's Rep. of	3.25		↓ 0.10		↓ 0.20						2.95	↓ 30
Indonesia	5.00		↓ 0.25	↓ 0.25			↓ 0.25	↓ 0.25			4.00	↓ 100
Korea, Rep. of	1.25			↓ 0.50		↓ 0.25					0.50	↓ 75
Malaysia	3.00	↓ 0.25		↓ 0.25		↓ 0.50		↓ 0.25			1.75	↓ 125
Philippines	4.00		↓ 0.25	↓ 0.50	↓ 0.50		↓ 0.50				2.25	↓ 175
Thailand	1.25		↓ 0.25	↓ 0.25		↓ 0.25					0.50	↓ 75
Viet Nam	6.00			↓ 1.00		↓ 0.50					4.50	↓ 150

(-) = negative.

Notes:

1. Data as of 11 September 2020.

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.

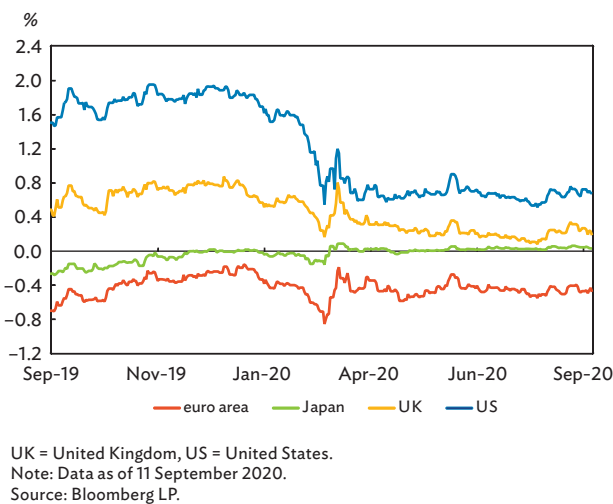
Sources: Various central bank websites.

domestic product (GDP) in the second quarter (Q2) of 2020. The Philippines posted the largest decline in 10-year yields at 40 bps amid a continued increase in confirmed COVID-19 cases and prolonged quarantine restrictions that significantly limited economic activities. The Philippine economy contracted 16.5% year-on-year (y-o-y) in Q2 2020 after a decline of 0.7% y-o-y in the first quarter (Q1), the worst performance since 1981 when such data became available.

The exceptions to the trend of declining yields were the PRC, the Republic of Korea, and Thailand, where the 2-year and 10-year yields picked up between 15 June and 11 September. In the PRC, the rise in yields was largely driven by hints of economic recovery. The PRC was one of two markets in the region that posted economic expansion in Q2 2020, recording GDP growth of 3.2% y-o-y in Q2 2020. Investor sentiment toward CNY-denominated bonds improved on the back of a low-interest-rate regime across the globe. In the case of the Republic of Korea, yields inched up on expectations the government will need to fund more fiscal spending to contain the COVID-19 outbreak and support recovery. On 3 July, the National Assembly approved a third supplementary budget worth KRW35.1 trillion, the largest ever in history in terms of amount. In Thailand, the rise in yields was driven by uncertainties relating to political issues and investors' rising concern that the government would hit the public debt to GDP ceiling of 60%.

In advanced economies, 10-year government bond yields fell in June and July before beginning to rise in August, then either stabilized or moved downward toward September (**Figure A**). In the United States (US), bond yields remained largely stable through July and spiked starting in the first week of August over signs of economic recovery. However, yields showed a slight downward trend on concerns that the economic downturn would be prolonged. The Federal Reserve left its monetary policy stance unchanged at its 9–10 June and 28–29 July meetings. The federal funds target range was kept at between zero and 0.25%, and asset purchases were continued given the ongoing economic impact of COVID-19. US GDP in Q2 2020 fell at an annual rate of 31.7% after a decline of 5.0% in Q1 2020. The Federal Reserve revised its previous GDP growth forecasts, made in December 2019, from 2.0% to –6.5% in 2020, from 1.9% to 5.0% in 2021, and from 1.8% to 3.5% in 2022. Forecasts also show that interest rates are expected to remain at current levels until 2022. Since May, the US labor market has shown some signs of recovery after bottoming out in April. Nonfarm payrolls declined by 20.8 million in April but have since posted gains, with July seeing an additional 1.7 million jobs and August an additional 1.4 million jobs. The unemployment rate peaked at 14.7% in April but has since declined. The unemployment rate slipped to 10.2% in July and to 8.4% in August. Inflation also improved slightly, with the Personal Consumption Expenditures inflation rate rising to 0.9% in June and 1.0% in July from

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

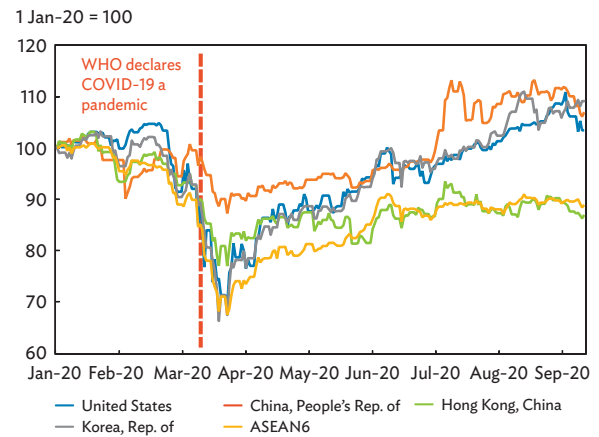


0.5% in May. While the US economy has shown signs of recovery, significant uncertainty remains stemming from the ongoing impact of the pandemic.

Similar to the Federal Reserve, the European Central Bank kept its monetary policy unchanged at its 16 July meeting, leaving key policy rates and existing asset purchases at the same levels. After the euro area's GDP contracted by 3.2% y-o-y in Q1 2020 and 14.7% y-o-y in Q2 2020, the European Central Bank noted signs of economic recovery beginning in May and expects a rebound in growth in the third quarter. Inflation inched up to 0.4% y-o-y in July from 0.3% y-o-y in June and 0.1% y-o-y in May. However, August inflation fell to -0.2% y-o-y. The euro area's industrial production also grew 4.1% month-on-month in July and 9.5% month-on-month in June. To further support economic recovery, the European Commission announced a fiscal stimulus program worth EUR750 billion on 20 July.

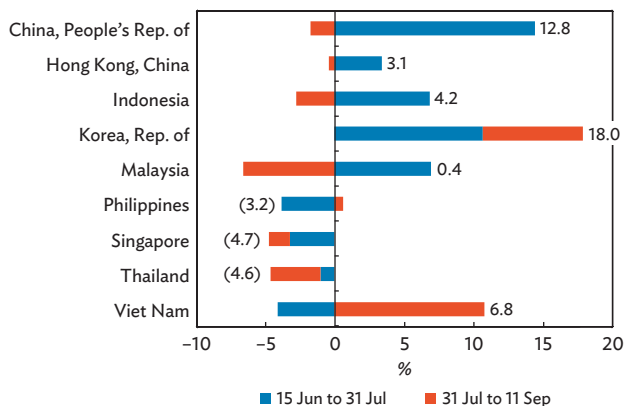
The Bank of Japan (BOJ) left its monetary policy unchanged at its meetings on 16 June and 15 July. The BOJ revised its GDP forecast for fiscal year 2020 in its July meeting to a contraction of between 5.7% and 4.5% from its previous forecast of a contraction of between 5.0% and 3.0% in April. While Japan's GDP contracted 28.1% y-o-y in Q2 2020 after a decline of 2.3% y-o-y in Q1 2020, the BOJ expects a moderate rebound in economic activity in the second half of 2020. It also slightly upgraded its GDP growth forecast for fiscal year 2021 to 3.0%–4.0% from 2.8%–3.9%.

Figure B.1: Equity Indexes in Emerging East Asia



Improved financial conditions were observed in different aspects of global financial markets. Most regional equity markets have picked up since April as investor sentiment improved (**Figure B.1**). At the height of market turmoil in March, which was driven by the oil price shock and the rapid spread of the pandemic, emerging East Asian markets had collectively fallen by 29.4% from 2 January to 23 March. Since April, equity markets in emerging East Asia have rallied. Between 15 June and 11 September, equity markets in the Republic of Korea and the PRC gained the most, posting increases of 18.0% and 12.8%, respectively (**Figure B.2**). Both markets have reached new high since January 2020, benefited from improved sentiment on the back of relatively good containment of, and recovery from, the pandemic. Nevertheless, equity markets in emerging East Asia posted an average loss of 11.0% from 2 January to 11 September weighed down by ASEAN markets, as investor sentiment failed to fully recover.

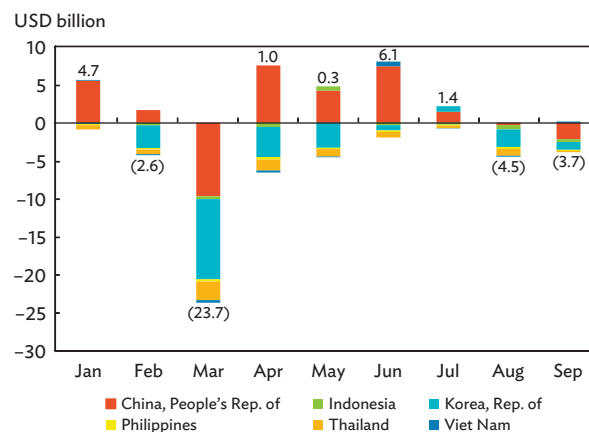
Foreign portfolio investment witnessed similar trends during the review period (**Figure C**). The largest monthly capital outflows from the region were observed in March before foreign portfolio investment stabilized in April. The PRC was the only market in the region with stable foreign capital flows into equity market from April through July, benefiting from improved investor sentiment and growth recovery. Outflows were seen in most other emerging

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

() = negative.
Notes:

- Changes from 15 June to 31 July 2020, and from 31 July to 11 September 2020.
- Figures on the chart refer to the net change between the two periods.

Source: Bloomberg LP.

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

() = outflows, USD = United States dollar.

Notes:

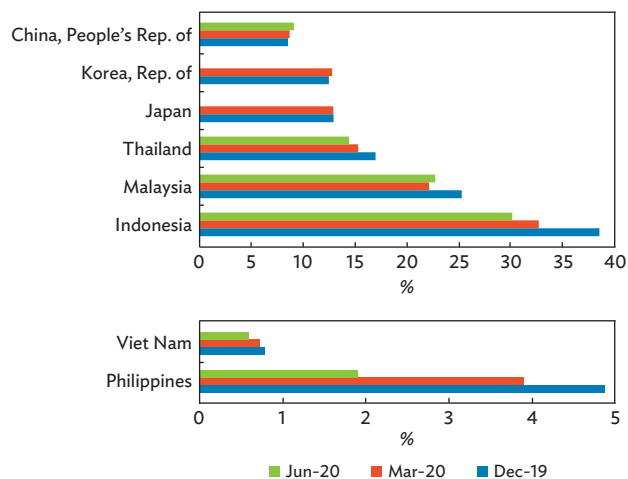
- Data as of 11 September 2020.
- Figures refer to net inflow (net outflow) for each month.

Source: Institute of International Finance.

East Asian markets during the same period, albeit to a much less degree compared with March. Outflows, however, were observed for all markets in August and for almost all markets in September.

Foreign holdings of LCY government bonds in emerging East Asia were mixed during the review period (**Figure D**). The foreign holdings share fell in Indonesia, declining from 32.7% at the end of March to 30.2% at the end of June, largely due to a more rapid increase in outstanding government bonds as the government sought to fund its stimulus packages. Similarly, the Philippines saw a decline in the foreign holdings share from 3.9% at the end of March to 1.9% at the end of June. Thailand and Viet Nam also experienced slight declines during the review period, while slight increases were observed in the PRC and Malaysia. **Box 1** reviews recent trends in LCY bond markets and changes in the investor profile in ASEAN+3 markets.

The weakness of the US dollar since 25 May resulted in the strengthening of most emerging East Asian currencies between 15 June and 11 September (**Figure E.1**). As of 11 September, most regional currencies had appreciated against the US dollar year-to-date (**Figure E.2**). The Chinese renminbi and the Philippine peso gained the most, strengthening by 3.7% each. The appreciation of the Chinese renminbi was driven by economic recovery while the Philippine peso strengthened on the back of a narrower trade deficit and lower demand for US dollars as quarantine restrictions limited economic activities. Bucking the trend were the Indonesian rupiah

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

Note: Data for Japan and the Republic of Korea as of 31 March 2020.
Source: AsianBondsOnline. <https://asianbondsonline.adb.org/>.

and the Thai baht, which depreciated by 5.2% and 0.8%, respectively, between 15 June and 11 September. The weakness of the Indonesian rupiah was partly driven by a sluggish economic performance and concerns over debt monetization. Economic contraction and rising political risks drove the Thai baht's depreciation.

Key risk sentiment indicators have trended downward amid improved investor sentiment and easing liquidity

Box 1: Asian Bond Markets—Recent Trends and Developments

Market Review

Risk appetite in emerging East Asian bond markets soured in the first quarter (Q1) of 2020 before partially recovering in April.^{a,b} The spread of the coronavirus disease (COVID-19) and the oil price shock rocked global financial markets in March. The JP Morgan Emerging Markets Bond Index Global (EMBIG) sovereign spreads of four Association of Southeast Asian Nations (ASEAN) markets and the People's Republic of China (PRC) widened amid the March turmoil, with average bond spreads in these markets jumping to 364 basis points (bps) on 23 March compared with 123 bps on 2 January (Figure B1.1). The Chicago Board Options Exchange Market Volatility Index also climbed from an average of 13.7 points in January to 57.2 points in March. Financial markets only began to stabilize in April, supported by the introduction of fiscal stimulus packages, accommodative monetary policies, and pandemic containment measures. By the end of August, average bond yield spreads narrowed to 171 bps and the Volatility Index had fallen to 26.4 points. However, risk sentiment has not yet recovered to pre-pandemic levels. On 31 August, the average bond yield spread remained 48 bps above where it stood on 2 January.

To maintain financial stability and mitigate the impact of COVID-19, most major central banks in emerging East Asia have cut interest rates at least once this year, releasing abundant liquidity into the financial sector and lowering borrowing costs (Figure B1.2). Lower interest rates across the region contributed to falling government bond yields in most emerging East Asian markets since the peak of the market turmoil in March. With the largest cumulative rate cut through the first 8 months of the year at 175 bps, the Philippines has witnessed the biggest drop in yields since March. By 31 August, government bond yields in most emerging East Asian economies had fallen below their December 2019 levels (Figure B1.3). At the end of Q1 2020, following the market sell-offs in March, government bond yields were higher than in December 2019 in a few relatively smaller bond markets in the region. Yields rose despite policy rate cuts, pointing to the importance of deeper financial markets in stabilizing asset prices.

Foreign Holdings in Emerging East Asian Markets

Foreign holdings in most emerging East Asian bond markets declined sharply in March and April before stabilizing in May.

Figure B1.1: Bond Yield Spreads for Select Asian Economies and the Volatility Index

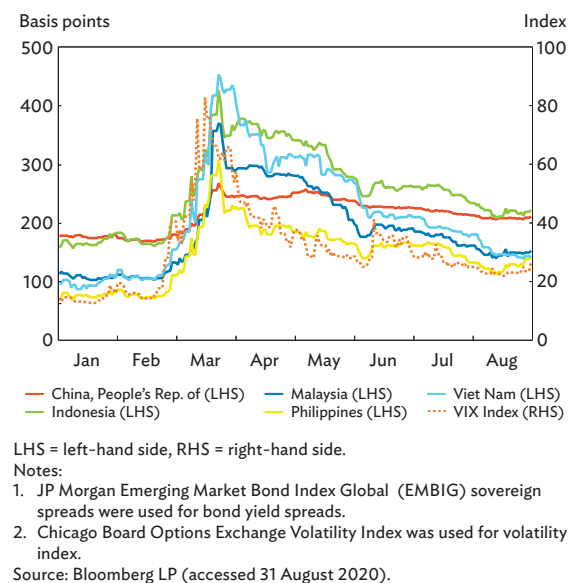
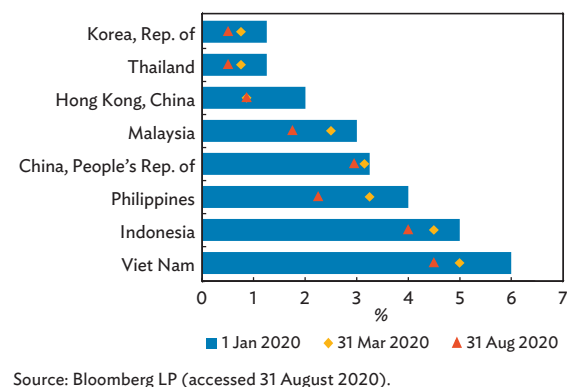


Figure B1.2: Policy Rate Changes in Select Emerging East Asian Markets



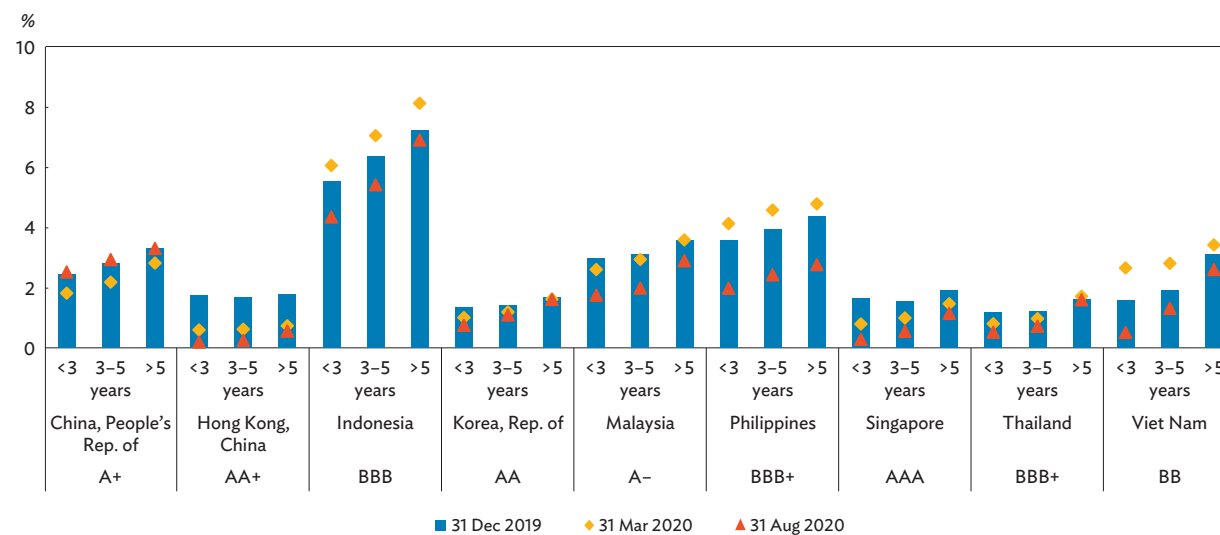
Heightened risk aversion during the peak of market turmoil in March led to a drop in foreign holdings of local currency (LCY) bonds for most emerging East Asian economies. The LCY government bond market in Indonesia witnessed the largest decline in foreign holdings, from a share of 38.6% at the end of December 2019 to 32.7% at the end of March. The corresponding figures for the Malaysian and Thai LCY government bond markets fell from 25.3% and 17.0% at the

^a This box was written by Donghyun Park (Principal Economist), Shu Tian (Economist), and Mai Lin Villaruel (Economics Officer) in the Economic Research and Regional Cooperation Department of the the Asian Development Bank.

^b 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.

Box 1: Asian Bond Markets—Recent Trends and Developments *continued*

Figure B1.3: Government Bond Yields in Emerging East Asia



Notes:

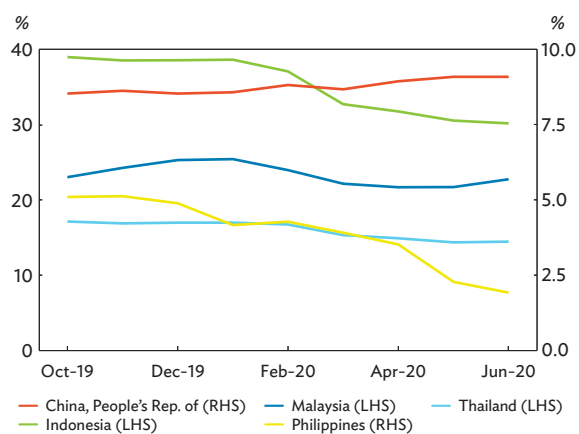
- Government bond yields are based on average yields of each maturity bucket.
 - S&P Global Rating is used for the sovereign rating classification.
- Source: Bloomberg LP (accessed 1 September 2020).

end of December 2019 to 22.2% and 15.3%, respectively, at the end of March. Meanwhile, foreign holdings in the PRC market remained stable during the review period (**Figure B1.4**).

With reduced foreign holdings of Indonesian government bonds in Q1 2020, domestic institutions such as banks increased their holdings from 21.1% at the end of December to 33.3% at the end of June. Domestic institutions also increased their holdings in Thailand and Malaysia (**Figure B1.5**).

With improved sentiment, foreign portfolio investment in select emerging East Asian economies gradually stabilized after substantial outflows in March. Emerging East Asian currencies have also strengthened in recent months. Foreign portfolio investment in both equity and debt markets witnessed outflows starting in February, with outflows from equity markets peaking at USD11.2 billion in the week that ended 13 March. Outflows from debt markets peaked at USD4.1 billion in the week ending 20 March (**Figure B1.6**).

Figure B1.4: Foreign Holdings of Local Currency Government Bonds in Select Emerging East Asian Markets



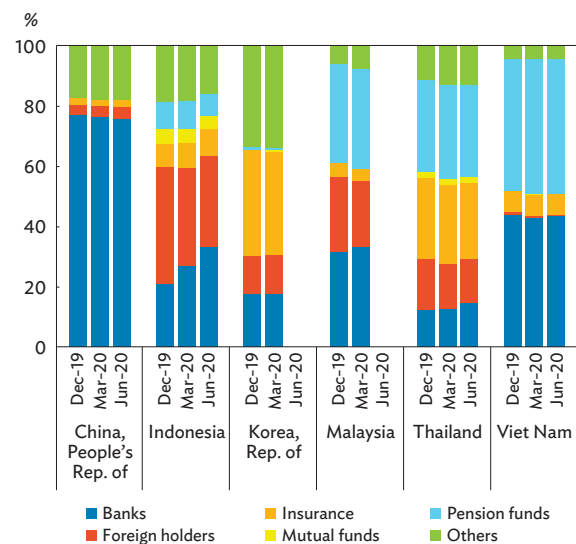
LHS = left-hand side, RHS =right-hand side.

Source: *AsianBondsOnline*. <https://asianbondsonline.adb.org/>.

continued on next page

Box 1: Asian Bond Markets—Recent Trends and Developments *continued*

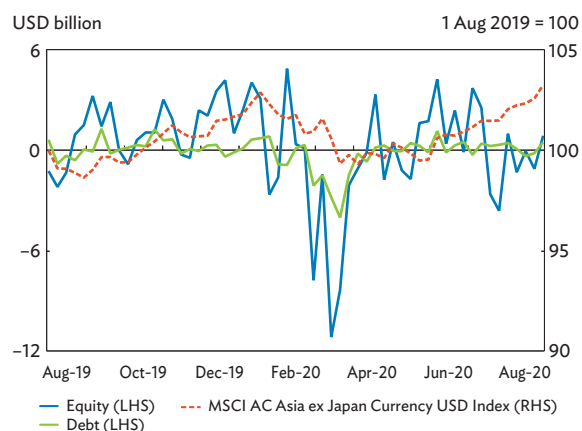
Figure B1.5: Changes in Domestic Investor Profile



Note: Others include central bank and government.

Source: *AsianBondsOnline*. <https://asianbondsonline.adb.org/>.

Figure B1.6: Foreign Portfolio Investment in Select East Asian Financial Markets



LHS = left-hand side, MSCI AC = Morgan Stanley Capital International All Country, RHS = right-hand side, USD = United States dollar.

Notes:

1. Total equity flows include the economies of the People's Republic of China, Indonesia, the Republic of Korea, the Philippines, Thailand, and Viet Nam.

2. Total debt flows include the economies of Indonesia and Thailand only. Source: Institute of International Finance Capital. Flow Tracker Database. <https://www.iif.com/Research/Capital-Flows-and-Debt/Capital-Flows-Tracker> (accessed 31 August 2020).

As financial markets stabilized in late March, portfolio outflows slowed, with inflows resuming in May. Between June and August, cumulative portfolio investment in select Asian equity and debt markets reached USD5.7 billion and USD2.4 billion, respectively. Meanwhile, emerging East Asian currencies depreciated versus the United States dollar in late March but have strengthened since June.

Bond Market Developments

Bond markets in emerging East Asia continued to expand to help meet the funding needs of both the public and private sectors in containing the COVID-19 pandemic and tackling its impact. The volume of bonds outstanding in the regional market rose in both Q1 and Q2 2020, with LCY bond financing playing a bigger role (**Figure B1.7**). At the end of June, LCY bonds outstanding in emerging East Asia reached

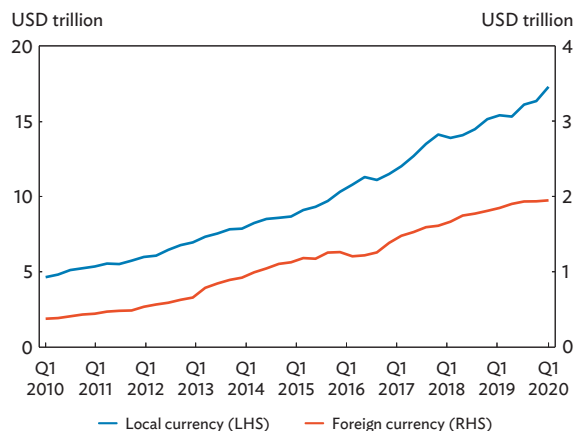
USD17.2 trillion on growth of 5.0% quarter-on-quarter (q-o-q) and 15.5% year-on-year (y-o-y). Foreign-currency-denominated bonds outstanding increased steadily as well, growing 0.7% q-o-q and 5.5% y-o-y to reach USD1.9 trillion at the end of June.

Government bonds still dominate the region's bond markets, accounting for almost 70% of total outstanding bonds at the end of Q2 2020. While LCY-denominated bonds already comprised more than 90% of the region's bonds outstanding, the share of LCY bonds inched higher in Q2 2020 relative to 2019, signaling the importance of LCY financing in supporting economic recovery from the COVID-19 pandemic (**Figure B1.8**).

continued on next page

Box 1: Asian Bond Markets—Recent Trends and Developments *continued*

Figure B1.7: Bond Market Size in Emerging East Asia

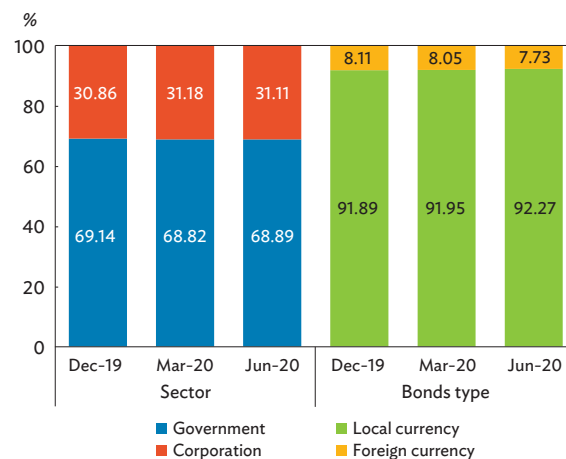


LHS = left-hand side, RHS =right-hand side.

Note: 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.

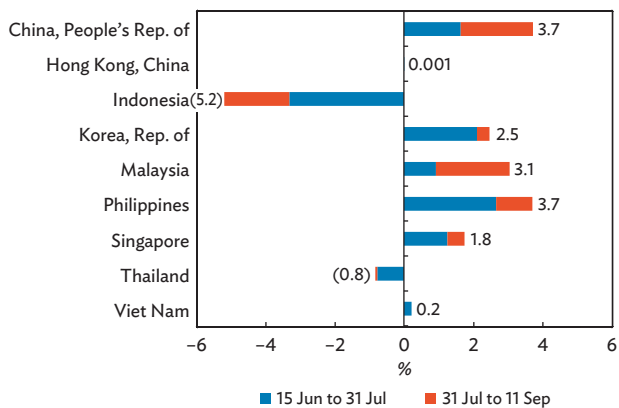
Source: *AsianBondsOnline* (<https://asianbondsonline.adb.org/>) and *AsianBondsOnline* estimates.

Figure B1.8: Regional Bond Market Composition



Source: *AsianBondsOnline* (<https://asianbondsonline.adb.org/>) and *AsianBondsOnline* estimates.

Figure E.1: Changes in Spot Exchange Rates vs. the United States Dollar

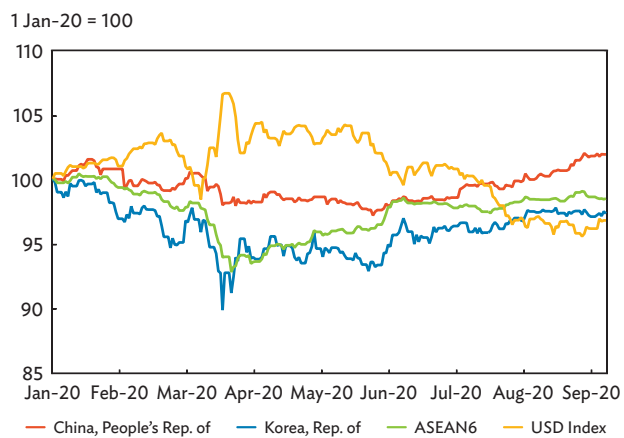


Notes:

- Changes from 15 June to 31 July 2020, and from 31 July to 11 September 2020.
- Numbers on the chart refer to the net change between the two periods.
- 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 E.2: Currency Indexes in Emerging East Asia



ASEAN = Association of Southeast Asian Nations, USD = United States dollar.

- Notes:
- Data as of 11 September 2020.
 - ASEAN6 comprises Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Viet Nam.

Source: Bloomberg LP.

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

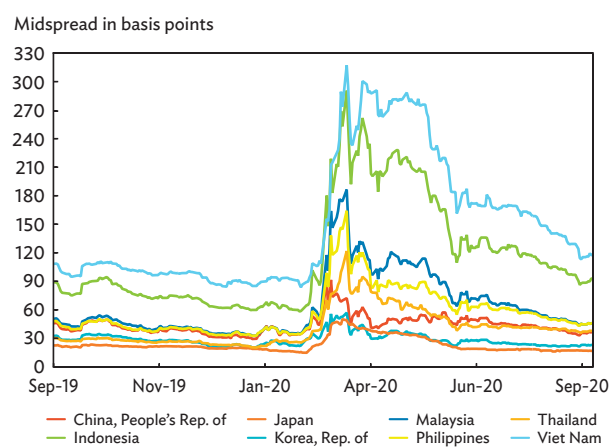
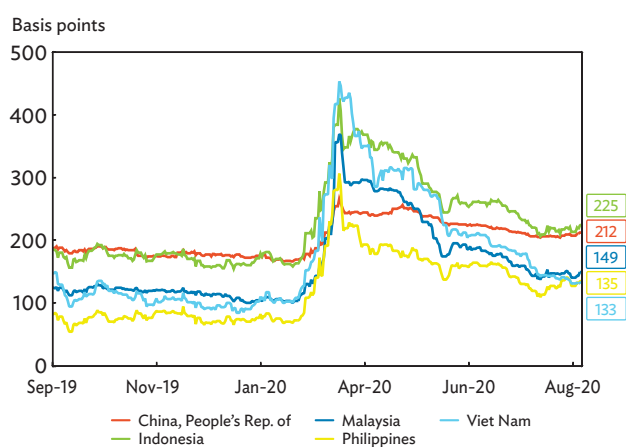


Figure G: JP Morgan Emerging Markets Bond Index Sovereign Stripped Spreads



conditions. Credit default swap (CDS) spreads in emerging East Asia have declined since peaking in March. Between 15 June and 11 September, CDS spreads in regional markets narrowed by 29 bps on average (**Figure F**). Nevertheless, in most regional markets, CDS spreads remained higher than their levels in January, indicating that investment sentiment had not fully recovered. As of 11 September, the average CDS spread was 16 bps higher than on 2 January. JP Morgan Emerging Market Bond Index sovereign stripped spreads showed similar trends, rising to 171 bps on average by 11 September (**Figure G**). While the region's bond yield spreads have steadily declined since April, the average yield spread as of 11 September remained 48 bps higher than on 2 January.

While uncertainty associated with COVID-19 has hampered economic activities, it has also boosted the

use of new technologies. **Box 2** describes the expanded opportunities for contactless payment in the COVID-19 era and beyond. Governments and markets continue to emphasize green and inclusive development as economies recover from the COVID-19 pandemic. **Box 3** and **Box 4** discuss how investments in environmental-, social-, and governance-themed assets have demonstrated resilience in 2020 amid the pandemic.

Overall, as improved liquidity conditions buoy financial conditions in the region, risks still tilt toward the downside. The largest risk remains the uncertain impact of COVID-19 globally. Aside from this, tension between the PRC and the US remains, casting a shadow on the post-COVID recovery. In addition, dim economic performances, abundant liquidity, and an uptick in nonperforming loans pose risks to financial soundness that may require more attention from policy makers.

Box 2: Contactless Payment in Post-COVID Asia

Cashless and contactless payments have increasingly become the preferred means of payment since the coronavirus disease (COVID-19) broke out.^{a,b} The key driver of the shift to cashless and contactless payments, which do away with human contact including indirect human contact via surfaces, is the general public's desire to minimize the risk of infection. Specifically, the highly contagious nature of COVID-19 is encouraging businesses and customers to avoid banknotes, which can be a source of surface transmission since they typically change hands many times. The shift away from cash will encourage greater use of credit and debit cards. However, using a credit card at a restaurant, for example, does not eliminate the risk of surface transmission altogether since the server will touch your credit card. As such, it is not contactless payment.

Well before the COVID-19 pandemic, cashless payment technology was rapidly evolving toward contactless payment. Enabled by advances in financial technology, the “fintech boom” ushered in innovative payment solutions that complemented traditional financial services. It has generally made payments for goods and services faster, easier, and more convenient and cost-efficient for customers with payment methods ranging from digital cash to e-wallets and biometric payments. These innovations have spanned several companies and countries. For instance, Apple paired its wristwatch with an electronic app, Apple Pay, that allowed users to pay from their wrists. In Sweden, thousands have microchip implants in their hands to buy goods instead of using credit cards or cash.^c

The development of contactless payment technology is being given a big push by the fear of COVID-19 infection through direct and indirect human contact. In particular, digital (or online) payment has gained a lot of traction since the outbreak. At a broader level, digital technology is redefining how we work, shop, play, learn, and live in the COVID-19 world. Work from home would not be possible without the internet. E-commerce and online shopping are a necessity during lockdowns and community quarantines when physical stores are shut down. Even after the restrictions are lifted,

e-commerce is likely to grow in popularity as consumers prioritize health safety, which explains the soaring stock prices of e-commerce giants like Amazon and Alibaba. E-commerce requires e-payment, and the post-COVID growth of e-commerce will thus translate into the growth of digital payment.

What does the data say at a broader level about the current state of digital payment in Asia? The Global Findex database plotted in **Figure B2.1** suggests that a sample of 28 economies from developing Asia is still below the global average in its use of digital payments, which is led by member countries of the Organisation for Economic Co-operation and Development. While the use of digital payments varies across the region as illustrated in **Figure B2.2**, it is rapidly increasing. Consumers throughout Asia tend to use fintech products regularly.^d Digital banking is also gaining ground in Southeast Asia, with most banks reducing the number of physical branches and improving the convenience and efficiency of online banking transactions.^e In the Philippines, the Bangko Sentral ng Pilipinas aims to increase the use of electronic payments to 50% of the total volume of financial transactions by 2023. Digital payments have soared in the Philippines since quarantine restrictions were imposed in March 2020. The country's largest provider of mobile money services reported in May 2020 that the total amount of payments through its platform had increased eightfold from the previous year. The lender also announced plans to roll out electronic payments in transport, telemedicine, and government services by the end of 2020.^f Other markets in the region are catching up quickly and launching various programs to tap into the potential of digital payments in the post-COVID world.

The experiences of two of Asia's largest economies, India and the People's Republic of China (PRC), provide valuable insights. The use of digital payments in India increased when the government demonetized its currency in 2016, forcing Indian consumers to shift to phone-based, cashless payment applications. Even when the availability of bank notes recovered, the use of electronic payments continued trending upward. Upgraded information and communication

^a This box was written by Donghyun Park (Principal Economist) and Irfan Qureshi (Young Professional) in the Economic Research and Regional Cooperation Department of the Asian Development Bank.

^b Cashless payments are made without using physical cash or money, offering a simple, efficient, and safe way to settle all point-of-sale and online purchases. Existing types of cashless payment systems include credit cards and debit cards, smart cards with radio frequency identification or near-field communications, and mobile payments using smartphones and other devices with QR codes.

^c NPR. 2018. Thousands of Swedes Are Implanting Microchips under Their Skin. <https://www.npr.org/2018/10/22/658808705/thousands-of-swedes-are-inserting-microchips-under-their-skin#:~:text=In%20Sweden%2C%20a%20country%20rich,their%20hands%20against%20digital%20readers>.

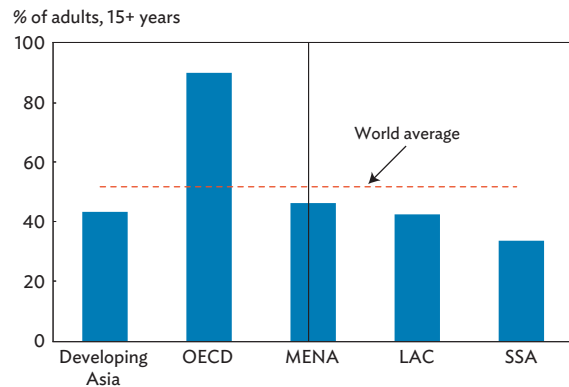
^d Bloomberg. 2019. Why Asia Is Leading the Fintech Revolution. <https://www.bloomberg.com/professional/blog/asia-leading-fintech-revolution/>.

^e Asian Development Bank Institute. 2019. *The Digital Revolution in Asia and its Macroeconomic Effects*. <https://www.adb.org/sites/default/files/publication/535846/adb-1029.pdf>.

^f Nikkei Asian Review. 2020. Digital Payment Grows in Philippines Amid COVID-19 Fears. <https://asia.nikkei.com/Business/Companies/Digital-payment-grows-in-Philippines-amid-COVID-19-fears>.

Box 2: Contactless Payment in Post-COVID Asia *continued*

Figure B2.1: Use of Digital Payments, 2017



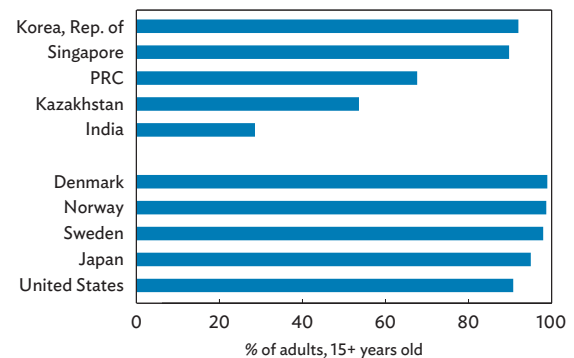
OECD = Organisation for Economic Co-operation and Development, MENA = Middle East and North Africa, LAC=Latin America and the Caribbean, SSA = Sub-Saharan Africa.

Notes:

1. Percentage of adults (15 years and above) who made and received digital payments in the past year.
2. Developing Asia comprises Afghanistan; Armenia; Azerbaijan; Bangladesh; the People's Republic of China; Georgia; Hong Kong, China; Indonesia; India; Kazakhstan; the Kyrgyz Republic; Cambodia; the Republic of Korea; the Lao People's Democratic Republic; Sri Lanka; Myanmar; Mongolia; Malaysia; Nepal; Pakistan; the Philippines; Singapore; Thailand; Tajikistan; Turkmenistan; Taipei, China; Uzbekistan; and Viet Nam.

Source: Global Findex Database.

Figure B2.2: Use of Digital Payments in Selected Economies, 2017



PRC = People's Republic of China.

Note: Percentage of adults (15 years and above) who made and received digital payments in the past year.

Source: Global Findex Database.

technology infrastructure made this possible. The success of India's Unified Payments Interface and Aadhaar biometric identity systems shows that a government-backed utility for electronic payments can be quickly accessed by a large portion of the population. Mobile payments through the Unified Payments Interface, where people link their bank accounts with their phone numbers through payment apps, increased by 163% to USD287 billion in 2019.^g

The transition to a cashless, contactless payment system began much earlier in the PRC. Digital payment and e-commerce took off in the aftermath of the 2003 severe acute respiratory syndrome (SARS) epidemic with the introduction of Alipay and similar payment systems.^h The PRC's payment transition was based on a strong foundation. By 2003, the PRC had already established the critical networks and digital infrastructure needed to enable digital payments. Several projects were launched by the central government, including the Golden Bridge Project, which built extensive internet networks; the Golden Card Project,

which established the unified card system; and the Golden Customs Project, which provided a national system for cashless transactions. In fact, in terms of contactless payment, the PRC has become one of the most advanced economies in the world. In particular, QR code payment, a contactless method where payment is made by scanning a QR code from a mobile app, is now one of the leading means of payment throughout the PRC. There is no physical touch required at all, which makes QR code payment ideal for the COVID-19 environment. In the PRC, you can even give alms to street beggars via QR code!

Notwithstanding the rapid ascent of digital payment in Asia, several challenges remain. Digital payment transactions require increased accountability and tracking, which will reduce the risk of theft and breaches of security.ⁱ Data privacy presents another major challenge. Digitalization brings new threats such as cyberattacks, digital crimes, data breaches of payment systems, and online fraud. Thus, banks and fintech companies will need to invest heavily in advanced and reliable cybersecurity systems to protect consumer data and transactions. On the supply side, payment providers also expect some challenges ahead, such as increased oversight and regulation of the global payments industry, the impact of government-imposed restrictions

^g S&P Global Market Intelligence. 2020. *2020 India Mobile Payments Market Report*. <https://www.spglobal.com/marketintelligence/en/documents/indiamobilepayments...2020finalreport.pdf>.

^h Y. Xiao and M. Chorzempa. 2020. *How Digital Payments Can Help Countries Cope with COVID-19 and Other Pandemics*. <https://www.weforum.org/agenda/2020/05/digital-payments-cash-and-covid-19-pandemics/>.

ⁱ K. Muralidharan, P. Niehaus, and S. Sukhtankar. 2016. *Building State Capacity: Evidence from Biometric Smartcards in India*. *NBER Working Paper*, No. 199999. Cambridge, MA: National Bureau of Economic Research.

Box 2: Contactless Payment in Post-COVID Asia *continued*

on international payment systems, and increasingly intense competition for clients and merchants in the payments industry.^j Finally, digital payments, including QR code payments, require a stable internet connection, so a strong digital infrastructure is essential.

Market demand is driving the relentless growth of contactless payment. Economic and health shocks such as India's demonetization and the SARS crisis in the PRC catalyzed

contactless payment in these two markets. It is reasonable to expect that COVID-19 will lead to a large and lasting expansion of digital payments. To seamlessly transition to digital payments, which will be an integral part of the more digital post-COVID world, Asian economies must invest in digital networks and infrastructure, and strengthen their regulatory frameworks. Robust identification systems, reliable internet networks, and trustworthy financial services are prerequisites for contactless payment systems.

^j Visa Inc. Q2 2020 Financial Results. https://s1.q4cdn.com/050606653/files/doc_financials/2020/q2/Visa-Inc.-Q2-2020-Financial-Results.pdf.

^k Fintech. 2019. The Great Shift Towards a Cashless Society. <https://www.fintechmagazine.com/mobile-payments/great-shift-towards-cashless-society>.

Box 3: Environmental, Social, and Governance Investment Growth amid the COVID-19 Crisis

Environmental, social, and governance (ESG) investment is critical for achieving inclusive growth in Asia and can play a vital role in reducing the income inequality being exacerbated by the coronavirus disease (COVID-19).^a

ESG investment is defined as a type of investment that factors corporates' extra-financial performance—such as environmental, social, and corporate governance factors—in decision-making. This concept has become increasingly popular since 2006, when major investors first announced their adherence to the United Nations Principles for Responsible Investment, and subsequently with the announcement of the United Nations Sustainable Development Goals in 2015. The 2008–2009 global financial crisis also spurred a widespread movement to reshape excess capitalism and an overemphasis on shareholder profits. Meanwhile, the younger generation, with activists such as Greta Thunberg, has further brought ESG issues into the public and media spotlight. In 2018, global ESG investment reached USD31 trillion, which was seven times its value in 2014.

Despite a slow start, Asia and the Pacific has witnessed a rapid uptake in ESG investment. Exchanges in some Asian economies—such as India, Singapore, and Thailand—have asked listed companies to disclose ESG-related information to stimulate ESG investment. Such investment can help boost Asian economies' potential growth by creating a virtuous cycle in which companies' increased environmental

protection, employee education, and women's participation will, in turn, raise corporate values and spur economic growth.

Companies with high ESG scores are less susceptible to market fluctuations.

Constraints to ESG investment can include declines in the value of investor assets, declines in profits, and shifts toward safe assets (e.g., cash and government bonds). Firms may also face difficulties in continuing ESG investing during periods of significant economic deterioration or crisis. In fact, achievement of the Millennium Development Goals, the predecessors to the Sustainable Development Goals, was delayed due to economic deterioration in developed countries in the aftermath of the 2008–2009 global financial crisis.

In recent years, however, ESG investment has expanded. According to a report by Sustainable Research and Analytics, the cumulative amount that mutual funds invested based on ESG factors increased to USD2.6 trillion in May 2020 from USD1.6 trillion in December 2019. ESG issues have become an extremely important consideration for medium- and long-term investors seeking to avoid long-term risks such as changes in consumer orientation and declines in corporate brands.

From a corporate perspective, ESG initiatives support resilience against market fluctuations. Recent leading studies found a strong correlation between ESG evaluation and stock prices during the 2008–2009 global financial crisis,

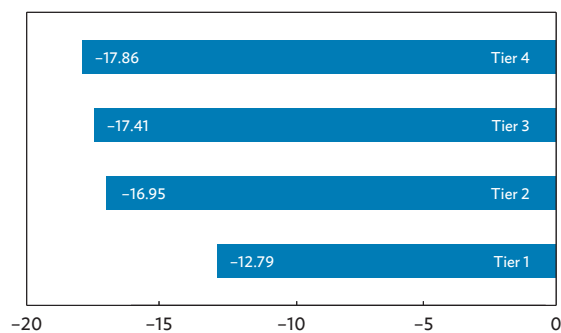
^a This box was written by Naoko Nemoto (Financial Economist) and Lian Liu (Research Associate) of the Asian Development Bank Institute.

Box 3: Environmental, Social, and Governance Investment Growth amid the COVID-19 Crisis

continued

when corporate trust was questioned.^b To see whether this hypothesis still holds during the COVID-19 crisis, we adopted a simple approach to divide the top 100 Japanese-listed companies into four groups based on their ESG ratings and compare their respective stock price performances in the first quarter of 2020. Although most firms faced a decline in equity prices during the review period, the group with the highest ESG ratings showed the smallest average decline and most stable stock prices among all groups (Figure B3).

Figure B3: Stock Price Changes in the First Quarter of 2020 among Top 100 Japanese Companies Grouped by Average ESG Rating



ESG = environmental, social, and governance.

Notes:

1. Tier 1 has the highest average corporate social responsibility (CSR) ranking, and Tier 4 group has the lowest.
2. The CSR ranking reflects employment, environment, society, and governance factors.
3. The sample comprises the top 100 listed Japanese firms by market capitalization.

Source: Authors' calculations based on 2020 CSR Enterprise Rankings by Toyo Keizai.

Social factors are attracting more attention.

Traditionally, social factors were considered to have a smaller impact on stock prices and corporate value than environmental and governance factors. Amid the COVID-19 crisis, society has started to focus more on the health and safety of its employees, as well as on the security of employment and maintenance of suppliers and customers. As such, social factors are attracting more investor attention.

Some companies have been severely criticized by investors for maintaining high compensation packages for management

and offering high-dividend payouts while also reducing their workforces. The *Financial Times* has highlighted that companies are under increasing pressure from investors to not only focus on the interests of stockholders but also on the diverse interests of stakeholders.^c Facing criticism for its working conditions, Amazon announced that it would reinvest second quarter profits to improve safety measures and add more than 170,000 jobs to improve working conditions.

To assess the importance of social factors, we further analyzed the relationship between capital costs and ESG factors for the top 100 Japanese companies based on the 2020 CSR Enterprise Rankings by Toyo Keizai, controlling for corporate size, revenue growth, industry, and leverage. Our results found a significant correlation between social factors and capital costs. Companies with better human resource utilization—such as promoting diversity, supporting human rights, and improving working conditions—tend to have lower capital costs and higher corporate values.

Asian economies should work collectively to create effective ESG standards.

ESG investment is crucial for supporting sustainable growth in Asia, but several challenges remain:

- Mediocre quality and accuracy of ESG information.** The financial data of listed firms are audited by an independent external auditor, but nonfinancial data are not endorsed by third parties in many cases. In addition, available ESG information for Asian corporates is insufficient. The rules of disclosure vary by economy, and the conversion and standardization of disclosure guidelines still needs to be developed.
- Difficulty in analyzing and evaluating the huge amount of necessary information.** Investors are increasingly referring to ESG indexes, but there are criticisms that these indexes have not fully incorporated the specific features of industries and companies.
- Risk of resource misallocation.** ESG investing criteria and standards have been developed mainly in European countries. Applying uniform standards to countries in different stages of economic development could result in the misallocation of economic resources. The effectiveness of ESG investment has not been tested across countries.

^b Sustainable Research and Analytics. 2020. Sustainable Funds Cashflows Summary. 24 May; and June Lins, K., and T. Ane. 2019. Social Capital, Trust, and Corporate Performance: How CSR Helped Companies During the Financial Crisis (and Why It Can Keep Helping Them). *Sustainable Finance Management*. 31 (2020), pp. IV-2.

^c *Financial Times*. 2020. Proxy Battles Heat Up as Investors Target Climate and Social Issues. 24 April.

Box 3: Environmental, Social, and Governance Investment Growth amid the COVID-19 Crisis

continued

To overcome these obstacles, policy makers and companies in Asia need to be proactive in disclosing ESG information, encouraging ongoing dialogue with global investors, engaging in the creation of effective investment standards, and ensuring the outcome of investments. A full discussion of these challenges and the benefits of ESG investment

is included in a new Asian Development Bank Institute book, *Environmental, Social, and Governance Investment: Opportunities and Risks for Asia*.^d The book examines the current state of ESG investment in Asia and offers insights into leveraging the benefits of ESG investment for sound and sustainable development.

^d N. Nemoto and P. J. Morgan. 2020. *Environmental, Social, and Governance Investment: Opportunities and Risks for Asia*. Tokyo: Asian Development Bank Institute.

Box 4: Is Green the New Gold? ESG Resilience during the COVID-19 Crisis

Pandemic: A Neglected Risk

When the World Health Organization declared the coronavirus disease (COVID-19) a pandemic on 11 March 2020, it signaled that what had started as an emerging disease in the People's Republic of China in late 2019 had turned into one of the most serious health crises ever known.^a

Evidence is mounting of the devastating economic impact of the pandemic. Equity markets in global financial centers plunged, and the International Monetary Fund is expecting growth in Asia to stall at zero in 2020, the worst economic performance in 60 years.

The world has been caught by surprise; a global pandemic was not included among the top risks for investors. Markets are not set up to anticipate the impact of a pandemic of this nature, and the impending risk of such events have traditionally been overlooked. For example, a pandemic did not make the list of the 10 most probable risks cited in the World Economic Forum's *Global Risks Report* published in January 2020, making way for other concerns such as climate and cyber risks.

For now, losses from the pandemic are difficult to estimate as the magnitude of the impact depends on the continued spread of the disease (i.e., sick people no longer contribute to gross domestic product) and political responses to limit the contagion. The only certainty is uncertainty as economies brace for impending recessions.

The Resilience of Environmental, Social, and Governance Investing

Amid the COVID-19 chaos, trends in sustainable and environmental, social, and governance (ESG) investing stand out. Before the pandemic, corporate social responsibility had already become a major investment criterion, significantly influencing the valuation of financial assets in both the equity and debt markets. The rise of ESG investing in recent years can be attributed to increased investor demand. During the COVID-19 market sell-off, ESG funds outperformed strikingly, proving their resilience amid the crisis. For example, when the MSCI World Index dipped in March, 62% of large-cap ESG funds outperformed the index. Furthermore, 42% of ESG open-ended funds and exchange-traded funds (ETFs) in the United States (US) were ranked in the first quartile of their Morningstar category.

This outperformance was partly due to the exposure of these funds to sectors less impacted by containment and social distancing measures, such as tech and telecoms.

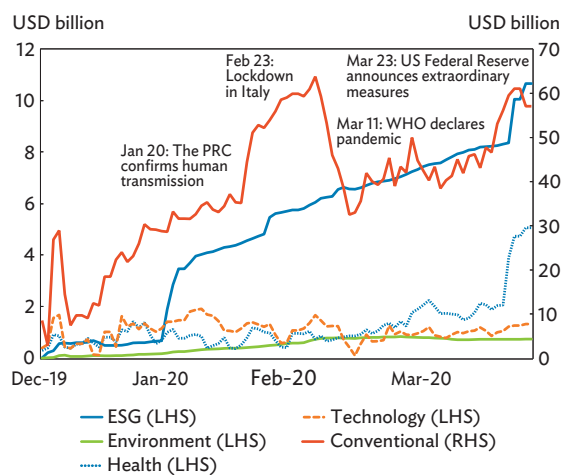
Recent analysis by Amundi of 1,662 ETFs listed in the US shows that investment flows into ESG funds have also been much more resilient during the COVID-19 crisis. From 31 December 2019 to 14 April 2020, the daily growth rate for ESG funds was over four times higher than for conventional funds (1.3% vs 0.3%).

Cumulative flows continued to increase throughout the early crisis period even after the initial phase of the lockdown in

^a This box is a summary of an Amundi research paper written by Jean-Jacques Barbéris, Head of Institutional and Corporate Clients Coverage, and Marie Brière, Head of the Investor Research Center. The full paper is available at <https://research-center.amundi.com/page/Article/2020/05/The-day-after-3-ESG-Resilience-During-the-Covid-Crisis-Is-Green-the-New-Gold>.

Box 4: Is Green the New Gold? ESG Resilience during the COVID-19 Crisis *continued*

Figure B4: Cumulative Flows into US-Listed Exchange-Traded Funds During the COVID-19 Crisis



COVID-19 = coronavirus disease; ESG = environmental, social, and governance; PRC = People's Republic of China; LHS = left-hand side; RHS = right-hand side; US = United States; USD = United States dollar; WHO = World Health Organization.
Sources: Amundi. 2020. *The Day After +3. ESG Resilience During the COVID Crisis: Is Green the New Gold?* 18 May. Bloomberg LP.

Italy in February when massive sales of traditional equity ETFs occurred. ETFs that specialized in sectors with little exposure such as tech and, to a lesser extent, health care also sold off during this period (Figure B4).

Is Environmental, Social, and Governance Investing “Pandemic-Proof”?

There are several possible reasons for the resilience of investment flows into ESG funds. Investors may perceive that ESG funds are “pandemic-proof.” By design, ESG funds tend to overweight sectors that have weathered the crisis better such as health care and tech. At the same time, ESG funds underweight those that have been most impacted such as transport, energy, and materials.

Another reason may be that investors have shown greater loyalty to their ESG investments. Past analysis has shown that compared to conventional funds, flows into ESG mutual funds are more sensitive to past positive returns and less sensitive to negative returns. Investors potentially derive positive utility from the simple act of investing responsibly, which can lead them to hold their investments during crises.

There may be one final reason. Even without loyalty, ESG funds may have benefited from investor preferences and played the role of safe havens within equity markets for the sole reason that investors anticipated others would do the same. Amid the COVID-19 crisis, which clearly has strong social and environmental implications, it seems that investors perceive a strong ESG fund performance as a defensive characteristic.

Outlook on Future ESG Trends

The COVID-19 crisis has moved social considerations to the forefront of ESG investing. Companies’ decisions affecting workers have become increasingly important. This was seen in the reactions of Amazon’s share price to the controversy over the working conditions of its employees during the crisis, as well as in the widespread publicity of COVID-related corporate social responsibility policies.

Companies’ environmental and climate actions could also be better valued by market participants. It is becoming impossible to argue that investors do not have to worry about the environmental externalities generated by companies. The pandemic reminds us that unanticipated adverse events can happen suddenly and unexpectedly, and they can have long-term consequences. We are more vulnerable than we previously imagined.

It is difficult to predict if ESG issues will continue to be a priority for investors in the long-term, but investors’ taste for ESG funds has not decreased during a pandemic like COVID-19. In fact, its impact has been quite the opposite.

Economic Outlook

The once-in-a-lifetime global public health crisis caused by COVID-19 is proving to be much deeper and more persistent than initially expected. The highly contagious nature of the virus means that it is a uniquely harmful pandemic. No other pandemic has shut down international travel and closed borders to the extent that COVID-19 has done. Based on the patterns of earlier pandemics, there were hopes during the early stages of the outbreak that COVID-19 would fade away as the weather turned warmer in the northern hemisphere during the summer months. For instance, the 1918 influenza pandemic broke out in the northern hemisphere in the spring but died down in the summer before returning from the southern hemisphere with a vengeance in the fall. However, the prevalence of COVID-19 seems unrelated to weather in either the northern or southern hemispheres. Hopes that warm weather would kill the virus have been dashed. Through the end of August, the pandemic had shown no signs of abating in either hemisphere.

To the contrary, the world remains mired knee-deep in a public health crisis without any clear signs of or pathways to containment. As of 30 August, the number of confirmed cases neared 25 million worldwide and the number of fatalities closed in on 800,000.² The US, the world's biggest and technologically most advanced economy, continued to hold the unenviable lead in confirmed cases and deaths, with around a quarter of the global total for both. A list of the 15 countries with the most infections—the US, Brazil, India, the Russian Federation, South Africa, Peru, Mexico, Colombia, Spain, Chile, Iran, the United Kingdom, Argentina, Saudi Arabia, and Pakistan—confirms that the pandemic is truly global, affecting all corners of the world. The best way to contain COVID-19 is likely to be the development and mass production of a safe and effective vaccine. While there has been progress on the vaccine front, it is unlikely that a working vaccine will emerge and be widely available by the end of this year. In short, COVID-19 still hangs over the world economy like a dark cloud.

As a result, the global economic outlook remains decidedly bleak. In its *World Economic Outlook Update* released in June 2020, the International Monetary Fund

(IMF) forecast the world economy, which had grown by 3.6% in 2018 and 2.9% in 2019, would contract by 4.9% in 2020 before rebounding to growth of 5.4% in 2021. The forecast contraction in 2020 represents a downgrade of 1.9 percentage points since April, when the IMF forecast a contraction of 3.0%. In January, the IMF had predicted that the world economy would expand by 3.3% in 2020. As such, the IMF downgraded its global growth forecast by a jaw-dropping 8.2 percentage points between January and June. The IMF's consecutive downgrades mean that 2021 global output will be down 6.5 percentage points relative to its January projections. The title of its June report, *A Crisis Like No Other, An Uncertain Recovery*, captured the severity of the global downturn as well as the highly uncertain prospects for recovery. The pandemic has had a bigger impact on the world economy than expected, and the eventual recovery is projected to be more gradual. It is now clear that we are unlikely to see a quick and robust V-shaped recovery. It is also clear that the economic downturn due to COVID-19 will be much deeper and more persistent than the Great Recession triggered by the global financial crisis.

The IMF's assessments are as equally bleak for emerging markets and developing economies as they are for advanced economies. The IMF projects the GDP of emerging markets and developing countries to contract by 3.0% in 2020, a sizable downgrade from its forecast of a 1.0% contraction in April, before rebounding with an expansion of 5.9% in 2021. The corresponding forecasts for advanced economies are a contraction of 8.0% in 2020 and growth of 4.8% in 2021. The IMF has downgraded its growth forecasts for all regions of the world relative to its April projections, when it had already downgraded its forecasts for all regions relative to January. The truly global pandemic has led to a truly global economic downturn. The collapse of global demand, along with pandemic-related measures such as border closures and other restrictions, have had a significant impact on international trade, which is projected to decline by 11.9% in 2020 before bouncing back into positive territory with 8.0% growth in 2021.

Developing Asia's economies are being hit hard by the pandemic even though they will likely fare better than other parts of the world, largely on the back of the PRC's resilience. According to the *Asian Development*

² World Health Organization. Coronavirus Disease (COVID-19) Weekly Epidemiological Update. 2020. https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200831-weekly-epi-update-3.pdf?sfvrsn=d7032a2a_4.

Outlook 2020 Update released in September by the Asian Development Bank (ADB), the region's economy, which grew by 5.1% in 2019, is expected to contract 0.7% in 2020 before rebounding with growth of 6.8% in 2021. The PRC's economy, which grew by 6.1% in 2019, will expand by only 1.8% in 2020 but is forecast to bounce back with robust 7.7% growth in 2021. The corresponding figures for (i) the Association of Southeast Asian Nations are 4.4%, -3.8%, and 5.5%; (ii) the Republic of Korea are 2.0%, -1.0%, and 3.3%; and (3) Hong Kong, China are -1.2%, -6.5%, and 5.1%. The PRC's positive growth forecast in 2020, which is albeit much lower than usual, largely explains why ADB expects developing Asia to avoid a downright contraction. Still, the deterioration of the global outlook is bad news for many Asian economies that depend heavily on exports and trade.

Overall, the economic outlook remains grim for both the world and members of the Association of Southeast Asian Nations plus the People's Republic of China; Hong Kong, China; and the Republic of Korea. The primary reason for the consecutive downgrades of global and regional growth forecasts is that the world is still struggling against COVID-19. It is unclear when the pandemic will either be contained or at least brought under a measure of control. The high level of uncertainty over global and regional economic prospects is grounded in a high level of uncertainty over COVID-19. The pandemic seems to throw up breaking news, most of it bad, with alarming frequency—for example, it may leave longer-lasting effects on infected persons than initially believed. In addition to persistent and elevated uncertainty, it is now clear that the global health impact of the pandemic will be larger and more persistent than expected. It is equally clear that the economic impact of the pandemic is likely to be much more pronounced than initially expected.

Risks to Economic Outlook and Financial Stability

The risks to the global and regional economic outlook remain decidedly tilted toward the downside. As noted earlier, the global health impact of the pandemic will be larger and more persistent than expected. As a result, the economic impact of the pandemic is likely to be much more pronounced than initially expected. The consecutive downgrades of global growth forecasts by the IMF and of developing Asia's growth forecasts

by ADB reflect an increasingly pessimistic assessment of the pandemic and its economic effects. But the downgrades may not be large enough if COVID-19 worsens further and precipitates a return to widespread lockdowns, community quarantines, and other measures that are needed to contain the disease but also severely disrupt the economy. As bleak as the current global and economic outlook is, it may get even worse unless and until the pandemic is brought under control, perhaps not completely but at least to the extent that some semblance of normalcy returns.

From an economic perspective, COVID-19 is both a supply and demand shock. That is, the pandemic-related health measures, such as travel restrictions and social distancing, adversely affect both the production of goods and services as well as the demand for and consumption of goods and services. Factories and shops that are closed during lockdowns and community quarantines cannot produce or sell. At the same time, consumers who cannot go to bars, restaurants, or shopping malls spend less. Furthermore, workers who are laid off or furloughed during lockdowns earn less income, so they cut back on their consumption. On the other hand, if the pandemic recedes much sooner than currently expected, perhaps due to the surprisingly quick development of a safe, affordable, and effective vaccine, the global and regional economy could stage a V-shaped recovery after all. The upshot is that the trajectory of economic recovery is tightly intertwined with the trajectory of the COVID-19 outbreak.

This is why the biggest risk to the region's economic outlook and financial stability is a major resurgence of COVID-19. As explained earlier, the pandemic has not yet been contained to a level that allows the world to carry on most of the activities that were part of the pre-pandemic normal. To name just one such activity, international air travel remains at a fraction of its pre-COVID-19 levels, and some aviation industry experts are predicting that it may not return to pre-pandemic levels until 2024. Some countries have done a solid job of containing the pandemic and managed to flatten the curve. But overall, the global picture is decidedly grim, and as bad as the current situation is, we cannot rule out further deterioration. In fact, some health experts are fearing the worst in the coming fall and winter in the northern hemisphere. In particular, they are expressing concerns about the potentially dangerous combination of the

common flu, which tends to be prevalent during fall and winter, and COVID-19.

Alarmingly, even countries that had seemingly crushed the curve are witnessing second waves of new infections. For instance, New Zealand, which received global praise for its effective containment while remaining virus-free for 102 days, reported new cases in August. In response, the government reintroduced stay-at-home restrictions for Auckland, the country's largest city. Also in August, the Republic of Korea, another country that was admired around the world as a model for successfully tackling COVID-19, suffered a new outbreak. In late February, the Republic of Korea experienced the world's second major outbreak, following the initial outbreak centered in the city of Wuhan in the PRC. What is remarkable about the Republic of Korea's achievement is that the country managed to contain the pandemic without any strict lockdowns, as daily life went on as more or less normal. Instead, the Republic of Korea relied on smart digital technology for contact tracing and mass testing.

Germany, another containment success story, has also recently experienced new localized outbreaks. Its second wave is part of a broader European second wave. In March, Italy became the leading global hot spot of COVID-19, with the number of new infections and deaths growing so rapidly that the country's hospitals and morgues were barely able to cope. The pandemic quickly spread to other parts of Europe, with France, Germany, Spain, and the United Kingdom, in addition to smaller European countries, all hit hard. The US and Europe were in similar positions in March in terms of cases and fatalities. Their trajectories since then could not be more different. The US suffered a sharp escalation, bordering on an explosion, while Europe managed to flatten the curve. As a result, the European economy has been on the mend since June, with all indicators pointing to a recovery. But a resurgence of new confirmed cases in August, most notably in Spain but also across all of Europe, is making companies, consumers, and travelers nervous. The Purchasing Managers Index, a key leading indicator of economic activity, dropped in August after a strong burst in July. The decline in the Purchasing Managers Index in European countries in response to the spike in cases underscores the fragility of economic recovery in the age of COVID-19.

But not all is doom and gloom. One significant positive development has been the marked improvement in financial conditions in emerging East Asia since late March, in line with a broader improvement of global financial conditions. This marks a welcome turnaround from early March when the region showed signs of financial stress. For instance, the region's major equity markets have rallied since April, and risk premia have declined although they remain above pre-COVID-19 levels. Furthermore, capital flows have remained relatively resilient, and emerging East Asia's currencies have strengthened against the US dollar since May. As noted earlier, there have been some positive developments on the vaccine front too. A safe, affordable, and effective COVID-19 vaccine would be a game changer that would drastically lift business and consumer confidence, and put the world economy back on track. In fact, seven potential vaccines are already in Phase 3 clinical trials, which involve administering the vaccine to thousands of people to test for safety and effectiveness. Phase 3 is the phase immediately preceding regulatory approval. While these developments are clearly promising, given the lengthy process of vaccine development and the intractable nature of COVID-19, it is unlikely that we will see a working vaccine available for widespread distribution by the end of 2020.

While major new waves of COVID-19 and the uncertainty surrounding the pandemic is the overriding downside risk facing the world and emerging East Asia, there are a number of other risks as well. For example, the pandemic has hit the poor and vulnerable disproportionately hard. In the absence of adequate relief, their smoldering discontent may morph into widespread social unrest, as it has in the US. A more immediate concern to emerging East Asia is the widening and deepening conflict between the PRC and the US, as evidenced by US sanctions against Chinese tech companies TikTok; WeChat; and, most significantly, Huawei. Other economies in the region depend heavily on trade with the two economic giants, so the conflict places them in a difficult position. On the other hand, any improvement in PRC-US links would be welcome news for the rest of emerging East Asia. While these additional factors matter for the region's economic prospects, they pale in comparison to the impact of COVID-19's trajectory.