Introduction: Bond Yields Edged Up in Emerging East Asia

Yields on 2-year and 10-year local currency (LCY) government bonds in emerging East Asia largely trended upward between 1 March and 31 May against a backdrop of global economic expansion and tightening United States (US) monetary policy (**Table A**).[2] However, while yields in advanced economies largely trended upward due to the positive economic growth, there was a small downward tick toward the end of May due to increased demand for safe-haven assets amid political uncertainty in the euro area (**Figure A1**).

Among major advanced economies, the US' growth trajectory remains robust. According to the Federal Reserve forecast released on 21 March, US gross domestic product (GDP) is expected to grow 2.7% and 2.4% in 2018 and 2019, respectively, compared with an earlier forecast made in December 2017 of 2.5% and 2.1%. The forecast for unemployment also improved, with a downward revision from 3.9% in 2018 and 3.9% in 2019 to 3.8% and 3.6%, respectively. The Federal Reserve indicated that all economic indicators remain positive. With a deceleration in consumption, the US GDP growth rate fell to 2.2% year-on-year (y-o-y) in the first quarter (Q1) of 2018 from 2.9% y-o-y in the fourth quarter (Q4) of 2017. The Federal Reserve expects the slowdown in growth to be transient, driven by seasonal factors as well as delays in household tax refunds. The US Consumer Confidence Index rose from 125.6 in April to 128.0 in May,

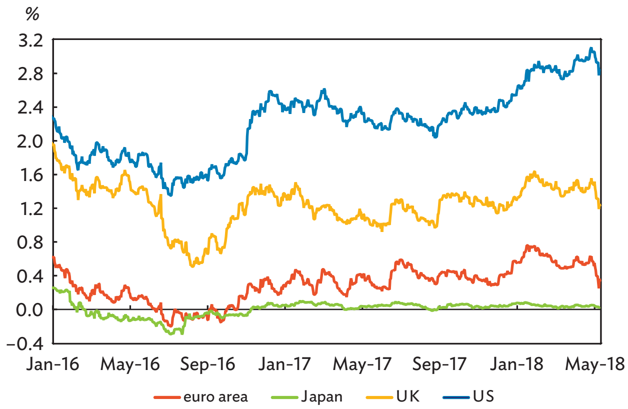
Table A: Changes in Global Financial Conditions

	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	22	5	–	1.0	–
United Kingdom	(16)	(24)	8	7.0	(3.5)
Japan	2	(0.3)	4	0.3	(2.4)
Germany	(10)	(30)	3	3.4	(4.7)
Emerging East Asia					
China, People's Rep. of	(24)	(32)	(0.05)	(5.4)	(0.8)
Hong Kong, China	49	14	–	(1.9)	(0.2)
Indonesia	110	38	34	(9.4)	(1.1)
Korea, Rep. of	(5)	(4)	(7)	(0.2)	0.8
Malaysia	29	18	28	(6.5)	(1.3)
Philippines	10	(70)	21	(11.4)	(1.1)
Singapore	27	22	–	(2.4)	(1.1)
Thailand	43	22	5	(5.6)	(1.7)
Viet Nam	6	57	25	(13.0)	(0.3)
Select European Markets					
Greece	(36)	13	33	(9.0)	(4.7)
Ireland	5	(5)	10	7.1	(4.7)
Italy	133	87	135	(3.0)	(4.7)
Portugal	14	5	44	1.7	(4.7)
Spain	16	6	33	(2.8)	(4.7)

( ) = negative, – = not available, bps = basis points, FX = foreign exchange.
Notes:
1. Data reflect changes between 1 March 2018 and 31 May 2018.
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.

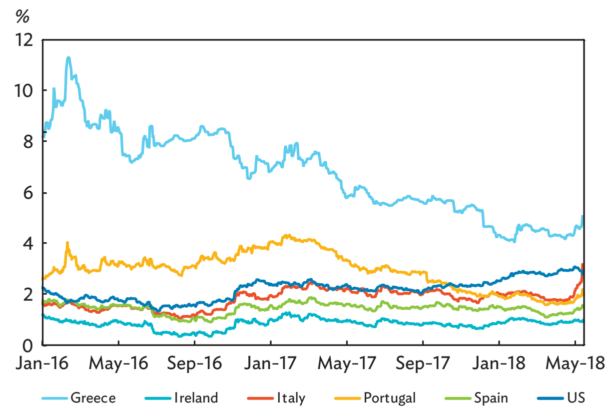
[2] Emerging East Asia comprises the People's Republic of China; Hong Kong, China; Indonesia; the Republic of Korea; Malaysia; the Philippines; Singapore; Thailand; and Viet Nam.

Figure A1: 10-Year Government Bond Yields in Major Advanced Economies (% per annum)



UK = United Kingdom, US = United States.
Note: Data as of 31 May 2018.
Source: Bloomberg LP.

Figure A2: 10-Year Government Bond Yields in Select European Markets and the United States (% per annum)



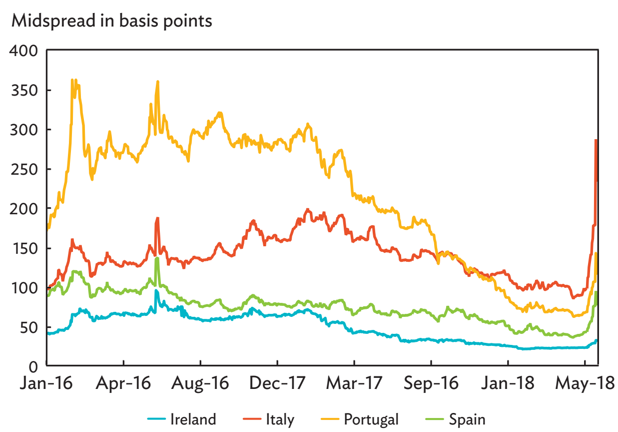
US = United States.
Note: Data as of 31 May 2018.
Source: Bloomberg LP.

which were among the highest levels since 2000. The job market also remains solid, with nonfarm payroll additions rising from a revised 159,000 in April to 223,000 in May, and the unemployment rate falling from 3.9% to 3.8% over the same period.

The economic growth of the euro area and Japan is expected to remain solid. According to a European Central Bank (ECB) estimate and projection released in March 2018, the euro area's GDP growth for 2017 and 2018 was upgraded to 2.5% and 2.4%, respectively, from 2.4% and 2.3%. Despite the positive euro area outlook, yields have been affected by political uncertainties (Table A, **Figure A2**). The current coalition between Italy's Five Star and the League is resulting in uncertainty over the direction of economic policy and has raised the possibility that Italy may seek to exit the euro area. The uncertainty has led to a rise in yields in select European markets, particularly Italy, and a decline in German yields due to demand for safe-haven assets.

This has also led to a rise in credit default swap (CDS) spreads in selected European markets (**Figure B**). Excluding the uncertainty, the euro area's economic situation was improving. Greece is expected to exit its bailout program this year, largely due to improvements in its economy and public finances. Portugal's economic recovery is also robust, according to the International Monetary Fund's Sixth Post-Program Monitoring released in February 2018.[3] The Government of Portugal expects to eliminate its budget deficit by 2020. Spain has received a series of credit rating upgrades in Q1 2018.

Figure B: Credit Default Swap Spreads in Select European Markets (senior 5-year)



Notes:
1. Based on USD-denominated sovereign bonds.
2. Data as of 31 May 2018.
Source: Bloomberg LP.

Like the US, GDP growth in the euro area declined between Q4 2017 and Q1 2018, slowing from 2.8%

[3] International Monetary Fund. 2018. *IMF Staff Country Reports*. https://www.imf.org/en/Publications/CR/Issues/2018/02/22/Portugal-Sixth-Post-Program-Monitoring-Discussions-Press-Release-Staff-Report-45650.

to 2.5%. The ECB indicated that the slower growth is mostly due to temporary factors and the moderation of exceptionally strong growth momentum in previous quarters. Similarly, Japan experienced a slowdown in Q1 2018 due to seasonal factors pertaining to weak private consumption. However, Japan's GDP growth is expected to rebound in subsequent quarters, supported by strong exports and higher production. According to Bank of Japan projections released in April, GDP growth has been revised upward from 1.4% to 1.6% and from 0.7% to 0.8% in fiscal years 2018 and 2019, respectively.

On the back of a strong labor market and an expanding economy, US monetary policy continues to normalize. Consistent with market expectations, the Federal Reserve raised its key policy rate by 25 bps at the 20 March Federal Open Market Committee meeting and left it unchanged at the 1 May meeting. More rate hikes are expected later this year and the Federal Reserve continues to shrink its balance sheet. Meanwhile, the euro area and Japan still do not have a clear schedule for monetary policy normalization. The ECB left policy rates unchanged at both its 8 March and 26 April monetary policy meetings, and announced that it plans to end its current asset purchase program of EUR30 billion per month in September 2018. At the same time, the ECB indicated that its asset purchase program may be extended if conditions warrant. The Bank of Japan maintained its monetary easing program at its monetary policy meeting on 27 April. On 1 June, however, the Bank of Japan unexpectedly reduced its monthly purchase of 5-year to 10-year bonds by JPY20 billion to JPY430 billion.

Amid a benign global economic outlook and US monetary tightening, most emerging East Asian markets witnessed an increase in bond yields between 1 March and 31 May. Indonesia posted the largest gains, with 2-year and 10-year yields rising 110 bps and 38 bps, respectively. The upward trend was partly driven by expectations that Bank Indonesia would raise policy rates to maintain the interest rate differential with the US. Foreign investors sold Indonesian bonds, which led to capital outflows in February and April and contributed to the depreciation of the Indonesian rupiah. At its monetary policy meeting on 16 May, Bank Indonesia raised its policy rate by 25 bps. In anticipation of the Federal Reserve meeting in June, Bank Indonesia called for an off-schedule monetary policy meeting on 30 May, where the central bank raised policy rates by another 25 bps.

In Singapore, yields rose in line with the rise in US Treasury yields. The Monetary Authority of Singapore tightened its monetary policy in April, on the back of improving economic growth and a pick-up in inflation, by slightly increasing the width of the Singapore dollar nominal effective exchange rate policy band. Yields in Hong Kong, China, which largely track US Treasury yields, also rose, particularly for 2-year bonds, which climbed 49 bps. While the US dollar strengthened during the review period, the Hong Kong dollar depreciated. When the Hong Kong dollar reaches the Hong Kong Monetary Authority's (HKMA) weak-side limit, it automatically triggers Hong Kong dollar purchases by the HKMA in order to strengthen the currency and reduce domestic liquidity.[4] In both Thailand and Malaysia, 2-year and 10-year bond yields rose, reflecting the impact of rising US interest rates. Bank Negara Malaysia also raised its policy rate by 25 bps in January. In Viet Nam, 2-year and 10-year yields rose, following the movement in US interest rates.

The major exception to the rising yield trend was the People's Republic of China (PRC), where the 2-year and 10-year yields declined 24 bps and 32 bps, respectively. The lower yields come after the PRC reduced banks' reserve requirement ratio on 17 April. While the freed-up funds must be used to repay borrowing from the central bank or to extend loans to the agricultural sector and small- and medium-sized enterprises, the overall liquidity situation in the market nevertheless improved. The fall in yields also reflected healthy economic fundamentals. The PRC's GDP grew at a robust pace of 6.8% y-o-y in Q1 2018, the same level as in Q4 2017. The PRC's GDP growth is expected to continue to moderate this year. Foreign investment inflows also contributed to the fall in bond yields as the PRC bond market continues to open up. In March, Bloomberg announced plans to include some CNY-denominated government and policy bank bonds in the Bloomberg Barclays Global Aggregate Index starting in April 2019.

Two other exceptions to the rising yield trend were the Philippines and the Republic of Korea. The Philippines'

[4] While the Hong Kong dollar is pegged to the US dollar, it is allowed to move within a narrow range, with the HKMA automatically stepping in once the Hong Kong dollar reaches a specified ceiling or floor.

2-year yield, which rose 10 bps during the review period, was impacted by both rising US yields and a 25-bps policy rate hike by the Bangko Sentral ng Pilipinas on 10 May. On the other hand, the 10-year yield declined due to a lack of liquidity affecting benchmark pricing. In the Republic of Korea, yields fell marginally on uncertainty over the timing and possibility of another rate hike by the Bank of Korea as the central bank maintained its policy rate but noted risks to the growth forecast, and lowered its inflation forecast for full-year 2018.

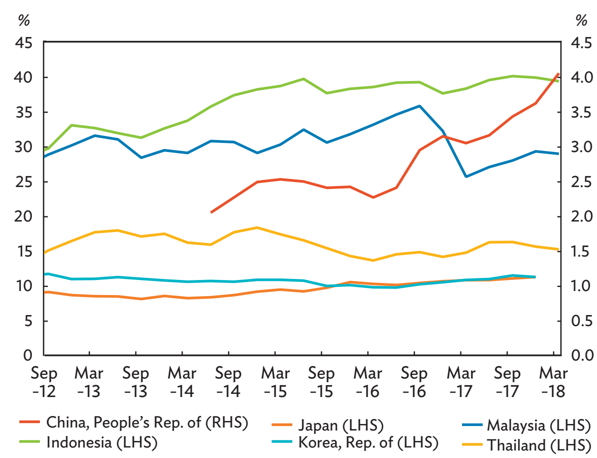
The defining feature of the global economic and financial landscape is the robust world economy, which continues to gather momentum. According to the International Monetary Fund's *World Economic Outlook, April 2018*, global output expanded 3.8% in 2017, the fastest pace since 2011, and is projected to expand 3.9% in both 2018 and 2019. Advanced economies grew at a pace of 2.3% in 2017 and are projected to grow 2.5% in 2018 and 2.2% in 2019. The corresponding figures for emerging markets and developing economies are 4.8%, 4.9%, and 5.1%. Global growth is supported by strong growth momentum, positive market sentiment, accommodative financial conditions, and US fiscal stimulus. According to the *World Economic Outlook, April 2018*, consumer price inflation in advanced economies will pick up from 1.7% in 2017 to 2.0% in 2018, before dipping to 1.9% in 2019. In emerging markets and developing economies, consumer price inflation will increase from 4.0% in 2017 to 4.6% in 2018, before slowing to 4.3% in 2019. The key drivers of rising inflation in 2018 will be strong demand pressures and higher global oil prices.

Developing Asia is also growing at a healthy pace and remains the world's fastest-growing region.[5] According to the Asian Development Bank's *Asian Development Outlook 2018* released in April, the region's economy expanded 6.1% in 2017 and is projected to expand 6.0% in 2018 and 5.9% in 2019. The economies of emerging East Asia, in particular, are performing well. The PRC grew 6.9% in 2017 and is projected to grow 6.6% in 2018 and 6.4% in 2019. The corresponding figures for the 10 members of the Association of Southeast Asian Nations are 5.2%, 5.2%, and 5.2%. The more mature, high-income economies of the Republic of Korea and Hong Kong, China are also doing well, with projected growth of around 3.0% in both 2018 and 2019. The region's rapid growth is fueled by the benign global environment and robust domestic demand. Inflation is rising in the region but remains below levels that would seriously threaten macroeconomic stability. The *Asian Development Outlook* projects developing Asia's consumer price inflation will rise from 2.4% in 2017 to 3.0% in 2018 and hold steady at 3.0% in 2019.

While both advanced economies and emerging economies are performing well, capital is flowing from emerging markets to advanced economies. Positive market sentiment about the US economy and the strengthening US dollar is attracting investment back to advanced economies. As rising US interest rates narrow interest rate differentials with emerging economies, global investors are pulling investment out of the region, leading to a decline in foreign holdings (**Figure C**), currency depreciations (**Figure D**), and subdued equity markets (**Figure E**).

Foreign holdings of LCY government bonds in emerging East Asia slightly fell in Q1 2018 in all emerging East Asian markets for which data are available, except the PRC. Foreign holdings as a share of total LCY government bonds remained high at the end of March in Indonesia and Malaysia at 39.3% and 28.9%,

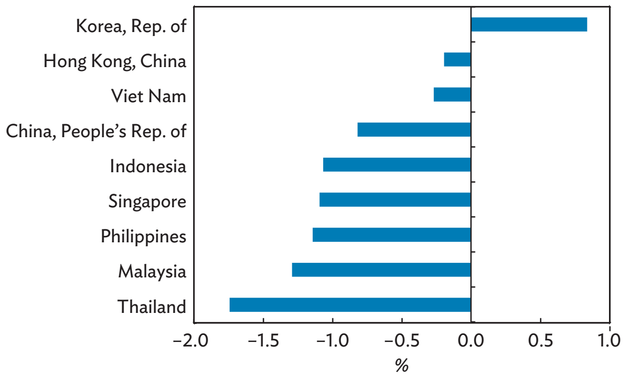
Figure C: Foreign Holdings of Local Currency Government Bonds in Select Asian Economies (% of total)



LHS = left-hand side, RHS = right-hand side.
Note: Data as of 31 March 2018 except for Japan and the Republic of Korea (31 December 2017).
Source: *AsianBondsOnline*.

[5] Developing Asia comprises the 45 regional developing member economies of the Asian Development Bank. https://www.adb.org/sites/default/files/publication/411666/ado2018.pdf.

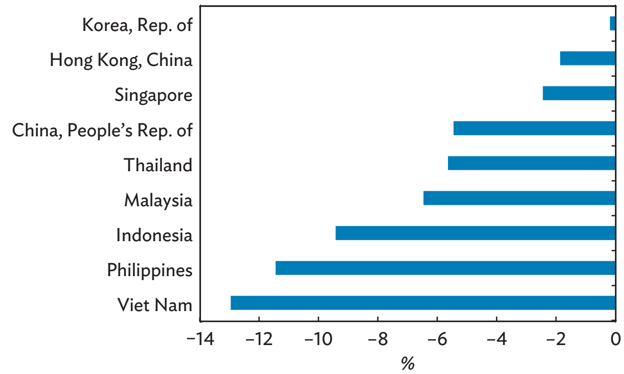
Figure D: Changes in the United States Dollar Value per Unit of Local Currency



Notes:
1. Changes between 1 March 2018 and 31 May 2018.
2. 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: Changes in Equity Indexes in Emerging East Asia



Note: Changes between 1 March 2018 and 31 May 2018.
Source: Bloomberg LP.

respectively. Yet, these ratios were down slightly in both markets due to net outflows of foreign investment amid the continued expansion of the LCY bond market. Foreign holdings in Thailand fell to 15.2% of the total LCY government bond market at the end of March for the same reason. In April, bond markets in Indonesia, Malaysia, and Thailand witnessed capital outflows triggered by the strengthening US dollar and rising US Treasury yields, which prompted a broader sell-off of emerging market assets. On the other hand, foreign holdings in the PRC continued to rise in Q1 2018, reaching 4.0% of the total market at the end of March from 3.6% at the end of December, as the PRC bond market opens up to foreign investors. Foreign holdings in Japan and the Republic of Korea were mostly unchanged in Q4 2017 based on the most recent data available in these markets.

Between 1 March and 31 May, all emerging east Asian currencies except for the Korean won depreciated against the US dollar. The Indonesian rupiah depreciated significantly, despite massive intervention by Bank Indonesia to defend the local currency. The Thai baht depreciated against the US dollar due to capital outflows. The Singapore dollar fell despite the Monetary Authority of Singapore's decision at its April policy meeting to allow the Singapore dollar to gradually appreciate. The Hong Kong dollar declined, hitting the weak-side of its currency band in April. The HKMA intervened to defend the currency but with limited effect. The Philippine peso showed a sharp depreciation in May following the 10 May monetary policy meeting in which the central bank hinted that there might be no further interest rate hikes in 2018. The statement contradicted market expectations of further rate hikes in 2018. The Korean won slightly appreciated versus the US dollar due to easing geopolitical tensions. The Chinese renminbi and Vietnamese dong were broadly stable during the review period. The strengthening US dollar and continuing rate hikes by the Federal Reserve have triggered large depreciations among other emerging market currencies, in particular the Argentine peso and Turkish lira. There are some concerns that pressures on currencies may challenge financial stability in the region. However, **Box 1** finds that the region's solid fundamentals limit the risk of sharp depreciations.

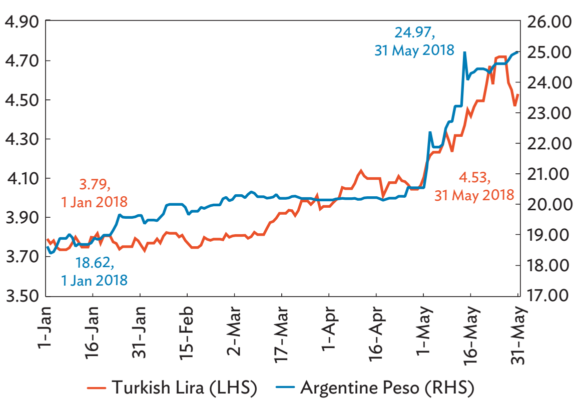
Most emerging Asian equity markets retreated between 1 March and 31 May (Figure E), with Viet Nam's equity market falling the most. Meanwhile, the Republic of Korea fell the least.

In line with a general rise in bond yields and the depreciation of most currencies in emerging East Asia, financial risk indicators such as CDS spreads rose during the review period (**Figure F**). Indonesia witnessed a jump of 34 bps in its CDS spread due to market expectations of continued depreciation and capital outflows. The rise in Malaysia's CDS spread came amid political uncertainty. There is also uncertainty with regard to the new administration's economic policies, such as the recent removal of the Goods and Services Tax. Reflecting the decline of geopolitical tensions, the

Box 1: Emerging Market Financial Turbulence and Its Implications for Emerging Asia

Two major emerging markets—Argentina and Turkey—are experiencing a bout of financial instability against the backdrop of rising United States (US) interest rates. The instability is evident in the sharp depreciation of the Argentine peso and the Turkish lira, which have fallen by 25% and 16%, respectively, since the beginning of the year (**Figure B1.1**). Weak fundamentals, as evidenced by high inflation and sizable current account deficits (**Figure B1.2**), have contributed to the erosion of confidence in the two economies. There are some concerns that tightening global conditions may adversely affect the financial stability of all emerging markets. In this box, we briefly assess the likelihood that Asian economies may also suffer financial stress in the face of higher US interest rates and a strengthening US dollar. We conclude that strong fundamentals limit this likelihood.

Figure B1.1: Argentine Peso–US Dollar and Turkish Lira–US Dollar, 1 January–31 May 2018

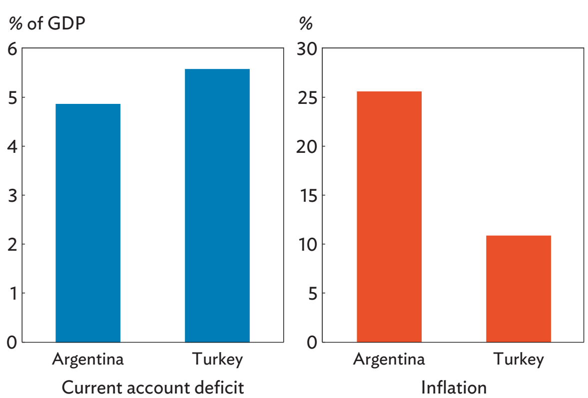


LHS = left-hand side, RHS = right-hand side, US = United States.
Note: Data are from 1 January 2018 to 31 May 2018.
Source: Bloomberg LP.

Argentina and Turkey: Key Recent Developments

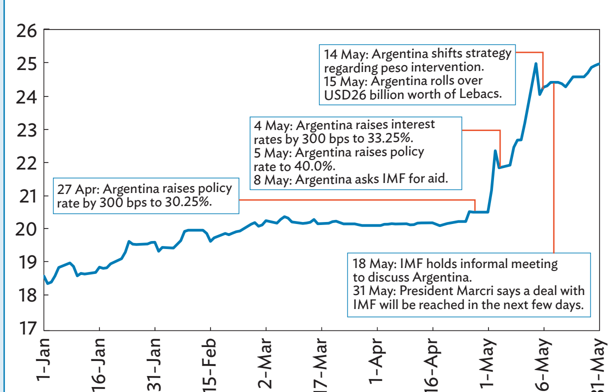
The Argentine peso has depreciated more than any other currency thus far in 2018. **Figure B1.3** shows the recent trend of the Argentine peso–dollar exchange rate, as well as key events related to the depreciation. Argentina's central bank actively defended the peso by using its foreign exchange reserves and raising its key policy rate three times in a week (27 April, 4 May, and 5 May) to reach 40.0%. These measures were insufficient since the Argentine peso only briefly appreciated after each intervention before falling again. The government finally turned to the International Monetary Fund on 8 May. On 14 May, the Argentine peso hit its lowest level of the year, forcing the central bank to change strategy and allow its currency to depreciate further while setting a ceiling of 25 to 1 versus the US dollar. On 16 May, however, the Argentine peso got a significant boost following the successful rollover of USD26 billion worth of short-term peso-denominated securities known as Lebacs. However, since then the Argentine peso has continued to depreciate and Argentina is currently in negotiations with the International Monetary Fund for a credit line of at least USD40 billion. On 31 May, President Marci said that he expected a deal to be made within the next few days.

Figure B1.2: Current Account Deficit and Inflation in Argentina and Turkey, 2017



GDP = gross domestic product.
Source: CEIC database.

Figure B1.3: Argentine Peso–US Dollar Key Developments, 1 January–31 May 2018



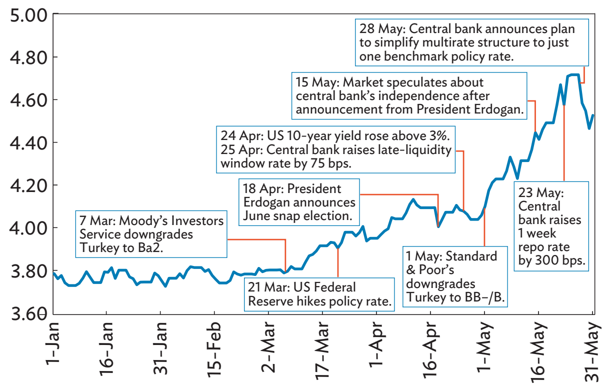
bps = basis points, IMF = International Monetary Fund, US = United States.
Note: Data are from 1 January 2018 to 31 May 2018.
Source: Bloomberg LP.

continued on next page

Box 1: Emerging Market Financial Turbulence and Its Implications for Emerging Asia

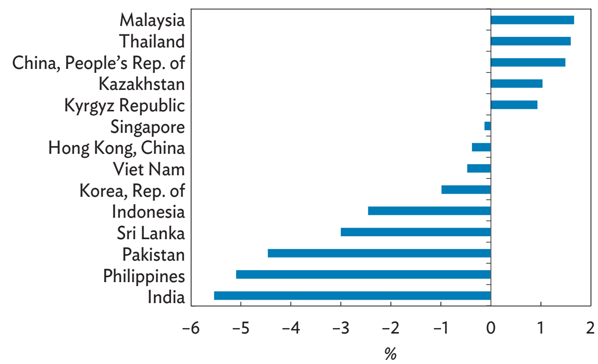
continued

Figure B1.4: Turkish Lira–US Dollar Key Developments, 1 January–31 May 2018



US = United States.
Note: Data are from 1 January 2018 to 31 May 2018.
Source: Bloomberg LP.

Figure B1.5: Change in Local Currency vs. US Dollar Exchange Rate, 1 January–31 May 2018



US = United States.
Note: Changes between 1 January 2018 and 31 May 2018.
Source: Bloomberg LP.

The Turkish lira has been the second-worst performing currency thus far in 2018 (**Figure B1.4**). The sharp depreciation of the lira combined with rising energy prices has pushed inflation into double-digit territory, which, in turn, further erodes investor confidence. On 25 April, the central bank raised one of its policy rates, the late-liquidity window rate, from 12.75% to 13.50%, to arrest inflation and support the currency. However, the lira continued to weaken amid uncertainty over the anti-inflationary commitment of Turkey's monetary policy. On 23 May, the central bank raised its 1-week repo rate, considered its key policy rate, by 300 basis points (bps) to 16.50%. The following week the central bank announced a plan to simplify its multirate structure to just one policy rate (1-week repo rate) effective 1 June, in order to add more credibility to its commitment to address inflation and reduce currency volatility. In a sign of eroding confidence, Standard & Poor's cut its sovereign debt rating on 1 May, as Moody's Investors Service had earlier done on 7 March.

Most emerging Asian currencies have depreciated against the US dollar thus far in 2018 (**Figure B1.5**).[a] The depreciation of regional currencies has been driven primarily by the general strengthening of the dollar due to the robust US economy and higher US interest rates. The Indian rupee, Philippine peso, and Indonesian rupiah have been among the worst-performing regional currencies year-to-date. In the three markets, which all have current account deficits, market-specific factors have contributed to the depreciation. The weakening of the Indonesian rupiah can be attributed to capital outflows as investors pulled out in the face of narrowing interest rate differentials with US interest rates. The Philippine peso depreciated sharply following the 10 May monetary policy meeting in which the central bank hinted that there might be no further interest rate hikes, contrary to market expectations. Finally, the Indian rupee's weakness can be partly attributed to the rise in energy prices since India is a net energy importer, adding to concerns of higher inflation and its impact on economic growth. Central banks in the region have also intervened to defend their local currencies, particularly in India, Indonesia, and the Philippines (**Figure B1.6**). Bank Indonesia in its monetary policy meeting on 17 May and a special meeting on 30 May, raised its policy rate by a total of 50 bps to arrest the sharp depreciation of the Indonesian rupiah. The Reserve Bank of India on 6 June raised its benchmark rate by 25 bps.

Both Hong Kong, China and Singapore have experienced a small depreciation in 2018, but neither of these reflects concerns about fundamentals. In the case of Hong Kong, China, the depreciation was largely due to US interest rate hikes, which Hong Kong, China did not immediately match due to ample liquidity in the market. As the Hong Kong dollar approached the weak-end of its currency band, the Hong Kong Monetary Authority

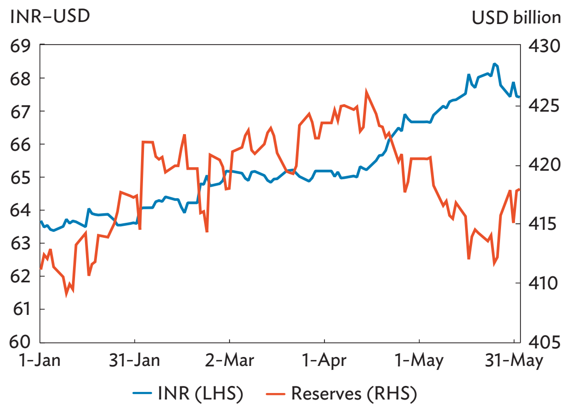
[a] Emerging Asia comprises the People's Republic of China; Hong Kong, China; Indonesia; India; Kazakhstan; the Republic of Korea; the Kyrgyz Republic; Malaysia; Pakistan; the Philippines; Singapore; Sri Lanka; Thailand; and Viet Nam.

continued on next page

Box 1: Emerging Market Financial Turbulence and Its Implications for Emerging Asia
continued

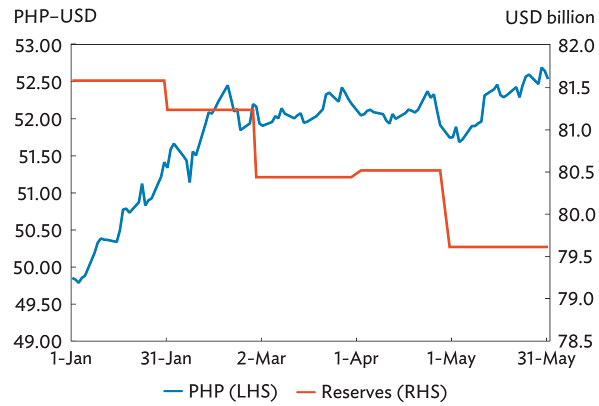
Figure B1.6: Currency Depreciation and Foreign Exchange Reserves, 1 January–16 May 2018

A. Indian Rupee–US Dollar and India's Foreign Exchange Reserves, 1 January–31 May 2018



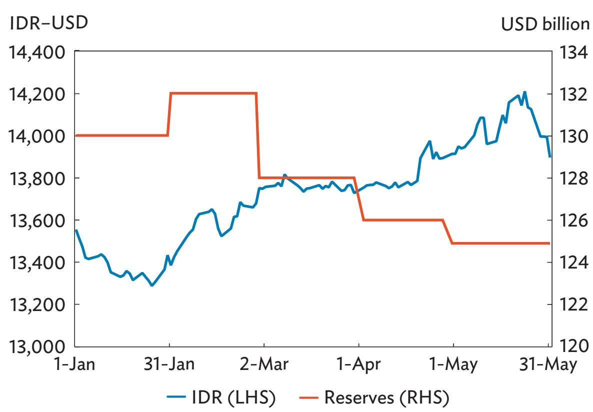
INR = Indian rupee, LHS = left-hand side, RHS = right-hand side, USD = United States dollar.
Source: Bloomberg LP.

B. Philippine Peso–US Dollar and the Philippines' Foreign Exchange Reserves, 1 January–31 May 2018



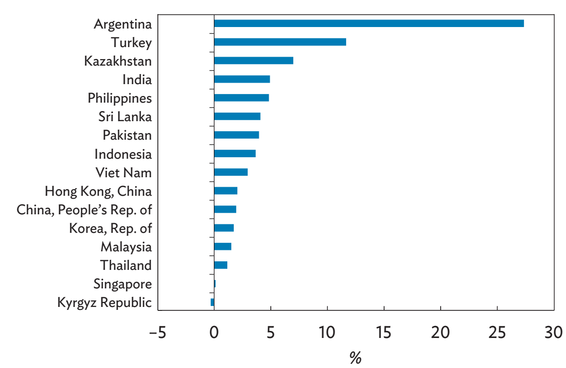
PHP = Philippine peso, LHS = left-hand side, RHS = right-hand side, USD = United States dollar.
Source: Bloomberg LP.

C. Indonesian Rupiah–US Dollar and Indonesia's Foreign Exchange Reserves, 1 January–31 May 2018



IDR = Indonesian rupiah, LHS = left-hand side, RHS = right-hand side, USD = United States dollar.
Source: Bloomberg LP.

Figure B1.7: Inflation in Select Economies, April 2018



Note: Inflation rate data as of April 2018 except for the Kyrgyz Republic (December 2017).
Source: Bloomberg LP.

intervened, leading to a rise in Hong Kong dollar interest rates; this intervention is automatic since the Hong Kong dollar is pegged to the US dollar. In the case of Singapore, the currency is largely managed and reflects monetary policy. On 13 April, the Monetary Authority of Singapore announced that it would allow a slight appreciation of the currency.

One key reason that higher US interest rates and a stronger US dollar have not destabilized emerging Asia is the region's relatively strong fundamentals. In particular, inflation, which is perhaps the most widely used indicator of macroeconomic stability, remains well below levels seen in Argentina and Turkey (**Figure B1.7**). The other vulnerability indicators show a mixed picture, with some Asian economies more vulnerable than others. However, some Asian economies are somewhat vulnerable according to some, but not all, indicators, as seen in **Table B1**. In contrast, Argentina and Turkey show vulnerability across the board.

continued on next page

Box 1: Emerging Market Financial Turbulence and Its Implications for Emerging Asia *continued*

Table B1: Vulnerability Indicators for Select Economies

	Current Account Balance/GDP	External Debt/GDP	Short-Term External Debt/Reserves	Import Cover (months)
Turkey	(5.56)	53.19	21.42	5.57
Argentina	(4.85)	28.17	67.08	5.15
Kyrgyz Republic	(4.76)	91.32	n.a.	4.85
Pakistan	(4.09)	27.30	19.49	8.87
Sri Lanka	(2.99)	56.96	109.42	3.80
Kazakhstan	(2.95)	105.88	40.87	7.24
India	(2.00)	19.27	25.07	10.48
Indonesia	(1.70)	34.69	38.62	8.95
Philippines	(0.80)	23.32	19.49	8.87
China, People's Rep. of	1.40	13.95	34.79	19.74
Viet Nam	2.90	42.39	38.35	3.09
Malaysia	2.98	69.15	92.03	6.34
Hong Kong, China	4.20	458.21	242.76	9.38
Korea, Rep. of	5.09	27.16	30.15	9.51
Thailand	10.83	32.73	31.85	10.85
Singapore	18.83	417.03	392.96	10.24

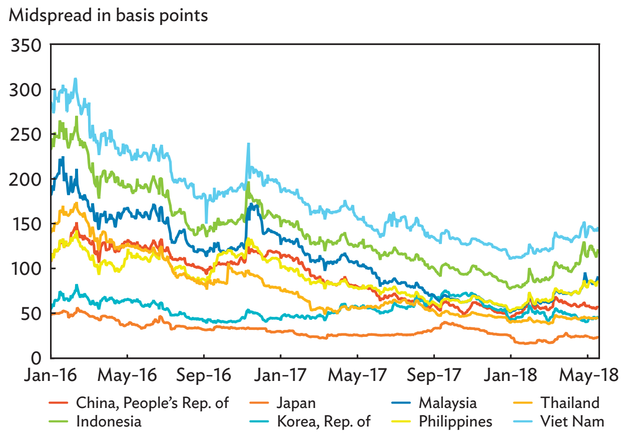
( ) = negative, n.a. = data not available.
Notes: Current Account Balance/GDP and External Debt/GDP as of 2017 except for the People's Republic of China, Sri Lanka, and Viet Nam (2016). Short-Term External Debt/Reserves as of 2017 except for Viet Nam (2016). Import Cover as of March 2018 for the People's Republic of China, India, Indonesia, Malaysia, Singapore, and Thailand; as of February 2018 for Hong Kong, China; Kazakhstan; the Republic of Korea; the Kyrgyz Republic; Pakistan; the Philippines; and Viet Nam; as of January 2018 for Sri Lanka; and as of 2016 for Argentina and Turkey.
Sources: For Turkey and Argentina, *AsianBondsOnline* calculations based on data from CEIC and Bloomberg LP; for all other economies, data taken from Asian Development Bank. 2018. *Asian Development Outlook 2018*. Manila.

To sum up, the current financial instability of two major emerging markets—Argentina and (to a lesser extent) Turkey—is giving rise to concerns that tightening global liquidity conditions could also impact emerging economies in Asia. By and large, it seems that the risk is relatively limited since emerging Asian economies have much stronger fundamentals than the two affected emerging markets highlighted in this box. In contrast to these two markets, which seem vulnerable according to all indicators, Asian economies that seem somewhat vulnerable in some areas are less vulnerable in other areas. Nevertheless, the turbulence engulfing the two economies should serve as a stark warning to Asian economies to closely monitor external developments and maintain strong fundamentals. A sudden global shock, such as a faster- and/or larger-than-expected increase in US interest rates, will reward emerging markets that are well prepared and punish those that are not. That, more than anything else, is the lesson from Argentina and Turkey.

Republic of Korea's CDS spread fell. Meanwhile, EMBI Global Spreads and JP Morgan Emerging Markets Bond Index Sovereign Stripped Spreads ticked upward during the review period. US yields peaked, causing a sell-off of emerging market assets (**Figure G**, **Figure H**). The Volatility Index declined as US equity markets remained stable after a spike in early February. However, an uptick was observed on 29 May due to political turmoil in Italy, but the index has since recovered.

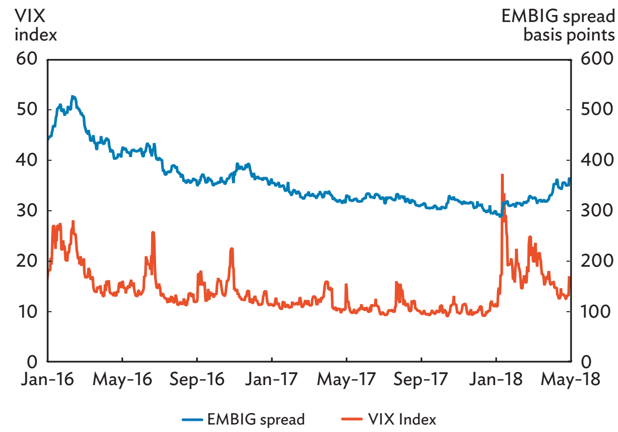
With emerging Asian's economic growth on solid footing, LCY bond markets continue to support investment across the region. In this context, developing the green bond market would greatly benefit environmentally friendly investments and sustainable growth in the region. The PRC has become a global leader in the fast-expanding green bond market, while the Association of Southeast Asian Nations has released a new green bond standard to give impetus to the further development

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



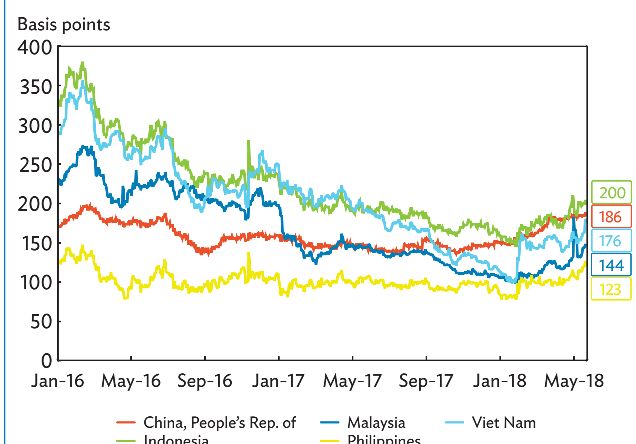
Notes:
1. Based on USD-denominated sovereign bonds.
2. Data as of 31 May 2018.
Source: Bloomberg LP.

Figure G: United States Equity Volatility and Emerging Market Sovereign Bond Spread



EMBIG = Emerging Markets Bond Index Global, VIX = Chicago Board Options Exchange Volatility Index.
Note: Data as of 31 May 2018.
Source: Bloomberg LP.

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



Notes:
1. Based on USD-denominated sovereign bonds.
2. Data as of 31 May 2018.
Source: Bloomberg LP.

of the market in a region where the market remains in a nascent stage. **Box 2** briefly reviews some key issues related to the green bond market's development.

Emerging East Asia is currently enjoying robust economic growth. Although the broader economic and financial landscape is benign, there are, as always, risks that loom on the horizon. Above all, ongoing US monetary policy normalization poses a potential risk to the region's financial stability. In recent decades, tightening by the Federal Reserve following a period of monetary loosening has often resulted in financial stress. Recent examples of such stress associated with normalization include the 1997/98 Asian financial crisis, bursting of the dotcom bubble, and global financial crisis. Relatively high levels of corporate and household debt in some Asian markets could exacerbate the risk (**Figure I**). More broadly, the gradual and anticipated nature of US monetary policy normalization is likely to limit the adverse impacts of US interest rate hikes. However, if the normalization process accelerates or rate hikes are larger than expected, the risk will become more serious.

Another risk to emerging East Asia's financial stability is emerging market currency turmoil. This risk stems partly from the general strengthening of the US dollar, which in turn stems from robust growth momentum and rising interest rates in the US, as reflected in the tangible rise in US Treasury yields. In recent months, the dollar has appreciated versus a broad basket of major currencies as measured by the increase in the US dollar currency index (**Figure J**). In some emerging markets with weak fundamentals, most notably Argentina and Turkey, the strong dollar has contributed to a sharp deterioration of market sentiment. Both the Argentine peso and Turkish lira have fallen sharply in recent weeks. While

Box 2: A Primer on Green Bonds

Primer on Green Bonds

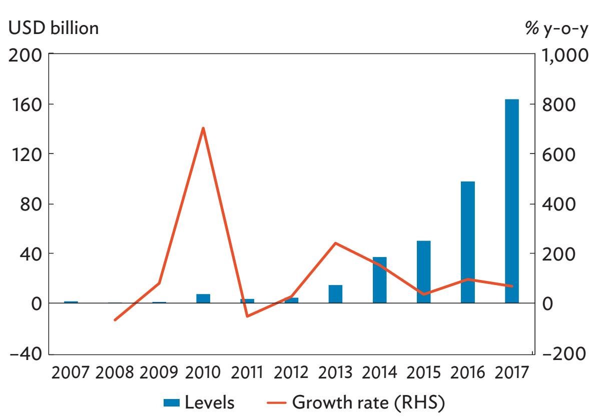
Green bonds are a type of debt instrument that provide financing for investment projects with positive environmental or climate change mitigation benefits. The emergence of this asset class is being driven by the determination of governments to tackle the harmful effects of climate change and limit global warming this century to within 2 degrees Centigrade above preindustrial levels. Green bonds serve as a vehicle for financing investments in green and climate-smart investment projects that contribute to the achievement of a low-carbon future under the Paris Agreement on climate change and the 2030 Agenda for Sustainable Development of the United Nations.

The green bond market has experienced growth and widespread diffusion in the past decade as investor appetite for such debt instruments has increased (**Figure B2.1**). According to Bloomberg criteria and data, green bond issuance rose from a meager USD1.5 billion in 2007 to USD163.1 billion in 2017. The green bond market's impressive growth momentum is expected to last. Average annual issuance has been around USD72 billion over the last 5 years, and around USD130 billion over the last 2 years. However, compared with traditional or conventional bonds, the green bond market is still tiny. The share of green bonds in the overall debt market was estimated at less than 2% in 2017. At the same time, awareness of the potential benefits of green bonds is rising among both investors and issuers.

Green bond issuance commenced in 2007 with pioneering issues by the European Investment Bank and the World Bank. According to the Asian Development Bank (2018), issuers of green bonds encompass the same categories as conventional bonds: sovereigns; supranationals, subsovereigns, and agencies; and corporates. Sovereign bonds are basically government issues. Supranationals, subsovereigns, and agencies include development banks, provincial and municipal governments, infrastructure developers, social security funds, utilities, and infrastructure operators. Corporate issuers comprise financial and nonfinancial companies. As seen in **Figure B2.2**, the share of issuances from supranationals has remained roughly the same over the last 5 years, but new corporate debt issuances jumped from almost nonexistent in 2012 to about one-third of all green bond issuances in 2017, reflecting significant average annual growth.

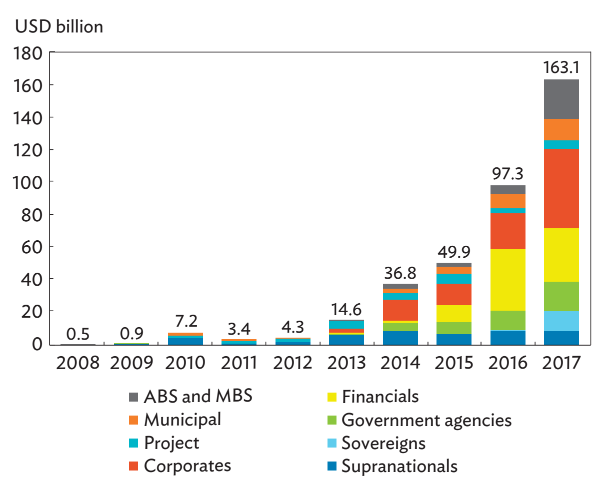
In the absence of universally accepted standards, green bonds usually adhere to the Green Bond Principles (GBP) of the International Capital Market Association, the Climate Bonds Standard of the Climate Bonds Initiative, or some other set of industry norms or voluntary guidelines. These green bond guidelines generally cover four areas: (i) use of proceeds, (ii) project evaluation and selection, (iii) management of proceeds, and (iv) reporting requirements. To provide additional assurances, a third-party examiner can review whether a green bond conforms with the accepted standards. **Table B2** provides a comparison of the guidelines used by the

Figure B2.1: Green Bonds Issuance—Annual Amounts and Growth Rates



LHS = left-hand side, RHS = right-hand side, USD = United States dollar, y-o-y = year-on-year.
Source: Bloomberg LP.

Figure B2.2: Green Bond Issuances by Issuer Type



ABS =asset-backed securities, MBS = mortgage-backed securities, USD = United States dollar.
Source: Bloomberg LP.

continued on next page

Box 2: A Primer on Green Bonds *continued*

Table B2: Framework Overview of Different Green Bond Identification Schemes

	ICMA Green Bond Principles	CBI Climate Bonds Standard	ASEAN Green Bond Standards	CICERO	Sustainalytics
Use of proceeds	Full amount should be described and present clear environmentally sustainable benefits (i.e., green projects).	Full alignment with the latest version of the GBP; a proportion of the proceeds of the bond to be used for financing and refinancing; funds may be reallocated at any time during the term of the bond.	Aligned with the Climate Bonds Standard; full disclosure of eligible projects with clear environmental benefits; fossil fuel power generation projects excluded.	Uses the GBP as loose guidance with deeper analysis to reveal potential climate and environmental risks (macro impacts of investments), with more dynamic approach and flexible definitions of greenness.	Uses the GBP and the SBG.
Project evaluation and selection	Evaluation process aligned with the 10 broad green categories, eligibility criteria, and the environment.	Follows a two-step process to determine eligibility of projects and assets that conform with the Climate Bonds Standard (taxonomy and sector-specific technical criteria).	Evaluation and selection of projects based on eligibility criteria of environmental sustainability.	Follows "shades of green" methodology of classification that is aligned with a low-carbon, climate-resilient future.	Evaluation process should be aligned the GBP and SBG, together with issuers' internal selection of eligible projects.
Management of proceeds	Net proceeds should be specifically tracked and reported using a formal internal process. Use of an external auditor or third party to verify process is encouraged.	The noncontamination of proceeds should be documented and tracked in an appropriate manner.	Net proceeds must be disclosed and tracked in an appropriate manner by a formal internal process with use of an auditor or third party.	Proceeds should be tracked and reported using a formal internal process.	Proceeds should be tracked and reported using an internal management system.
Reporting requirements	Issuers should disclose the use of proceeds and the annual list of projects, with qualitative and quantitative performance indicators, where possible.	Issuers should provide to bond holders and the Climate Bonds Standard Secretariat at least annually a report containing the list of projects and assets for which proceeds of the bond have been allocated (or reallocated).	Issuers must report at least annually and are encouraged to make more frequent reporting on the full allocation of the use of proceeds, with quantitative and qualitative measures.	Issuers are to prepare annual climate bond reporting covering the use of proceeds and impact reporting.	Issuers are to report annually the allocation, estimated share of financing or refinancing, and amount of unallocated proceeds.
External review	An external reviewer is encouraged.	An external reviewer is required for pre- and post-issuance assurance.	An external reviewer is recommended.	n.a.	n.a.

ASEAN = Association of Southeast Asian Nations, CBI = Climate Bonds Initiative, CICERO = Centre for International Climate and Environmental Research Oslo, GBP = Green Bond Principles, ICMA = International Capital Market Association, n.a. = not applicable, SBG = Sustainability Bond Guidelines.
Sources: Asian Development Bank (2018), ASEAN Capital Markets Forum (2017), CBI, CICERO, International Capital Market Association (2017), Sustainalytics.

International Capital Market Association, the Climate Bonds Initiative, and selected major reviewers.

Green bonds are very similar to conventional bonds in terms of deal structure and maturity, but they differ in having additional disclosure requirements on the use of proceeds and in terms of the specific impacts achieved for a given period of time. The reporting requirement usually extends into regular reporting to track the progress of the projects throughout the life of the bond. Investors are increasingly keen to include actual impacts as part of the monitoring requirement for green bonds.

continued on next page

Box 2: A Primer on Green Bonds *continued*

There are about six common types of green bonds, which are categorized by their purpose. First, general obligation bonds are the most common type of long-term debt security, fully backed by the issuer and used for general-purpose green activity. Most green bonds fall under this type. Second, green *sukuk* (Islamic bonds) adhere to Islamic law. Third, revenue bonds are mostly utilized by sovereigns and subsovereigns, which guarantee repayment from the income of specific revenue-generating green projects. Fourth, project bonds finance all or part of a green infrastructure project. Asset-backed securities are the fifth type and are collateralized by a pooled portfolio of similar green assets within a special purpose vehicle. The sixth type of green bonds are covered bonds, which are debt securities issued by financial institutions and secured by a pool of assets and a general claim on the assets of the issuer.

Green bond proceeds are mostly used for renewable energy and energy efficiency projects, which account for roughly 62% of green bonds investments. More recently, green bonds have expanded to other infrastructure areas such as healthcare, sanitation, and transportation (**Figure B2.3**). By market, the United States, the People's Republic of China, and France have seen the most green bond issuance over the last 3 years. **Figure B2.4** also shows that emerging markets are increasingly participating in the green bond market.

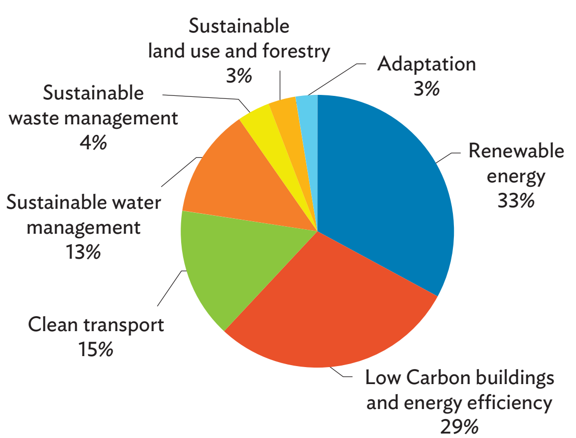
There is growing interest in green bond issuance from various groups despite the higher transaction costs for issuance and ongoing reporting requirements. Estimates from the Asian Development Bank (2018) show that administrative costs can range from USD29,000 to USD117,000 for pre-issuance through ongoing reporting, assuming that the net proceeds of the green bond are fully deployed after 1 year.

A fundamental motive is attaining an improved reputation as the issuing entity can showcase its green credentials and socially responsible behavior when it publicly commits to environmentally beneficial projects and assets. For example, Apple offered the largest green bond in United States' corporate history (USD1.5 billion) in June 2017 as part of its efforts to achieve 100% renewable energy in its worldwide energy sources. Also in 2017, the People's Republic of China issued USD25 billion worth of green bonds for various environmental projects as part of its commitment to reduce carbon emissions.

Another important motive for issuers is to broaden and diversify their investor base by attracting more responsible investors that consider not only financial returns but also the environmental, social, and governance factors of investment. Furthermore, responsible investors tend to hold a bond until maturity, which helps stabilize secondary markets.

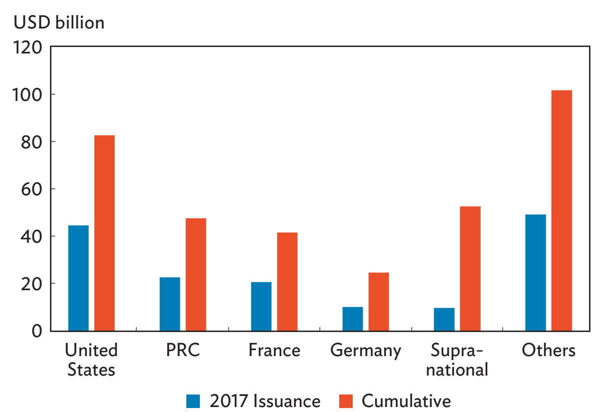
Green bond investors comprise institutional and retail investors, asset owners and asset managers, foreign and domestic investors, and conventional and responsible investors. Most of these investors have an underlying desire

Figure B2.3: Share in the Use of Green Bond Proceeds by Sector, 2017



Source: Climate Bonds Initiative (2018).

Figure B2.4: Top Green Bond Issuers, 2017



PRC = People's Republic of China, USD = United States dollar.
Source: Climate Bonds Initiative (2018).

continued on next page

Box 2: A Primer on Green Bonds *continued*

to align their portfolios with sustainable and responsible investing. According to the CBI, there is strong demand for green bonds, which are often oversubscribed by a wide range of investors. Examples include ING Bank's USD1.3 billion offer that was 7 times oversubscribed; the Korea Development Bank's first green bond issuance of USD300 million that was 2.2 times oversubscribed; and the world's first green *sukuk*, a MYR250 million issuance by Affin Hwang IN that was from 2.5 to 4.0 times oversubscribed. This suggests that there are attractive opportunities for potential issuers to supply more green bonds to the market.

Despite the apparent high demand for green bonds, it is important to know whether green bonds can trade at a lower yield compared with conventional bonds sharing the same characteristics (e.g., issuer, financial, and provisions in case of default). What would be the benefits of green bonds trading at a lower yield? A first good look at this question is discussed in the theme chapter, The Role of Greenness Indicators in Green Bond Market Development: An Empirical Analysis.

The market for green bonds is forecast to post healthy growth in 2018. Forecasts from Moody's Investors Service and the CBI both set the market at USD250 billion, while Standard & Poor's is more conservative at USD200 billion. The green bond market is expected to continue to grow and mature, not only in terms of issuance amounts but also in terms of market players, sector coverage, and active participation from a greater number of markets. Developing a reliable taxonomy on standards and label classifications for green bonds, such as the European Commission's initiative on labels for green finance products and the Association of Southeast Asian Nations' Green Bond Standards, will encourage more investors to use such bonds to finance green investments.

References

Asian Development Bank. 2018. *Promoting Green Local Currency Bonds for Infrastructure Development in ASEAN+3*. Manila.

Association of Southeast Asian Nations (ASEAN) Capital Markets Forum. 2017. *ASEAN Green Bond Standards*. http://www.theacmf.org/ACMF/upload/ASEAN_Green_Bond_Standards.pdf.

Center for International Climate Research Oslo. 2018. CICERO Second Opinion Framework. http://www.cicero.oslo.no/en (accessed 18 April 2018).

Climate Bonds Initiative. Explaining Green Bonds. https://www.climatebonds.net/market/explaining-green-bonds (accessed 18 April 2018).

European Commission. 2018. *Action Plan: Financing Sustainable Growth*. https://ec.europa.eu/transparency/regdoc/rep/1/2018/EN/COM-2018-97-F1-EN-MAIN-PART-1.PDF.

International Capital Market Association. 2017. *Green Bond Principles 2017*. https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/GreenBondsBrochure-JUNE2017.pdf.

Sustainalytics. 2018. *Sustainalytics Green and Social Bond Services*. PowerPoint provided by C. Secretaneau, Director for Client Relations.

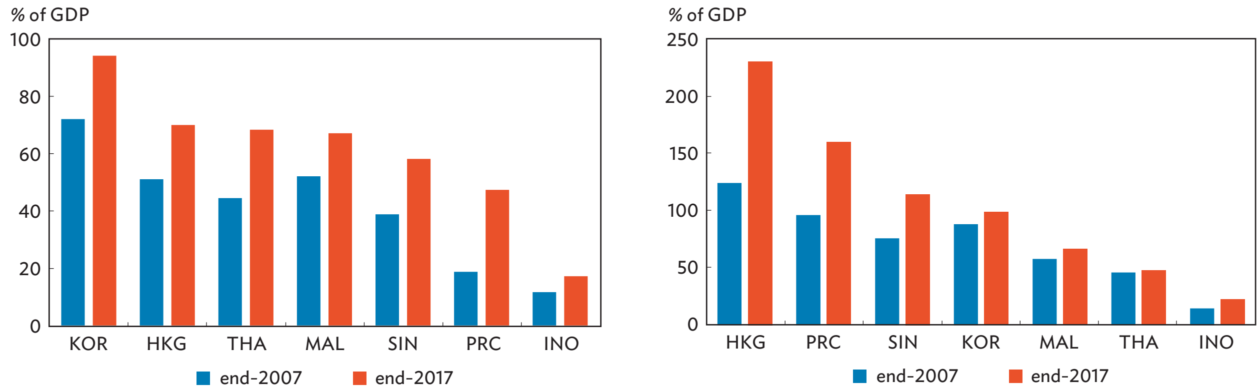
The Economist. 2017. *Green Finance: Making the Transition to a Climate-Resilient Future*. 13 November. https://perspectives.eiu.com/sites/default/files/S%26PGREENFINANCEINFOGRAPHICFINAL13Nov17.pdf.

a generalized, risk-aversion sell-off of emerging market assets would not spare emerging East Asia, the region is relatively well positioned to withstand the adverse effects of the strong dollar on its financial stability.

Finally, global trade tensions represent an indirect and less immediate risk to the region's financial stability, but are nevertheless a risk. If trade tensions escalate and result in protectionist measures that significantly affect trade, global growth momentum would be adversely affected. Close supply chain linkages among emerging East Asian economies would amplify the damage from trade disruptions. But perhaps the bigger damage from escalating trade tensions might be the potential erosion of business and consumer confidence, which was evident in the fall of regional and global equity markets on 23 March, in the aftermath of a major US announcement on import tariffs (**Figure K**). A further escalation of trade tensions, especially between the PRC and the US, could adversely affect global economic outlook and financial stability.

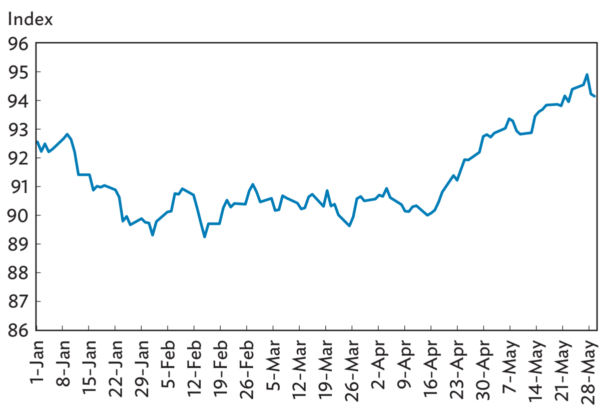
Figure I: Selected Developing Asian Economies, Household Debt, and Nonfinancial Corporate Debt, 2007 versus 2017

A. Household Debt | **B. Nonfinancial Corporate Debt**



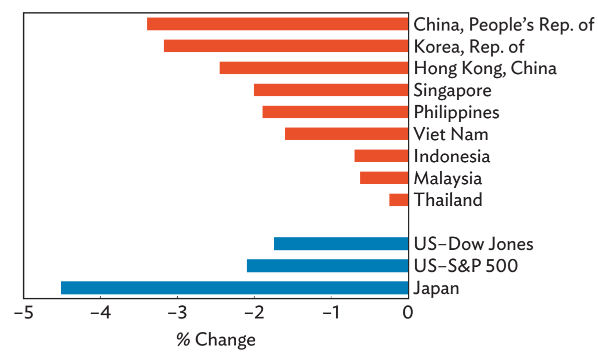
GDP = gross domestic product; HKG = Hong, Kong China; INO = Indonesia; KOR = Republic of Korea; MAL = Malaysia; PRC = People's Republic of China; SIN = Singapore; THA = Thailand.
Source: International Institute of Finance. Global Debt Monitor Database, April 2018.

Figure J: United States Dollar Currency Index, 1 January–31 May 2018



Notes: An increase in the index denotes the strengthening or appreciation of the US dollar. The US Dollar Currency Index is a basket of leading global currencies versus the US dollar, representing both developed and emerging market currencies with the most liquidity in currency markets and biggest trade flows with the US. The latest rebalanced basket consists of the euro (31.52%), Japanese yen (18.04%), Canadian dollar (11.42%), pound sterling (10.49%), Mexican peso (10.05%), Australian dollar (5.09%), Swiss franc (4.51%), Korean won (3.73), Chinese renminbi (3.00%), and Indian rupee (2.14%).
Source: Bloomberg LP.

Figure K: Stock Market Index, 23 March 2018



S&P = Standard & Poor's, US = United States.
Source: Bloomberg LP.