ASIA BOND MONITOR

JUNE 2019

ASIAN DEVELOPMENT BANK

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Emerging East Asian Local Currency Bond Markets: A Regional Update

Highlights

Key Trends

- Between 1 March and 15 May, global growth moderation, ongoing trade tensions, and the less hawkish monetary stances of major central banks contributed to a decline in bond yields in both advanced economies and emerging East Asia.[1] Yields on 10-year local currency (LCY) government bonds posted declines in most emerging East Asian economies except the People's Republic of China (PRC), Indonesia, and Viet Nam, where yields rose due to temporary factors.
- The region's financial markets faced uncertainties as trade tensions between the PRC and the United States (US) resurfaced in May. The tensions soured investment sentiment and led investors to pull back from emerging East Asian financial markets.
- Equity markets in emerging East Asia declined between 1 March and 15 May, with Indonesia experiencing the largest decline due to heavy foreign selling. Credit default swap spreads widened, reflecting deteriorating investment sentiment.
- All regional currencies except the Thai baht weakened vis-à-vis the US dollar between 1 March and 15 May. The baht strengthened on the back of Thailand's strong current account surplus.
- Emerging East Asia's LCY bond market expanded to reach a size of USD15.0 trillion at the end of March. The region's bond market grew 2.9% quarter-on-quarter in the first quarter of 2019. On a year-on-year basis, growth reached 14.0%.
- The Asian Bond Markets Initiative witnessed the fourth bond issuance under the ASEAN+3 Multi-Currency Bond Issuance Framework in March when Singapore-based CJ Logistics Asia Pte. Ltd. issued SGD70 million worth of 5-year bonds. In Cambodia, microfinance firm LOLC (Cambodia) issued KHR80 billion worth of bonds in April. The bonds were subsequently listed on the Cambodia Securities Exchange in May.

Risks to Financial Stability

- Downside risks to the region's bond markets currently outweigh the upside risks.
- Global trade tensions continue to pose the single-largest risk to the world economy and financial stability. Renewed tensions may further slow global economic growth, which was already decelerating.
- Volatile global oil prices could also have a negative impact on growth and financial stability. Geopolitical factors underlie the oil price volatility.
- On the upside, it is widely expected that the US Federal Reserve will not raise interest rates in 2019. The change in its monetary policy stance will contribute to financial stability in emerging markets.

Theme Chapter: Developing the Housing Bond Market

- The theme chapter discusses the role of housing finance and government-sponsored enterprises in expanding home ownership. Housing finance comprises both financing for prospective homeowners and for housing suppliers.
- Banks have been the traditional providers of housing finance (via mortgage loans), but capital markets can also help mobilize housing finance for banks through instruments such as covered bonds and mortgage-backed securities.
- This chapter discusses the development of housing finance in the PRC; Hong Kong, China; Indonesia; the Republic of Korea; Malaysia; Mongolia; Singapore; and Thailand. The Republic of Korea in particular has made considerable progress in housing finance, as evidenced by the issuance of National Housing Bonds and the establishment of the Korea Housing Finance Corporation.

[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.

Executive Summary

Local Currency Government Bond Yields Fall in Emerging East Asia

The yields on 10-year local currency (LCY) government bonds fell in most emerging East Asian markets between 1 March and 15 May as global economic growth moderated and the central banks of advanced economies stopped their monetary policy tightening.[1]

Ongoing trade tensions between the People's Republic of China (PRC) and the United States (US) is further constraining global growth momentum. Volatile oil prices are another downside risk. Central banks from advanced economies have become more accommodative in response to slowing growth. Central banks from the euro area, Japan, and the US have all signaled that they will keep their current policy rates unchanged throughout 2019. Some central banks in emerging East Asia are also turning more accommodative, with Malaysia and the Philippines both cutting policy rates in May. This contributed to a decline in yields in most emerging East Asian economies.

The downside risks of the global economic outlook are reflected in other economic and financial indicators. Emerging East Asia's equity markets have declined and their currencies have depreciated against the US dollar, reflecting investors' risk-off sentiment. Similarly, the region's credit default swap spreads and the CBOE Volatility Index have risen.

The June issue of the *Asia Bond Monitor* updates the recent progress made under the Asian Bond Markets Initiative in developing regional bond markets and includes a theme chapter on developing the housing bond market. The issue also contains two discussion boxes. Box 1 reviews efforts to develop green bond markets in emerging East Asia. Box 2 discusses distributed ledger technology and its potential applications in the financial sector.

Emerging East Asia's Local Currency Bond Market Reaches USD15.0 Trillion at the end of March

Emerging East Asia's LCY bonds outstanding reached USD15.0 trillion at the end of March on growth of 2.9% quarter-on-quarter (q-o-q) and 14.0% year-on-year (y-o-y).

The PRC remained the region's leader in terms of bond market size, with its share of the regional bond market total rising to 75.3% at the end of March from 74.6% at the end of December.

At the end of March, government bonds accounted for 61.7% of emerging East Asia's total LCY bond stock. In nominal terms, the outstanding amount of government bonds climbed to USD9.3 trillion, up 2.6% q-o-q and 14.0% y-o-y. Corporate bonds reached USD5.8 trillion, with growth decelerating to 3.5% q-o-q but rising 14.2% y-o-y.

Outstanding LCY bonds among members of the Association of Southeast Asian Nations (ASEAN) grew to USD1.5 trillion at the end of March, expanding 4.0% q-o-q.[2] Thailand's bond market was ASEAN's largest at USD398.6 billion, while Malaysia's *sukuk* (Islamic bond) market remained the biggest in emerging East Asia.

As a share of gross domestic product (GDP), the region's LCY bond market inched up to the equivalent of 81.4% of GDP at the end of March from 80.4% at the end of December. The Republic of Korea had the largest LCY bonds-to-GDP share at the end of March at 125.6%.

LCY bond issuance in emerging East Asia totaled USD1.4 trillion in the first quarter (Q1) of 2019 on growth of 10.0% q-o-q, largely due to stronger issuance of government bonds amid lower corporate bond issuance.

[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.
[2] LCY bond statistics for ASEAN include the markets of Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Viet Nam.

The region witnessed the fourth bond issuance under the ASEAN+3 Multi-Currency Bond Issuance Framework on 26 March.[3] With a guarantee from the Credit Guarantee and Investment Facility, CJ Logistics Asia Pte. Ltd. successfully issued a 5-year bond worth SGD70 million.

Also, in May, microfinance firm LOLC (Cambodia) became the second corporate issuer to list bonds on the Cambodia Securities Exchange. LOLC's bond issuance, worth KHR80 billion, comprised a foreign-exchange-indexed bond with a coupon rate of 8.0% and a 3-year bond with a fixed coupon of 9.0%.

Foreign Investor Outlook for Emerging East Asia Is Mixed

In Q1 2019, foreign holdings and capital flows diverged across the region's bond markets. Foreign investors were upbeat on the PRC on the back of better-than-expected economic indicators in March. The temporary ceasefire in the trade dispute between the PRC and the US also helped. Similarly, Indonesia continued to attract foreign investor flows in Q1 2019 due to its high yields and sound economic fundamentals.

On the other hand, foreign holdings fell in the Philippines and Thailand in Q1 2019. In the Philippines, the foreign holdings share fell to 6.3% at the end of Q1 2019 from 7.5% in the previous quarter as investors cashed out their profits. In Thailand, the decline in the foreign investor share in Q1 2019 was largely due to uncertainty surrounding the Thai general elections held in March.

Trends in foreign investment and capital flows in most of the region's bond markets reversed in the early part of the second quarter as the PRC–US trade conflict reignited.

Theme Chapter: Developing the Housing Bond Market

The theme chapter reviews the development of housing finance in the US and in emerging East Asian economies. Housing matters for personal well-being, yet housing demand is growing faster than supply in Asia. Housing finance typically looks only at the demand side by providing homebuyers with financing. The theme chapter discusses the role of bank financing and capital markets in facilitating the construction of new housing. Our research finds that while banks typically finance housing purchases, developing housing finance via the capital market is a valuable complement that can mitigate the maturity mismatch arising from the short-term nature of bank funding.

Box 1: Singing the Blues but Seeing Green

This box examines the continued development of Asia's green bond market, noting that while the PRC continues to lead the region in the issuance of green bonds, issuances from other markets have increased and become more innovative. The box presents examples of innovative green bond financing across the region, including green bond issuance by Indonesia's Tropical Landscape Finance Facility and the Korea Housing Finance Corporation.

Box 2: Significant Opportunities and Challenges Ahead for Distributed Ledger Technology

This box discusses the benefits of distributed ledger technology such as speeding up cash transfer operations and facilitating improved efficiencies in smart energy. The box also points to its challenges, including the need for a balanced regulatory stance that manages the tradeoff between risk management and innovation. A further challenge to the adoption of distributed ledger technology in emerging markets is the lack of reliable electricity and network connectivity.

[3] ASEAN+3 refers to the 10 members of ASEAN plus the People's Republic of China, Japan, and the Republic of Korea.

Introduction: Bond Yields Fall Amid Growth Moderation and Looming Downside Risks

From 1 March to 15 May, most emerging East Asian markets witnessed a decline in yields on 10-year local currency (LCY) government bonds in line with the moderation of global economic growth and recent monetary decisions from major central banks.[1] The United States (US) Federal Reserve, the European Central Bank (ECB), and the Bank of Japan (BOJ) all recently indicated that they will maintain their current policy rates for the rest of 2019. As a result, 10-year government bond yields fell in all major advanced economies and select European markets. In many markets, the yield curve flattened on the back of a global growth slowdown and looming downside risks (**Table A**).

In emerging East Asia, the largest drop in the 10-year government bond yield was observed in the Philippines, where it fell 39 basis points (bps) on the back of a 25-bps policy rate cut on 9 May. The Philippines

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	(39)	(38)	–	1.7	–
United Kingdom	(9)	(23)	(4.7)	2.7	(2.7)
Japan	(1)	(4)	2.6	(3.9)	2.1
Germany	(14)	(28)	0.04	4.3	(1.4)
Emerging East Asia					
China, People's Rep. of	20	12	(0.2)	(1.8)	(2.5)
Hong Kong, China	20	(21)	–	(1.9)	(0.01)
Indonesia	5	18	6	(8.0)	(2.4)
Korea, Rep. of	(12)	(13)	5	(4.7)	(5.4)
Malaysia	(15)	(5)	2	(5.3)	(2.4)
Philippines	(0.9)	(39)	(3)	(0.9)	(1.2)
Singapore	(7)	(12)	–	(0.1)	(1.0)
Thailand	10	(8)	(7)	(1.2)	0.9
Viet Nam	24	3	(7)	(0.4)	(0.5)
Select European Markets					
Greece	(22)	(16)	(46)	1.4	(1.4)
Ireland	(9)	(32)	(6)	0.7	(1.4)
Italy	14	(10)	14	0.8	(1.4)
Portugal	(9)	(34)	(6)	(2.0)	(1.4)
Spain	(11)	(33)	(3)	(1.0)	(1.4)

( ) = negative, – = not available, bps = basis points, FX = foreign exchange.
Notes:
1. Data reflect changes between 1 March 2019 and 15 May 2019.
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.

also experienced easing inflation during the review period and received a ratings upgrade of one notch to BBB+ from S&P Global. In Malaysia, the 10-year bond yield fell 5 bps and the 2-year bond yield fell 15 bps following a 25-bps rate cut on 7 May. In both Singapore and Hong Kong, China, the 10-year bond yield fell in tandem with declining US bond yields. Meanwhile, the People's Republic of China (PRC), Indonesia, and Viet Nam bucked the downward trend.

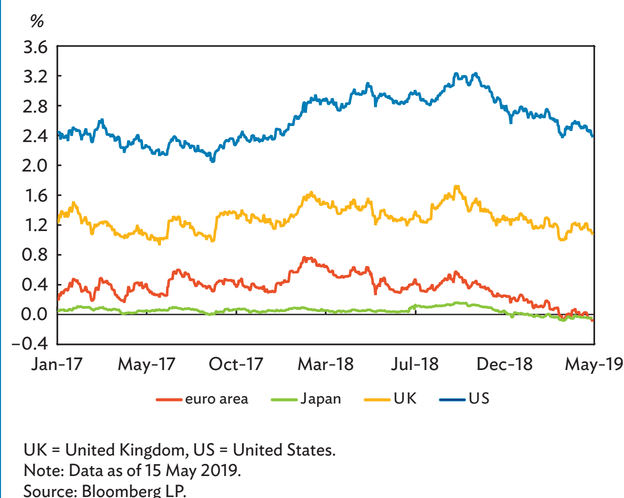
Despite moderating economic growth and a reduction in the reserve requirement ratio in January, the PRC's 2-year and 10-year bond yields rose 20 bps and 12 bps, respectively, from 1 March to 15 May on the back of stronger-than-expected economic growth. In Q1 2019, the PRC's gross domestic product (GDP) expanded 6.4% y-o-y, the same growth rate as in the fourth quarter (Q4) of 2018. Markets were anticipating another reserve requirement ratio cut in April, which did not materialize as the People's Bank of China focused on fine-tuning its liquidity measures rather than increasing aggregate liquidity.

In Indonesia, the 2-year and 10-year bond yields rose 5 bps and 18 bps, respectively, during the review period amid uncertainties in global and domestic economic conditions, and in financial markets. The continuing trade conflict between the PRC and the US, and expected wider-than-projected current account deficit weighed on investor sentiments and contributed to the investor pullback from the Indonesian market. During its 15–16 May meeting, Bank Indonesia left its policy rate unchanged as it sought to maintain financial stability.

In Viet Nam, while the 10-year bond yield rose marginally by 3 bps from 1 March to 15 May, the 2-year bond yield rose 24 bps, influenced by higher deposit interest rates and rising inflation expectations following increases in the prices of electricity and gasoline in March and April.

Between 1 March and 15 May, major advanced economies witnessed declines in their 2-year and 10-year government bond yields. Yields on 10-year government bonds dropped more than yields on 2-year government bonds in Germany, Japan, and the United Kingdom. The flattening yield curve implies a moderation of global economic growth (**Figure A**).

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



UK = United Kingdom, US = United States.
Note: Data as of 15 May 2019.
Source: Bloomberg LP.

Economic Outlook

Global economic growth has decelerated since the second half of 2018 and will continue to moderate in 2019 before picking up somewhat in 2020, according to the International Monetary Fund's *World Economic Outlook April 2019*. The world economy is projected to grow by 3.3% in 2019, down from estimated growth of 3.6% in 2018, before rebounding to 3.6% in 2020. Relative to its January 2019 forecasts, the International Monetary Fund cut its global growth forecasts by 0.2% for 2019 and left its global growth forecasts for 2020 unchanged. Relative to its October 2018 forecasts, the global growth forecasts for 2019 and 2020 were reduced by 0.4% and 0.1%, respectively. World trade volume growth is expected to follow the trajectory of global growth, falling from an estimated 3.8% in 2018 to 3.4% in 2019 before recovering to 3.9% in 2020.

Upside risks are outweighed by downside risks, of which trade tensions between the PRC and the US remained the biggest. The temporary ceasefire in effect since December, as well as growing optimism in recent weeks that the two sides were nearing a more permanent settlement, was disrupted by the escalation of tariffs by both sides in May and June. On 10 May, the US more than doubled its tariffs on USD200 billion worth of Chinese imports from 10% to 25%. The PRC immediately

responded by imposing tariffs on USD60 billion worth of US imports on 1 June.

Separate but related factors negatively impacting growth include worsening global business confidence, which were especially evident in vulnerable emerging markets. In particular, Argentina and Turkey, two countries that suffered severe financial stress in the middle of 2018 but subsequently rebounded in the fourth quarter of 2018, have come under heavy renewed pressures in recent months. The fact that the US Federal Reserve has not raised interest rates this year will benefit global financial stability. On the other hand, heightened uncertainty about monetary and other economic policy in the US and elsewhere may become an additional destabilizing factor.

The growth of advanced economies, especially the US, is slowing. The robust cyclical upswing that the US economy enjoyed over the last 2 years is losing steam even as many key economic indicators, especially job market indicators, remain healthy. US economic growth is expected to moderate from an estimated 2.9% in 2018 to 2.3% in 2019 and further to 1.9% in 2020. As a group, the advanced economies grew by an estimated 2.2% in 2018, with the growth rate projected to decline to 1.8% in 2019 and 1.7% in 2020. The corresponding figures for emerging markets and developing economies are 4.5%, 4.4%, and 4.8% for 2018, 2019, and 2020, respectively. Since growth in advanced economies and the PRC is projected to slow in 2020, the projected modest pick-up in global growth in 2020 is expected to be led by emerging markets outside the PRC.

The *World Economic Outlook April 2019* forecasts consumer price inflation in advanced economies to drop from 2.0% in 2018 to 1.6% in 2019 before rising to 2.1% in 2020. In emerging markets and developing economies, consumer price inflation was estimated at 4.8% in 2018 and projected to be 4.9%, and 4.7% in 2019 and 2020, respectively. Global oil prices declined toward the end of 2018 due to a mix of supply-side factors such as record-high US crude production and weakening global growth. Although prices have recovered somewhat in 2019, a mix of relatively low oil and commodity prices and softening global demand for oil will help subdue inflationary pressures in both advanced economies and emerging markets.

Despite the reignition of the simmering trade conflict between the PRC and the US, developing Asia is forecast to grow at a healthy clip in 2019 and 2020.[2] According to the Asian Development Bank's *Asian Development Outlook 2019* released in April 2019, the region's economy is projected to expand 5.7% in 2019 and 5.6% in 2020, down from an estimated 5.9% in 2018. The estimated 2018 and forecasted 2019 growth figures are marginally lower than the December 2018 forecasts of 6.0% and 5.8%, respectively. Strong domestic demand—in terms of both consumption and investment—is supporting the growth of emerging East Asian economies in the face of less benign external conditions. Growth in the PRC, which is at the center of the trade dispute with the US, is forecast to moderate from an estimated 6.6% in 2018 to 6.3% in 2019 and 6.1% in 2020. The corresponding growth figures for the 10 members of the Association of Southeast Asian Nations are 5.1%, 4.9%, and 5.0% for 2018, 2019, and 2020, respectively. Growth in the Republic of Korea is projected to decelerate modestly from an estimated 2.7% in 2018 to 2.5% in both 2019 and 2020. The corresponding growth figures for Hong Kong, China are 3.0%, 2.5%, and 2.5% for 2018, 2019, and 2020, respectively. According to the *Asian Development Outlook 2019*, developing Asia's estimated consumer price inflation in 2018 was 2.5%; it is projected to remain unchanged in both 2019 and 2020.

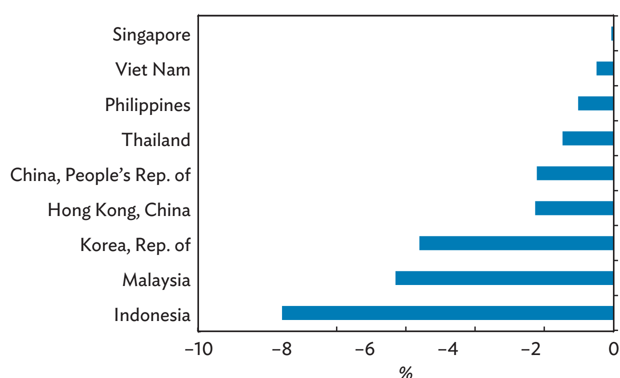
At its 19–20 March and 30 April–1 May meetings, the Federal Reserve noted the continued expansion of the US economy amid the slight moderation of a few economic indicators. Consistent with the Federal Reserve's assessment, preliminary data showed US GDP grew at an annual rate of 3.1% in Q1 2019 based on second estimate, up from 2.2% in Q4 2018. Nonfarm payrolls continued to be strong, with 263,000 jobs added in April, up from 189,000 in March. Amid looming uncertainties about the global economy, the Federal Reserve in March downgraded its GDP growth forecast for 2019 to 2.1% from its earlier December forecast of 2.3%. The growth forecast for 2020 was also reduced to 1.9% from 2.0%, while the forecast for 2021 remained unchanged. The Federal Reserve decided to take a

[2] Developing Asia comprises the 45 regional developing member economies of the Asian Development Bank. See https://www.adb.org/sites/default/files/publication/216421/ado-supplement-dec-2016.pdf.

patient approach in deciding when to adjust its policy rates. It suggested that there would be no additional adjustments in 2019 and that the pace of its balance sheet reduction program would be slowed before ending in September. Meanwhile, US inflation remained weak, with the Personal Consumption Expenditure Index, excluding food and energy prices, falling from 1.7% in February to 1.6% in March.

In both the euro area and Japan, economic growth is expected to moderate amid global risks that are tilted toward the downside. GDP in the euro area grew 1.2% y-o-y in Q1 2019, the same rate as in Q4 2018 and lower than the 2.2% y-o-y and 1.6% y-o-y growth rates in the second and third quarters of 2018, respectively. In March, the ECB revised its forecast for 2019 GDP growth to 1.1%, down from its December 2018 forecast of 1.7%. For 2020, the ECB slightly downgraded its GDP forecast from 1.7% to 1.6%. The ECB left its monetary policies unchanged at its 7 March and 10 April meetings, further clarifying the euro area's monetary stance by noting that it expects policy rates to remain unchanged during the rest of 2019. At its 24 January meeting, the ECB had indicated that policy rates were expected to remain unchanged through the middle of 2019. Similarly, in March the BOJ downgraded its economic growth forecasts for fiscal years 2018 and 2019 to 0.6% and 0.8%, respectively, from its December 2018 forecasts of 0.9% for both years. At its 25 April monetary policy meeting, the BOJ stated that its interest rate targets are expected to remain unchanged until at least the second quarter of 2020.

Figure B: Changes in Equity Indexes in Emerging East Asia

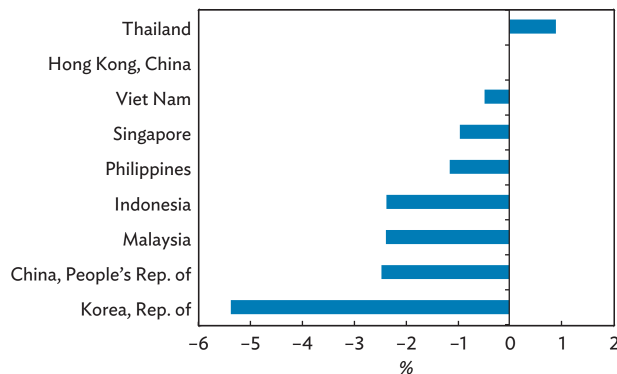


Note: Changes between 1 March 2019 and 15 May 2019.
Source: Bloomberg LP.

The recent reignition of the PRC–US trade conflict and slowing growth in most of emerging East Asia's major trade partners have exerted downward pressure on regional equity markets and currencies (**Figures B and C**). In tandem with the region's bond market performance, emerging East Asian equity indexes collectively declined from 1 March to 15 May. Indonesia experienced the largest decline, with its equities dipping 8.0% due to heavy foreign selling. Nearly all emerging East Asian currencies depreciated during the review period on slowing world economic growth and looming downside risks. The only exception was the Thai baht, which appreciated 0.9% against the US dollar on the back of a strong current account surplus. Given the close economic linkages of most of the region's economies with both the PRC and the US, the failure of the two sides to reach an agreement was bound to have an adverse effect on regional currencies. The future evolution of the PRC–US relationship is likely to continue to influence the trajectory of Asian asset prices, including bond yields, equities, and exchange rates.

The reescalation of PRC–US trade tensions in early May contributed to a sharp deterioration of major sentiment indicators such as credit default swap spreads (**Figure D**), the volatility index and emerging market bond index (**Figure E**), and emerging market sovereign stripped spreads (**Figure F**). Indicators of

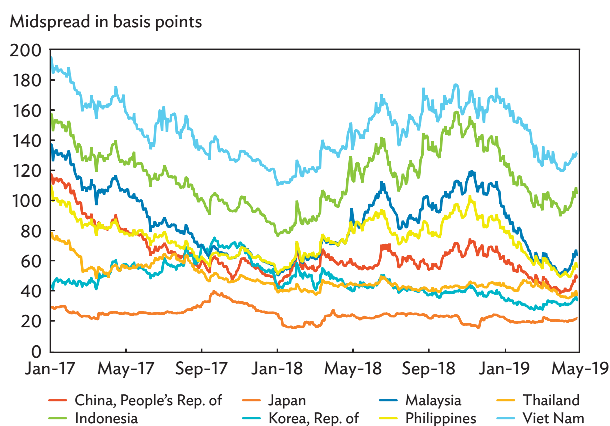
Figure C: Changes in Month-End Spot Exchange Rates vs. the United States Dollar



Notes:
1. Changes between 1 March 2019 and 15 May 2019.
2. A positive (negative) value for the foreign exchange rate indicates the appreciation (depreciation) of the local currency against the United States dollar.
3. Data for Hong Kong, China is not visible in the chart due to its small value (−0.01).

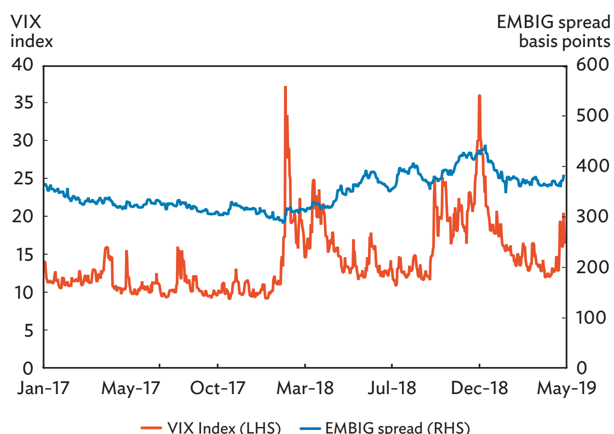
Source: Bloomberg LP.

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



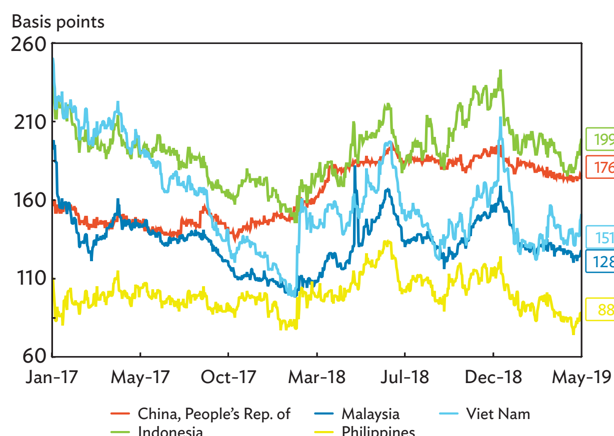
Notes:
1. Based on United States dollar-denominated sovereign bonds.
2. Data as of 15 May 2019.
Source: Bloomberg LP.

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



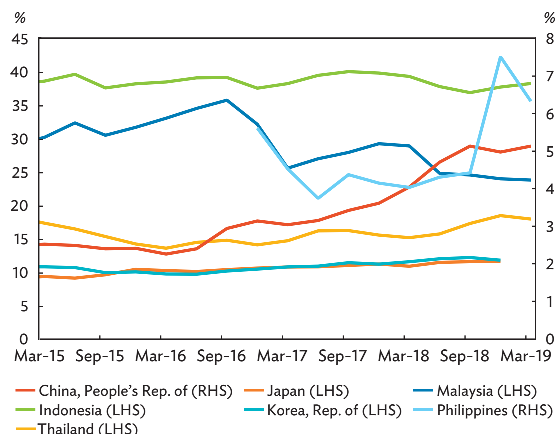
EMBIG = Emerging Markets Bond Index Global, LHS = left-hand side, RHS = right-hand side, VIX = Chicago Board Options Exchange Volatility Index.
Note: Data as of 15 May 2019.
Source: Bloomberg LP.

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



Notes:
1. Based on United States dollar-denominated sovereign bonds.
2. Data as of 15 May 2019.
Source: Bloomberg LP.

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



LHS = left-hand side, RHS = right-hand side.
Note: Data as of end-March 2019 except for Japan and the Republic of Korea (end-December 2018).
Source: *AsianBondsOnline*.

negative sentiments—such as credit default swap spreads, volatility, and emerging market sovereign stripped spreads—increased sharply since early May, reversing the declining trend during earlier months of this year. One major source of improved risk sentiment over the entire review period was the more accommodative monetary policy of the Federal Reserve.

The improved market sentiments witnessed earlier in the year were reflected in foreign holdings of LCY government bonds in emerging East Asian markets (**Figure G**). Relatively stable capital flows were recorded in regional bond markets in Q1 2019. In the PRC, the share of foreign holdings rose slightly to 5.1% at the end of March from 5.0% at the end of December. Global investors were attracted by rising bond prices following

the People's Bank of China's reserve requirement ratio cut in January. In Indonesia, the foreign holdings' share rose to 38.3% at the end of March from 37.7% at the end of December, driven by investors' risk-on approach as they sought Indonesia's relatively high interest rates. However, capital outflows were experienced in Indonesia in April due to a wider-than-expected current account deficit. In Thailand, foreign holdings declined to 18.0% at the end of March from 18.5% at the end of December as a result of political uncertainties relating to the general election. Continuous monitoring of the changes in foreign holdings can reveal the dynamics of foreign investment in the region as well as shifts in market sentiments.

Despite the global slowdown, emerging East Asian bond markets continued to develop amid increased regional cooperation. For example, the Asian Bond Markets Initiative has bolstered regional corporate bond markets via the ASEAN+3 Multi-Currency Bond Issuance Framework. The fourth corporate bond under this framework was successfully issued in Singapore by CJ Logistics Asia Pte. Ltd. on 26 March. The bond issuance worth SGD70 million carried a maturity of 5 years and was guaranteed by the Credit Guarantee and Investment Facility (**Table B**).

Globally, green bonds have emerged as an innovative solution to financing sustainable development. **Box 1** reviews efforts to develop green bond markets in emerging East Asia as they gain traction. In addition, new technologies, such as distributed ledger technology, are continuing to shape the global financial landscape. The challenges facing distributed ledger technology and its potential applications in the financial sector are discussed in **Box 2**.

Risks to Emerging East Asian Bond Markets

It was earlier noted that downside risks to global growth prospects outweigh upside risks. In this section, we take a closer look at the salient risks that may affect the region's short-term growth outlook. Global trade tensions continue to pose by far the single-biggest risk to global economic growth and financial stability. Hopes were raised on 2 December 2018 when the two economic giants agreed to a temporary truce. According to the terms of the ceasefire, the PRC and the US would refrain from imposing new tariffs or increasing existing tariffs on the other party for 90 days until 1 March 2019. The temporary ceasefire was meant to provide some breathing space and give the two sides time to work with each other toward a deal. The US promised not to impose tariffs on an additional USD267 billion worth of Chinese goods. The truce also stipulated that the PRC commit to importing more agricultural and energy products from the US. The December ceasefire prevented the escalation of tariffs and other protectionist measures, and thus fulfilled its central objective.

While the truce was strictly temporary, and financial markets were fully aware of its temporary nature, it provided the basis for some optimism about the prospects for resolving the conflict through negotiations. Furthermore, there were indications that the two sides were nearing a settlement that would resolve their outstanding key differences. Therefore, when senior Chinese officials visited Washington, DC to meet with their American counterparts on 8–9 May, there was widespread optimism about a deal. However, optimism turned to disappointment when the two sides failed to

Table B: Bonds Issued under the ASEAN+3 Multi-Currency Bond Issuance Framework

No.	Issuer	Sector	Currency and Amount	Tenure	Issuance Date
1	Mizuho Bank, Ltd.	Financials (banking)	THB3 billion	3 years	28 Sep 2015
2	Hattha Kaksekar Limited	Financials (consumer finance)	KHR120 billion	3 years	14 Nov 2018
3	AEON Credit Services (Philippines) Inc.	Financials (consumer finance)	PHP900 million	3 years	16 Nov 2018
			PHP100 million	5 years	16 Nov 2018
4	CJ Logistics Asia Pte. Ltd.	Logistics	SGD70 million	5 years	26 Mar 2019

ASEAN = Association of Southeast Asian Nations, KHR = Cambodian riel, PHP = Philippine peso, SGD = Singapore dollar, THB = Thailand baht.
Source: Asian Bond Markets Initiative.

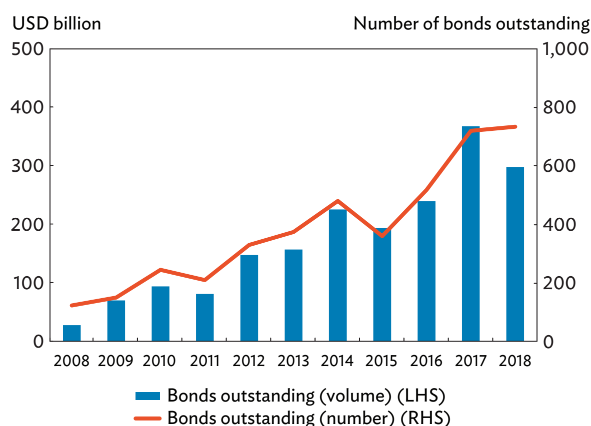
Box 1: Singing the Blues but Seeing Green

Following 2017's stellar double-digit returns, 2018 was many investors' annus horribilis. In the fixed-income market, the JP Morgan Asia Credit Index Composite, which tracks United States (US) dollar-denominated bonds issued in Asia, fell 4.5% between 1 January and 20 December. Spreads on Asian investment-grade bonds widened from 48 basis points (bps) to 206 bps during the same period, while Asian high-yield bond spreads jumped from 164 bps to 620 bps, according to Nikko Asset Management.

The strength of the US dollar was relentless throughout the year. The weakness in emerging market currencies spared no one. In Asia, central banks acted swiftly by raising interest rates multiple times. The hardest-hit currencies included the Indian rupee and the Indonesian rupiah. Interestingly, the Thai baht was the least affected. Even so, the Bank of Thailand raised its policy rate by 25 bps in December 2018, the first increase in more than 7 years.

Activity in Asian capital markets reflected many of the challenges of 2018. The total amount of outstanding US dollar bonds was USD298.3 billion at the end of December, according to Refinitiv figures, down 18.8% from USD367.8 billion a year earlier (**Figure B1**). Although they continue to account for the lion share of activity, issuance from firms in the People's Republic of China dipped to USD146.5 billion from USD186.7 billion between 2017 and 2018, a decline of 21.5%. The drop was more pronounced in the high-yield bond market—a space dominated by Chinese property companies—as high-yield issuance plunged 43.6% year-on-year to USD19.0 billion from USD33.7 billion as of November 2018.

Figure B1: Volume and Number of US Dollar Bonds Outstanding



LHS = left-hand side, RHS = right-hand side, US = United States, USD = United States dollar.
Source: Refinitiv.

Local currency (LCY) bond markets served as a buffer against volatility in the offshore market as total LCY issuance picked up in 2018 by nearly 5% to USD1.4 trillion. This was a recovery from the year-on-year decline in issuance in 2017. The continued strong performance of LCY bond markets reinforces the important role they now play in Asian financial markets. During a period of considerable volatility, as occurred in 2018, firms were still able to access markets to meet their financing needs.

The challenging market environment, has not dampened efforts to further develop Asia's bond markets. An emerging trend in 2018 was the rise of bonds linked to sustainable finance. While Asia has become a center for green bonds in the past few years, led by the People's Republic of China, the region is adding to its diversity.

In Indonesia, innovative models of financing are helping to fight deforestation and improve the working conditions of farmers and rural communities. One example is a unique lending platform offered by Indonesia's Tropical Landscape Finance Facility (TLFF). TLFF provides long-term finance to individual projects and companies that focus on green growth and improve rural livelihoods. Put together, the loans are securitized and turned into a medium-term note program, where bonds are sold to investors in a range of tranches, allowing small green projects access to investor pools that typically back large deals only. The projects under the program have to meet certain sustainability criteria.

TLFF's first deal in February 2018 was a USD95 million senior secured note. The bond's proceeds are financing a sustainable natural rubber plantation on heavily degraded land in Jambi and East Kalimantan in Indonesia. The project incorporates extensive social and environmental objectives and safeguards confirmed by Vigeo Eiris, an environmental, social, and governance research agent. Planted areas will serve as a buffer zone to protect a threatened national park from encroachment.

Indonesia is the world's second-largest producer of natural rubber. Supported by an amortizing loan partially guaranteed by the United States Agency for International Development, the deal represented the first sustainability project bond in Asia and the first project bond for a rubber plantation.

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Box 1: Singing the Blues but Seeing Green *continued*

In October 2018, the Korea Housing Finance Corporation successfully priced the first-ever social covered bond offering in Asia, which was also the first EUR-denominated covered bond deal out of the Republic of Korea. The net proceeds from the deal will be used exclusively to purchase the company's mortgage loans that were directed to support low- and moderate-income individuals. The proceeds will also help improve the structure of the Republic of Korea's mortgage loan market in accordance with Korea Housing Finance Corporation's social bond framework.

New World China Land joined the green bandwagon as it issued its inaugural green bond in November 2018, which amounted to USD310 million. The company will use the proceeds to finance two certified environmental projects in the Guangdong–Hong Kong–Macau Greater Bay Area.

In May, Korea Water Resources Corporation priced Asia's first-ever water bond amounting to USD300 million. The fund-raising was designed to finance (or refinance) projects contributing to climate change adaptation, improved accessibility of sustainable water management systems, and the development of renewable energy sources.

In Singapore, Olam International completed the first sustainability club loan in Asia for USD500 million. The facility links the interest rate on the loan to achieving clear sustainability targets, with Olam International committed to meeting targets for a comprehensive range of environmental, social, and governance metrics.

These new bond issuances in 2018 suggest a broadening of investment choices in green and sustainable finance in the region. That the capital markets have become the venue of innovation in sustainable finance reflects a growing focus among local corporates on not just funding objectives, but also on meeting the broader environmental and social needs of the region.

Source: Contributed by Daniel Yu of The Asset.

reach any agreement. The announcements of both parties suggested that there were deep-seated disagreements that still separated the two sides and reduced the likelihood of a settlement. In particular, the two sides remained far apart on the key item of structural issues, which refer to the large role of the state in the Chinese economy; the protection of intellectual property; access of foreign firms to the Chinese market; and other issues related to the structure of the Chinese economy.

The failure to reach a deal ruptured the temporary ceasefire and immediately reignited the trade conflict between the PRC and the US. On 10 May, the US raised tariffs to 25% on USD200 billion worth of Chinese imports. The US had previously imposed 10% tariffs on those goods on 17 September 2018. Furthermore, the US government announced that it was looking into the possibility of imposing tariffs on an additional USD300 billion worth of Chinese goods. If the additional tariffs were imposed, then virtually all Chinese imports into the US would be subject to tariffs. The PRC immediately hit back with retaliatory tariffs on US imports when on 1 June it imposed tariffs of 5%–25% on USD60 billion worth of US goods, including a wide range of agricultural products. Reflecting the dismay of investors, stock markets on both sides of the Pacific fell sharply at the news of the reescalation. Worryingly, neither side showed much sign of trying to accommodate the other to reach a mutually beneficial outcome. As such, without a dramatic turn of events, the chances of a speedy solution to the conflict seem limited.

The revival of the PRC–US trade conflict comes at an inopportune point in the global business cycle. As noted earlier, the world economy is approaching the end of a 2-year cyclical upswing and, as a result, global growth has started to moderate. Slower global growth in and of itself represents another downside risk to global financial stability even though the moderation is relatively modest. The ongoing trade conflict between the world's two largest economies exacerbates this risk from slowing global growth by adversely affecting business confidence, as evidenced by the negative reaction of global financial markets. Emerging East Asian economies depend heavily on trade with the PRC and the US for their growth. This suggests that any further intensification of the dispute could inflict tangible damage on the growth and stability of the PRC's neighbors. One particular concern is that the PRC's growth, which has been moderating due to structural factors as well as policies to rein in credit growth, will decelerate more sharply than expected as a result of the ongoing trade conflict. In this scenario, the

Box 2: Significant Challenges Ahead for Distributed Ledger Technology

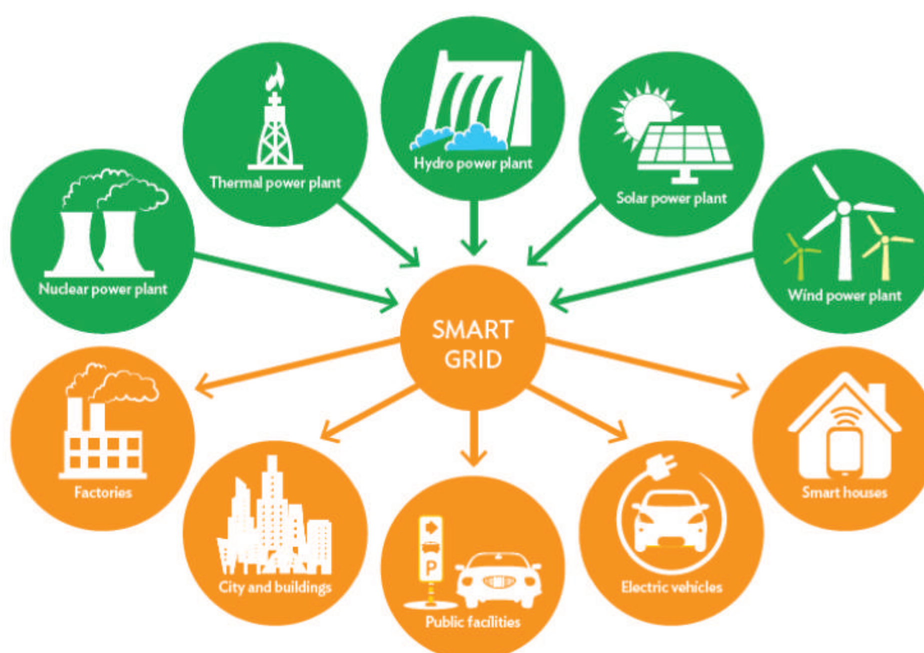
As highlighted in the November 2018 issue of the *Asia Bond Monitor*, distributed ledger technology (DLT) can revolutionize the financial sector. For example, inefficient back-office infrastructure is giving way to DLT-based clearing and settlement. DLT is expected to drastically reduce the time needed for operations such as exchanging cash for securities. DLT can benefit many financial markets in developing economies, including remittances, emergency aid delivery, microcredit, and trade finance, to name a few.

DLT also has far-reaching implications for other sectors such as smart energy. Sensors and meters of various kinds can be integrated with DLTs, making energy one of the most active areas of DLT experimentation (**Figure B2**). In regions where sunlight is plentiful but centralized electricity production or distribution is inadequate, smart transactive microgrids let community members contribute to local renewable energy production by installing solar panels on their rooftops. Participants sell energy to others in the microgrid when they produce more than they consume and purchase energy when their production falls short. Using DLTs to connect microgrids enables participants to instantly compensate one another for their energy purchases and sales. This eliminates the need for periodic meter checks and billing after the fact.

In addition, DLTs can facilitate financing for such projects. For example, one startup company allows investors to purchase solar cells and lease them to schools and businesses in developing economies. The company then collects monthly rental fees out of the proceeds from electricity generation and automatically distributes them back to investors, who can opt to be paid in either fiat or virtual currency. A project that created a solar cryptocurrency is attempting to create worldwide markets for renewable energy, incentivizing local production by allowing producers to trade with one another over a distributed ledger. Crypto tokens backed by clean energy could one day become integrated into the global carbon-trading system, a key mechanism for reducing carbon emissions under the United Nations Framework Convention on Climate Change. More broadly, DLT can help provide guarantees of origin and renewable energy certificates, which are crucial to the implementation of green finance and carbon-trading systems.

At a broader level, the key benefits from DLT include improved transparency and accountability, reduced transaction and monitoring costs, real-time data collection and analysis, and the expanded participation of vulnerable

Figure B2: Smart Grid System



Source: ADB staff illustration.

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Box 2: Significant Challenges Ahead for Distributed Ledger Technology *continued*

populations currently excluded from or underserved by finance. However, DLT deployment faces significant challenges.

Regulatory hurdles risk blocking innovation. For example, to counter money laundering and terror financing, international regulatory regimes require that all businesses offering money services perform know-your-customer checks on their clients. Meanwhile, many unbanked people do not have government-issued identification, and regulators may be reluctant to accept alternative methods of establishing identity, including those based on DLT itself.

This creates legal uncertainty and liability risk for DLT-based remittance providers and threatens to leave out the unbanked. Development projects should strive to work with local and international regulators to identify risk-based approaches to managing these concerns that would allow innovation to flourish while protecting legitimate public interests. One such approach would be a test-and-learn regulatory sandbox in which regulators and companies test and fine-tune new solutions, or adopt the regulatory approaches of other economies, before they are implemented on a wider scale.

DLT applications are not a panacea and may introduce distortions or have unforeseen drawbacks. For example, microcredit programs typically cope with the absence of collateral by relying on informal social relationships within the receiving community to achieve high repayment rates. The introduction of DLT could crowd out such informal enforcement mechanisms and end up causing more harm than good. In addition, as a technical matter, the issuance and tracking of microloans on a distributed ledger involves the execution of a series of smart contracts that interact with one another on-chain, self-executing in response to the occurrence of predetermined conditions. While sound in theory, this approach raises questions about what happens when a smart contract does not execute as expected in the real world. Who is liable? For answers, development lenders wishing to use DLT-based microcredit mechanisms must ensure the formulation of robust regulatory frameworks to support them.

As is common in the delivery of development initiatives, many challenges to DLT crop up in the last mile. Over 400 million Asians still live without electricity. Where internet connectivity is deficient and brownouts are frequent, communications networks and even the electricity supply are unable to meet the requirements of many DLTs. Less resource-intensive DLT designs, such as directed acyclic graph tangles or private permissioned ledgers, can render connectivity problems less acute but still require both electricity and at least periodic connectivity. The ideal of public distributed ledgers girdling the globe may thus prove difficult to realize in many developing economies, at least until local infrastructure and DLT transactional efficiencies improve. This highlights the importance of continued development lending to the energy sector for building and upgrading infrastructure—with an additional focus on its ability to support the introduction of DLT and other advanced technologies.

Many problems in the last mile arise from attempts to connect a new DLT platform to existing arrangements. For example, funds remitted through a DLT platform require conversion into fiat money or another form that recipients can readily use. Significant investments are necessary to equip and train local merchants with technologies for DLT-based payment acceptance.

An even greater challenge is coordination across sectors that operate in separate silos. To fully leverage DLT and the automated nature of smart contracts, for example, a trade finance platform would have to involve not only banks, but the whole chain of stakeholders, including shipping agents, freight forwarders, ports, insurance companies, and customs authorities. Major hurdles still exist that can only be overcome through international efforts and cooperation. One such initiative is Digital Standards in Trade, through which the World Trade Symposium endeavors to compensate for a lack of common standards in the trade system by implementing fully digitized trade transactions seamlessly end-to-end worldwide, thereby creating a viable basis for DLT operations.

It must be made clear to policy makers and international development agencies alike that the benefits and potential of DLT systems cannot be realized without an enabling environment that they will have to help create through an array of available instruments, including public–private partnerships, innovative sandbox approaches, and international coordination. DLTs have enormous potential to make a difference in development. By assessing them carefully and investing in them strategically, domestic and international lenders can be instrumental in unleashing their full developmental impact throughout Asia and the Pacific. Finally, public support for DLT experimentation should weigh the underlying infrastructure requirements, especially electrification and connectivity, against prevailing conditions and buttress DLT initiatives with the appropriate investment in infrastructure and necessary adjustments to the institutional and regulatory environment.

Source: Contributed by B. Ferrarini of the Economic Research and Regional Cooperation Department.

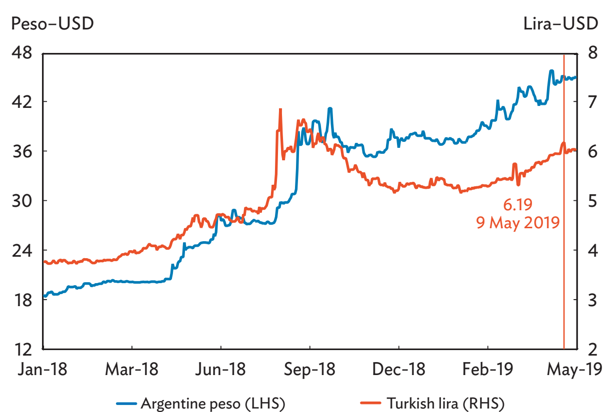
whole region will suffer negative spillover effects. The outsized economic role of the PRC in emerging East Asia means that the effects will be felt across the whole economy rather than just industries and firms that are directly impacted by the conflict.

Another major threat to global and regional stability is financial turbulence in vulnerable emerging markets. The Turkish lira and Argentine peso both stabilized in the fourth quarter (Q4) of 2018. Forceful interest rate hikes by Turkey's central bank halted the lira's sharp depreciation. In Argentina, the expansion and acceleration of an International Monetary Fund loan package and the government's commitment to fiscal consolidation arrested the peso's fall. However, both economies still suffer under substantial macroeconomic imbalances and remain vulnerable to shocks. Ominously, notwithstanding moderation in the pace of US interest rate hikes, both the lira and peso weakened in 2019 due to country-specific factors (**Figure H**). On 9 May 2019, the lira hit a 7-month low, due to a combination of political uncertainty associated with the ruling party's election losses, strained Turkey–US relations, and high inflation. The peso hit a record low in mid-May, despite tight monetary policy, due to higher-than-expected inflation and investor concerns related to upcoming elections in October. The two currencies clearly remain fragile and vulnerable to shocks.

The currencies of emerging markets as a whole have performed noticeably better than the Argentine peso and Turkish lira. However, the aggregate emerging market currency index is showing some signs of decline since late April 2019. One key driver of the recent weakness is the escalation of the PRC-US trade conflict despite widespread market expectations of a settlement. (**Figure I**). While there have been some variations across countries, the currencies of most emerging markets have remained relatively stable in 2019. This is especially true for the currencies of emerging Asian economies, which enjoy relatively strong fundamentals. Visibly improved stability was also evident for the Indian rupee and Indonesian rupiah, both of which depreciated substantially during the emerging market foreign exchange turbulence of 2018, after the central banks of both countries aggressively raised interest rates to restore investor confidence (**Figure J**).

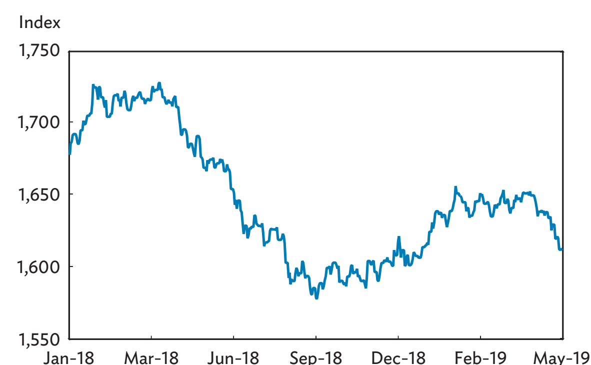
In light of uncertain global growth prospects and simmering global trend tensions, it is far too early to say that emerging market currencies are completely safe. While they have stabilized since Q4 2018, the currencies of emerging markets with weak fundamentals remain vulnerable. Such vulnerability is especially evident in the poor performances of the Argentine peso and Turkish lira in 2019. Severe instability in vulnerable markets can spill over and precipitate a generalized risk aversion toward emerging markets. Therefore, although emerging market exchange rates have gained a measure of stability since Q4 2018, the potential for volatility remains.

Figure H: Argentine Peso and Turkish Lira vs. the US Dollar



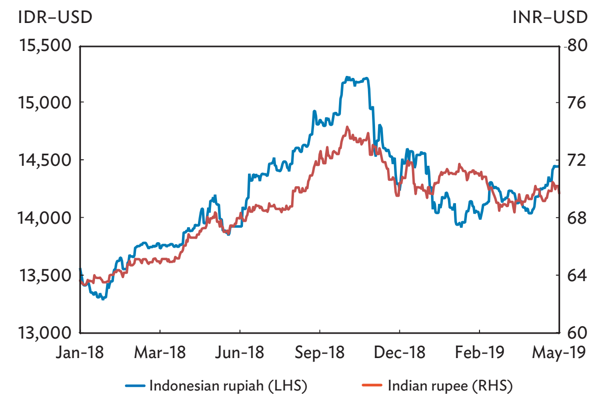
LHS = left-hand side, RHS = right-hand side, US = United States, USD = United States dollar.
Note: Local currency unit relative to the US dollar. Data are from 1 January 2018 to 20 May 2019.
Source: Bloomberg LP.

Figure I: MSCI Emerging Markets Currency Index



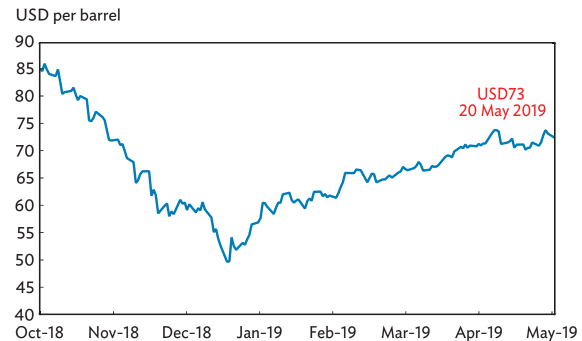
MSCI = Morgan Stanley Capital International.
Note: The MSCI Emerging Market Currency Index measures the total return of 25 emerging market currencies relative to the US dollar where the weight of each currency is equal to its country weight in the MSCI Emerging Markets Index. Data are from 1 January 2018 to 20 May 2019.
Source: Bloomberg LP.

Figure J: Indian Rupee and Indonesian Rupiah vs. the US Dollar



IDR = Indonesian rupiah, INR = Indian rupee, LHS = left-hand side, RHS = right-hand side, US = United States, USD = United States dollar.
Note: Local currency unit relative to the US dollar. Data are from 1 January 2018 to 20 May 2019.
Source: Bloomberg LP.

Figure K: Spot Price of Brent Crude Oil



USD = United States dollar.
Note: Data are from 1 October 2018 to 20 May 2019.
Sources: Bloomberg; World Bank. Commodity Price Data (Pink Sheet). http://www.worldbank.org (accessed 21 May 2019).

Volatile global oil prices are yet another source of uncertainty in a highly uncertain global economic environment. After hitting a 4-year peak of USD86 on 3 October 2018, the price of Brent crude oil fell to USD53 per barrel on 31 December before recovering to USD73 on 20 May (**Figure K**). The decline was due to a mix of supply-side factors—a temporary waiver on sanctions on Iranian oil exports to certain countries and record-high US output—and softening demand due to slowing global growth. The recovery since the beginning of 2019 was driven primarily by output cuts in oil-exporting countries. Going forward, the combustible mix of geopolitics and oil production is creating a lot of uncertainty over the global oil supply and the future trajectory of global oil prices. Political instability in Libya, where rival factions are seeking to unify a divided country, and Venezuela, where an increasingly unpopular government is under siege from political protest, is disrupting the production of two major exporters. Most significantly, the ongoing geopolitical confrontation between the US and Iran poses a nonnegligible tail risk of a major disruption that could seriously affect global production and thus trigger a sharp rise in prices. The magnitude of this risk was underlined by drone attacks on a major pipeline and other key energy infrastructure in Saudi Arabia on 14 May. The drone attacks, which were preceded by sabotage attacks that significantly damaged two oil tankers in the strategic Strait of Hormuz, immediately pushed global oil prices higher.

One significant positive factor that is conducive for financial stability in emerging markets is the pause in US interest rate hikes. The US Federal Reserve raised interest rates four times for a total of 100 basis points in 2018 but has not yet once raised interest rates in 2019. Nor do the financial markets foresee any hikes during the rest of 2019. The Federal Reserve's latest announcements seem to support market expectations. Above all, the slowdown in US growth suggests that the Federal Reserve is unlikely to tighten its monetary stance. Its interest rate hikes helped to destabilize emerging markets in 2018. Therefore, the likely absence of hikes in 2019 means that a significant source of instability will have been removed. There are other potential upside risks but these are mostly low-probability flip sides of downside risks. For example, if the PRC and the US manage to unexpectedly settle their differences and reach an agreement, that would provide a big boost to global business confidence and growth.

Overall, downside risks clearly outweigh upside risks in the current global financial and economic landscape. Global trade tensions, intensified by the failure of the PRC and US to reach a settlement in May and the ensuing reignition of their bilateral economic conflict, still pose the overarching threat to global growth and financial stability. Most worryingly, the two sides seem far apart and remain firmly entrenched in their own respective positions, clouding the prospects for a speedy resolution. Additional downside risks include slowing global growth momentum, financial turbulence in vulnerable emerging markets, and volatile global oil prices. Steady US interest rates provide some cause for optimism, but on balance the cause for optimism is limited.

Bond Market Developments in the First Quarter of 2019

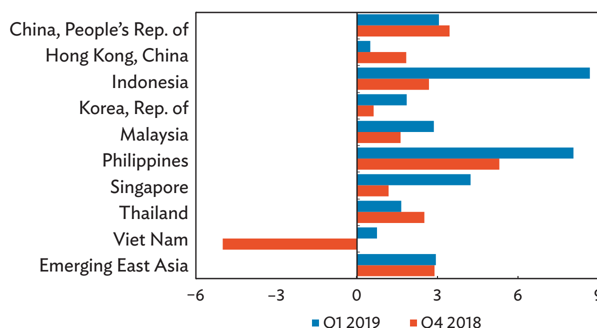
Size and Composition

Emerging East Asia's local currency bond market reached a size of USD15.0 trillion at the end of March.

The local currency (LCY) bond market in emerging East Asia expanded in size to reach USD15.0 trillion at the end of March.[3] Improved investor optimism in emerging markets benefitted the region's bond market after the United States (US) Federal Reserve hinted at a pause in policy rate hikes for the rest of the year. At the same time, the region's bond markets are beginning to feel the impact of the overall slowdown in the global economy.

The region's bond market grew 2.9% quarter-on-quarter (q-o-q) in the first quarter (Q1) of 2019, maintaining its pace of growth from the fourth quarter (Q4) of 2018 (**Figure 1a**). All of the region's nine markets recorded positive q-o-q growth in Q1 2019, with the fastest growth seen in Indonesia and the Philippines. Compared with Q4 2018, the q-o-q growth rate accelerated in all emerging East Asian bond markets except for those in the People's Republic of China (PRC); Hong Kong, China; and Thailand.

Figure 1a: Growth of Local Currency Bond Markets in the Fourth Quarter of 2018 and First Quarter of 2019 (q-o-q, %)



q-o-q = quarter-on-quarter, Q1 = first quarter, Q4 = fourth quarter.

Notes:

1. Calculated using data from national sources.
2. Growth rates are calculated from local currency base and do not include currency effects.
3. Emerging East Asia growth figures are based on 31 March 2019 currency exchange rates and do not include currency effects.
4. For Singapore, corporate bonds outstanding are based on *AsianBondsOnline* estimates.

Sources: People's Republic of China (*CEIC*); Hong Kong, China (Hong Kong Monetary Authority); Indonesia (Bank Indonesia; Directorate General of Budget Financing and Risk Management, Ministry of Finance; and Indonesia Stock Exchange); Republic of Korea (*EDAILY BondWeb* and The Bank of Korea); Malaysia (Bank Negara Malaysia); Philippines (Bureau of the Treasury and Bloomberg LP); Singapore (Monetary Authority of Singapore, Singapore Government Securities, and Bloomberg LP); Thailand (Bank of Thailand); and Viet Nam (Bloomberg LP and Vietnam Bond Market Association).

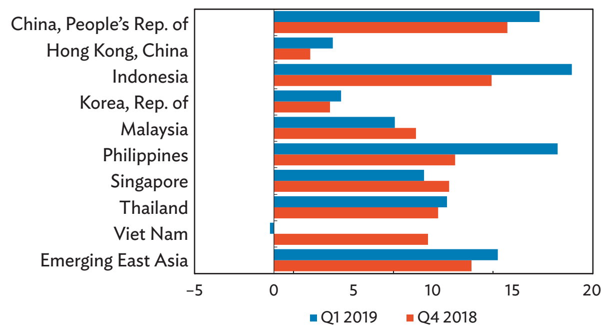
On a year-on-year (y-o-y) basis, the region's LCY bond market grew at a faster pace of 14.0% in Q1 2019 versus 12.4% in Q4 2018 (**Figure 1b**). Positive y-o-y growth rates were recorded in all emerging East Asian markets except Viet Nam in Q1 2019. Similar with the q-o-q trends, Indonesia and the Philippines were the region's fastest growing bond markets, albeit from a relatively low base in both cases. The LCY bond markets of Malaysia, Singapore, and Viet Nam recorded slower y-o-y growth in Q1 2019 than in Q4 2018.

The PRC remained the region's leader in terms of bond market size, with outstanding bonds of USD11.3 trillion at the end of March. The PRC's share of the regional bond market total increased to 75.3% at the end of March from 74.6% at the end of December. However, the PRC's overall bond market growth moderated to 3.0% q-o-q in Q1 2019 from 3.4% q-o-q in Q4 2018.

Much of the growth in the PRC's government bond segment was sustained by an increase in the stock of local government bonds, the issuance of which surged in Q1 2019. As part of measures to boost the economy, the government frontloaded local governments' allocation for the issuance of special bonds in January instead of March, as had been the case in recent years. The growth in the local government bond stock, however, was capped by a contraction in the stock of Treasury bills and bonds as maturities exceeded new issuances, which declined by nearly half during the review period.

[3] 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 1b: Growth of Local Currency Bond Markets in the Fourth Quarter of 2018 and First Quarter of 2019 (y-o-y, %)



Q1 = first quarter, Q4 = fourth quarter, y-o-y = year-on-year.

Notes:

1. Calculated using data from national sources.
2. Growth rates are calculated from local currency base and do not include currency effects.
3. Emerging East Asia growth figures are based on 31 March 2019 currency exchange rates and do not include currency effects.
4. For Singapore, corporate bonds outstanding are based on *AsianBondsOnline* estimates.

Sources: People's Republic of China (*CEIC*); Hong Kong, China (Hong Kong Monetary Authority); Indonesia (Bank Indonesia; Directorate General of Budget Financing and Risk Management, Ministry of Finance; and Indonesia Stock Exchange); Republic of Korea (*EDAILY BondWeb* and The Bank of Korea); Malaysia (Bank Negara Malaysia); Philippines (Bureau of the Treasury and Bloomberg LP); Singapore (Monetary Authority of Singapore, Singapore Government Securities, and Bloomberg LP); Thailand (Bank of Thailand); and Viet Nam (Bloomberg LP and Vietnam Bond Market Association).

Growth in the corporate bond stock moderated to 4.1% q-o-q in Q1 2019 from 5.9% q-o-q in Q4 2018. While the volume of new corporate bonds issued remained fairly large, issuance in all major corporate bond categories fell except for commercial paper, which mostly carry short-term maturities. On a y-o-y basis, the PRC's bond market expanded 16.7% in Q1 2019.

The Republic of Korea's LCY bond market was the second largest in the region at USD2.0 trillion at the end of March. Growth in the bond market rebounded from 0.6% q-o-q in Q4 2018 to 1.8% q-o-q in Q1 2019. However, its share of the regional total slipped to 13.4% at the end of Q1 2019 from 14.0% in the previous quarter. Government bonds rose 1.9% q-o-q, largely driven by an increase in the stock of Korea Treasury Bonds (KTBs). In Q1 2019, the government sold more bonds as it frontloaded expenditures for 2019 by utilizing 70% of its budget in the first 6 months of the year to boost economic growth. The stock of corporate bonds also grew significantly during the review period, as firms locked in low borrowing costs amid concerns that the slowing economy could lead to a deterioration of credit quality and put upward pressure on interest rates. On an annual basis, growth in the Republic of Korea's bond market was 4.2% y-o-y in Q1 2019.

The size of the LCY bond market in Hong Kong, China was little changed at the end of March at USD249.7 billion. The overall growth of 0.5% q-o-q was the weakest among the region's bond markets in Q1 2019. The stock of government bonds contracted 0.6% q-o-q in Q1 2019, largely driven by the declines in the stocks of Exchange Fund Notes and Hong Kong Special Administrative Region Bonds. While the stock of Exchange Fund Bills rose 0.5% q-o-q, overall growth in government bonds was limited by the declines in the two other government instruments. The corporate bond segment was the main growth driver in Q1 2019, with issuance volume rising two-fold during the quarter. On a y-o-y basis, the bond market of Hong Kong, China grew 3.7% in Q1 2019.

The aggregate amount of LCY bonds outstanding among member economies of the Association of Southeast Asian Nations (ASEAN) stood at USD1.5 trillion at the end of March.[4] Overall growth inched up to 4.0% q-o-q in Q1 2019 from 2.0% q-o-q in Q4 2018. The total government bond stock climbed to USD996.0 billion and corporate bonds stood at USD458.5 billion at the end of March. The largest LCY bond markets in ASEAN at the end of Q1 2019 were found in Thailand, Malaysia, and Singapore.

The LCY bond market of Thailand expanded to a size of USD398.6 billion at the end of March, with growth moderating to 1.6% q-o-q in Q1 2019 from 2.5% q-o-q in Q4 2018. The government bond segment slowed its pace of expansion during the review period as the stock of state-owned enterprise bonds and other bonds declined, and the stock of government bonds and Treasury bills grew marginally. On the other hand, the corporate bond segment rebounded with growth rising from 0.5% q-o-q in Q4 2018 to 2.3% q-o-q in Q1 2019. The y-o-y growth rate in the Thai bond market inched up to 10.9% in Q1 2019.

The outstanding amount of Malaysia's LCY bonds totaled USD353.0 billion at the end of March, with growth

[4] LCY bond statistics for ASEAN include the markets of Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Viet Nam.

accelerating from 1.6% q-o-q in Q4 2018 to 2.9% q-o-q in Q1 2019. Growth stemmed largely from government bonds, particularly central government bonds as their issuance picked up in Q1 2019. The stock of central bank bills, on the other hand, fell 9.9% q-o-q. Corporate bonds also contributed to the positive growth but on a smaller scale. On a y-o-y basis, Malaysia's LCY bond market grew 7.6% in Q1 2019.

The largest *sukuk* (Islamic bond) market in emerging East Asia is that of Malaysia, where 61.0% of total LCY bonds outstanding comprise *sukuk*. In Malaysia, 47.0% of all government bonds are structured following Islamic principles, while 76.9% of corporate bonds are *sukuk*.

Singapore's LCY bond market climbed to a size of USD309.6 billion at the end of March, as growth picked up from 1.2% q-o-q in Q4 2018 to 4.2% q-o-q in Q1 2019. Government bonds drove much of the growth, with increases in both Singapore Government Securities and Monetary Authority of Singapore bills. The corporate bond stock also grew 3.7% q-o-q. On an annual basis, Singapore's bond market growth eased to 9.4% y-o-y in Q1 2019 from 11.0% y-o-y in Q4 2018.

The outstanding amount of Indonesia's LCY bonds climbed to USD216.5 billion at the end of March, with growth accelerating to 8.7% q-o-q in Q1 2019 from 2.7% q-o-q in Q4 2018. Indonesia's bond market grew the most among its ASEAN peers, gaining USD17.0 billion in its stock of bonds during the review period, driven largely by government bonds. The stock of Treasury instruments expanded in line with the government's frontloading policy in which it opts to issue a higher volume in the first semester of the year to secure its funding requirements at a time when revenue collection is generally slow. The stock of central bank bills and bonds also contributed to the growth as Bank Indonesia continued to issue conventional Sertifikat Bank Indonesia (SBI) and *sukuk* Bank Indonesia (SukBi). The corporate bond stock grew 3.0% q-o-q on increased issuance volume as corporates took advantage of market conditions following the pause in rate hikes by the Federal Reserve. On a y-o-y basis, Indonesia's LCY bond market growth climbed from 13.7% in Q4 2018 to 18.7% in Q1 2019.

The Philippines' LCY bond market reached a size of USD125.4 billion at the end of March, as growth quickened from 5.3% q-o-q in Q4 2018 to 8.0% q-o-q in Q1 2019. Growth was buoyed largely by government bonds, the stock of which rose 8.8% q-o-q, up from 4.1% q-o-q growth in the prior quarter. The government took advantage of improving market sentiment and issued nearly triple the amount of bonds in Q1 2019 than in Q4 2018. The corporate bond segment also contributed to the overall growth, although at a lesser extent. Annual bond market growth in the Philippines jumped to 17.8% y-o-y in Q1 2019 from 11.4% y-o-y in Q1 2018.

The LCY bond market in Viet Nam posted positive q-o-q growth during the review period, rebounding from a contraction in the prior quarter. LCY bonds outstanding rose to USD51.4 billion at the end of March, up 0.7% q-o-q from the end of December. Growth was solely driven by an increase in the stock of Treasury bonds. For the first time in 5 months, the State Bank of Vietnam sold central bank bills amid flush liquidity in the banking system. The increases in the stock of Treasury bonds and central bank bills more than offset the decline in government-guaranteed bonds and municipal bonds. The stock of corporate bonds also declined in Q1 2019. On a y-o-y basis, Viet Nam's bond market contracted a marginal 0.2%.

At the end of March, government bonds continued to account for the majority of emerging East Asia's total LCY bond stock, representing a 61.7% share. In nominal terms, the outstanding amount of government bonds climbed to USD9.3 trillion on growth of 2.6% q-o-q and 14.0% y-o-y (**Table 1**). Accounting for the largest shares of the regional government bond market were the PRC and the Republic of Korea with 78.8% and 8.8% of the region's government bond stock, respectively.

Among ASEAN members, Thailand had the largest LCY government bond market at the end of March at a size of USD287.1 billion. Next largest were Singapore and Malaysia, with outstanding government bonds totaling USD188.5 billion and USD187.6 billion, respectively. Due to the rapid growth of government bonds outstanding in Q1 2019, Indonesia's total bonds outstanding were nearly on par at USD186.7 billion. The Philippines and Viet Nam continued to have the smallest government bonds outstanding at USD99.0 billion and USD47.1 billion, respectively.

LCY corporate bonds outstanding in emerging East Asia reached USD5.8 trillion at the end of March. On a q-o-q basis, growth in the corporate bond outstanding decelerated to 3.5% from 4.6% in the previous quarter.

Table 1: Size and Composition of Local Currency Bond Markets

	Q1 2018		Q4 2018		Q1 2019		Growth Rate (LCY-base %)				Growth Rate (USD-base %)			
							Q1 2018		Q1 2019		Q1 2018		Q1 2019	
	Amount (USD billion)	% share	Amount (USD billion)	% share	Amount (USD billion)	% share	q-o-q	y-o-y	q-o-q	y-o-y	q-o-q	y-o-y	q-o-q	y-o-y
China, People's Rep. of														
Total	10,382	100.0	10,725	100.0	11,325	100.0	1.3	15.8	3.0	16.7	5.0	27.1	5.6	9.1
Government	6,735	64.9	6,961	64.9	7,309	64.5	0.7	17.5	2.5	16.1	4.4	28.9	5.0	8.5
Corporate	3,647	35.1	3,763	35.1	4,015	35.5	2.3	12.8	4.1	17.8	6.1	23.8	6.7	10.1
Hong Kong, China														
Total	241	100.0	249	100.0	250	100.0	(0.9)	2.1	0.5	3.7	(1.3)	1.1	0.3	3.7
Government	146	60.8	149	59.9	148	59.2	(0.4)	7.6	(0.6)	1.1	(0.8)	6.5	(0.9)	1.1
Corporate	94	39.2	100	40.1	102	40.8	(1.6)	(5.5)	2.2	7.7	(2.1)	(6.4)	1.9	7.7
Indonesia														
Total	189	100.0	197	100.0	217	100.0	4.0	13.4	8.7	18.7	2.7	10.1	9.8	14.4
Government	160	84.6	169	85.5	187	86.2	4.2	11.5	9.6	21.0	2.8	8.2	10.7	16.7
Corporate	29	15.4	29	14.5	30	13.8	3.4	24.8	3.0	5.9	2.1	21.1	4.0	2.1
Korea, Rep. of														
Total	2,056	100.0	2,014	100.0	2,007	100.0	1.2	4.4	1.8	4.2	1.5	9.8	(0.3)	(2.4)
Government	860	41.9	823	40.8	820	40.9	3.0	4.9	1.9	1.7	3.4	10.3	(0.3)	(4.7)
Corporate	1,195	58.1	1,191	59.2	1,187	59.1	(0.1)	4.0	1.8	6.0	0.2	9.3	(0.3)	(0.7)
Malaysia														
Total	347	100.0	339	100.0	353	100.0	4.1	11.1	2.9	7.6	9.1	27.2	4.1	1.8
Government	182	52.6	179	52.7	188	53.1	4.7	8.3	3.6	8.7	9.7	24.1	5.0	2.8
Corporate	164	47.4	160	47.3	165	46.9	3.5	14.3	2.0	6.4	8.4	30.9	3.3	0.7
Philippines														
Total	107	100.0	116	100.0	125	100.0	2.1	13.1	8.0	17.8	(2.5)	8.8	8.0	17.0
Government	86	80.1	91	78.4	99	79.0	0.5	11.7	8.8	16.2	(4.0)	7.4	8.8	15.4
Corporate	21	19.9	25	21.6	26	21.0	9.2	19.5	5.4	24.4	4.3	14.9	5.4	23.5
Singapore														
Total	292	100.0	295	100.0	310	100.0	5.7	10.3	4.2	9.4	7.7	17.5	4.8	5.9
Government	175	60.0	179	60.7	188	60.9	3.7	12.2	4.5	11.1	5.6	19.6	5.1	7.5
Corporate	117	40.0	116	39.3	121	39.1	8.9	7.5	3.7	6.9	10.9	14.5	4.3	3.4
Thailand														
Total	366	100.0	385	100.0	399	100.0	1.2	2.2	1.6	10.9	19.5	31.7	3.5	8.9
Government	263	71.9	278	72.2	287	72.0	0.1	(0.6)	1.4	11.1	16.4	26.5	3.3	9.1
Corporate	103	28.1	107	27.8	111	28.0	4.0	10.1	2.3	10.3	28.2	47.2	4.2	8.3
Viet Nam														
Total	52	100.0	51	100.0	51	100.0	10.8	16.5	0.7	(0.2)	10.3	16.3	0.7	(1.9)
Government	49	93.6	47	91.4	47	91.6	11.6	16.1	0.9	(2.4)	11.1	15.9	0.9	(4.1)
Corporate	3	6.4	4	8.6	4	8.4	(0.5)	23.2	(1.3)	31.9	(0.9)	23.0	(1.4)	29.7
Emerging East Asia														
Total	14,032	100.0	14,371	100.0	15,036	100.0	1.4	13.0	2.9	14.0	4.8	23.1	4.6	7.2
Government	8,657	61.7	8,875	61.8	9,273	61.7	1.1	14.8	2.6	14.0	4.6	25.2	4.5	7.1
Corporate	5,375	38.3	5,496	38.2	5,763	38.3	1.9	10.3	3.5	14.2	5.1	19.9	4.9	7.2
Japan														
Total	10,848	100.0	10,687	100.0	10,710	100.0	0.2	1.8	1.3	3.0	6.2	6.7	0.2	(1.3)
Government	10,125	93.3	9,964	93.2	9,992	93.3	0.3	2.1	1.4	2.9	6.4	7.0	0.3	(1.3)
Corporate	723	6.7	724	6.8	718	6.7	(1.5)	(1.9)	0.3	3.7	4.4	2.8	(0.7)	(0.6)

( ) = negative, LCY = local currency, q-o-q = quarter-on-quarter, Q1 = first quarter, Q4 = fourth quarter, USD = United States dollar, y-o-y = year-on-year.
Notes:
1. For Singapore, corporate bonds outstanding are based on *AsianBondsOnline* estimates. For Japan, Q1 2019 bonds outstanding data are as of February 2019.
2. Corporate bonds include issues by financial institutions.
3. Bloomberg LP end-of-period LCY–USD rates are used.
4. For LCY base, emerging East Asia growth figures are based on 31 March 2019 currency exchange rates and do not include currency effects.
5. 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.
Sources: People's Republic of China (*CEIC*); Hong Kong, China (Hong Kong Monetary Authority); Indonesia (Bank Indonesia; Directorate General of Budget Financing and Risk Management, Ministry of Finance; and Indonesia Stock Exchange); Republic of Korea (*EDAILY BondWeb* and The Bank of Korea); Malaysia (Bank Negara Malaysia); Philippines (Bureau of the Treasury and Bloomberg LP); Singapore (Monetary Authority of Singapore, Singapore Government Securities, and Bloomberg LP); Thailand (Bank of Thailand); Viet Nam (Bloomberg LP and Vietnam Bond Market Association); and Japan (Japan Securities Dealers Association).

The slower growth rate was driven mostly by a slowdown in the PRC's corporate bond sector. The PRC and the Republic of Korea account for a significant portion of emerging East Asia's corporate bond sector with a combined share of 90.3% at the end of March. Within ASEAN, Malaysia had the largest corporate bond market, followed by Singapore.

Emerging East Asia's share of LCY bonds outstanding to gross domestic product (GDP) rose to 81.4% at the end of March from 80.4% at the end of December (**Table 2**). The shares of government bonds and corporate bonds to GDP rose to 50.2% and 31.2%, respectively. The region's largest bond market measured as a share of GDP remained the Republic of Korea's at 125.6%. Next was the Malaysian bond market at 104.7%. Emerging East Asia's rising share of bonds outstanding to GDP in Q1 2019 was mostly due to slower economic growth in the region.

Foreign Investor Holdings

Movements in the shares of foreign investor holdings in emerging East Asia were mixed at the end of March.

Foreign investor holdings in emerging East Asia's LCY government bond markets moved in mixed directions in Q1 2019, reflecting individual market characteristics (**Figure 2**). The PRC and Indonesia saw increases in their foreign investor shares during the quarter, while the Philippines, Thailand, and Malaysia recorded declines.

In the PRC, the uptick in nonresident holdings reflects optimism that the domestic economy will be able to weather a slowdown following stimulus measures initiated by the government to help boost growth and stabilize the economy.

Indonesia experienced the largest increase during the review period, with its foreign investor share rising to 38.3% at the end of March from 37.7% at the end of December. Overseas funds shored up their holdings of Indonesian bonds after the Federal Reserve's announcement that it would hold off further rate hikes for the year. Indonesia continued to attract interest from offshore investors due to relatively high real interest rates as inflation remained under control.

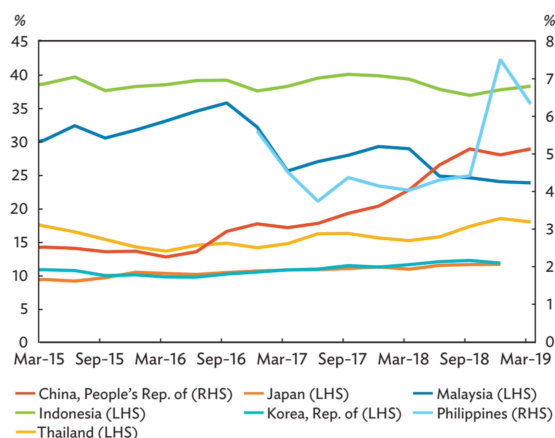
Table 2: Size and Composition of Local Currency Bond Markets (% of GDP)

	Q1 2018	Q4 2018	Q1 2019
China, People's Rep. of			
Total	77.6	81.9	83.0
Government	50.4	53.2	53.6
Corporate	27.3	28.8	29.4
Hong Kong, China			
Total	69.6	68.6	68.3
Government	42.3	41.1	40.5
Corporate	27.3	27.5	27.8
Indonesia			
Total	18.7	19.1	20.4
Government	15.8	16.4	17.6
Corporate	2.9	2.8	2.8
Korea, Rep. of			
Total	123.4	123.8	125.6
Government	51.6	50.6	51.3
Corporate	71.7	73.2	74.3
Malaysia			
Total	101.7	102.9	104.7
Government	53.5	54.3	55.6
Corporate	48.2	48.6	49.1
Philippines			
Total	34.6	35.0	37.2
Government	27.7	27.4	29.4
Corporate	6.9	7.5	7.8
Singapore			
Total	81.2	82.0	84.8
Government	48.7	49.8	51.7
Corporate	32.5	32.2	33.2
Thailand			
Total	72.8	76.3	76.8
Government	52.3	55.1	55.3
Corporate	20.5	21.2	21.5
Viet Nam			
Total	23.4	21.4	21.2
Government	21.9	19.5	19.4
Corporate	1.5	1.8	1.8
Emerging East Asia			
Total	77.4	80.4	81.4
Government	47.7	49.7	50.2
Corporate	29.6	30.7	31.2
Japan			
Total	210.6	213.6	215.8
Government	196.6	199.1	201.4
Corporate	14.0	14.5	14.5

GDP = gross domestic product, Q1 = first quarter, Q4 = fourth quarter.
Notes:
1. Data for GDP is from CEIC.
2. For Singapore, corporate bonds outstanding are based on *AsianBondsOnline* estimates. For Japan, Q1 2019 bonds outstanding data are as of February 2019.

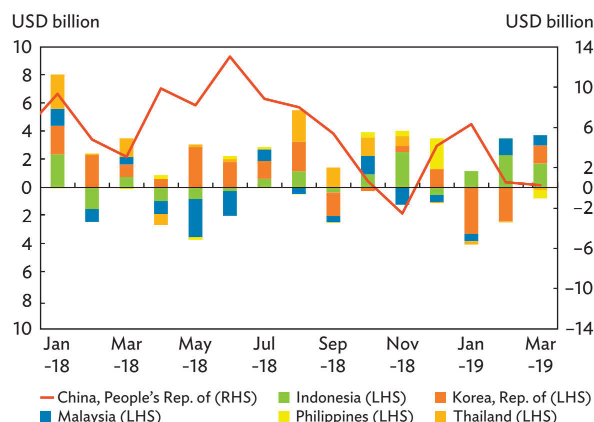
Sources: People's Republic of China (*CEIC*); Hong Kong, China (Hong Kong Monetary Authority); Indonesia (Bank Indonesia; Directorate General of Budget Financing and Risk Management, Ministry of Finance; and Indonesia Stock Exchange); Republic of Korea (*EDAILY BondWeb* and The Bank of Korea); Malaysia (Bank Negara Malaysia); Philippines (Bureau of the Treasury and Bloomberg LP); Singapore (Monetary Authority of Singapore, Singapore Government Securities, and Bloomberg LP); Thailand (Bank of Thailand); Viet Nam (Bloomberg LP and Vietnam Bond Market Association); and Japan (Japan Securities Dealers Association).

Figure 2: 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 end-March 2019 except for Japan and the Republic of Korea (end-December 2018).
Source: *AsianBondsOnline*.

Figure 3: Foreign Bond Flows in Select Emerging East Asian Economies



LHS = left-hand side, RHS = right-hand side, USD = United States dollar.
Notes:
1. The Republic of Korea and Thailand provided data on bond flows. For the People's Republic of China, Indonesia, Malaysia, and the Philippines, month-on-month changes in foreign holdings of local currency government bonds were used as a proxy for bond flows.
2. Data as of end-March 2019.
3. Figures were computed based on 31 March 2019 exchange rates to avoid currency effects.

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

The Philippines, on the other hand, experienced the largest decline in its foreign holdings share, which dropped to 6.3% at the end of March from 7.5% at the end of December. Investors locked in their profits ahead of expectations that yields will decline further.

Thailand's foreign holdings share slipped to 18.0% from 18.5% due to uncertainties ahead of the Thai general election at the end of March. In Malaysia, the share fell slightly to 23.8% at the end of March on concerns over the government's debt levels.

Foreign Bond Flows

Foreign flows into the region's bond markets were also mixed in Q1 2019.

The PRC's and Indonesia's bond markets were the biggest beneficiaries of capital flows, with both markets registering positive bond flows in each month of Q1 2019 (**Figure 3**).

Thailand experienced consistent bond outflows in each month of Q1 2019 amid uncertainty surrounding the general election. Overall, outflows were limited to a net of USD0.5 billion as Thailand's strong current account surpluses helped offset the impact of negative investor sentiment.

The largest cumulative outflows for Q1 2019 were in the Republic of Korea at USD4.4 billion, mainly in January and February. Investor sentiment in the Republic of Korea was negatively affected by the continued depreciation of the Korean won due to economic growth concerns.

Malaysia's net inflows for Q1 2019 were positive at USD1.4 billion. Concerns over Malaysia's fiscal balances and overall debt levels led to outflows in January, which were more than offset by inflows in February and March.

The Philippines reported outflows in March, following positive inflows in January and February as investors took profits from rising bond prices.

On an aggregate basis, foreign bond flows into emerging East Asia's LCY bond market remained positive at USD8.2 billion in Q1 2019. However, this was down from the net inflows posted in Q4 2018.

Issuance

Emerging East Asia's aggregate bond issuance rose to USD1.4 trillion in Q1 2019.

Emerging East Asia's LCY aggregate bond issuance reached USD1.4 trillion in Q1 2019, up 10.0% q-o-q after a decline of 15.8% q-o-q in Q4 2018, buoyed by strong issuance of government bonds despite lower corporate bond sales (**Table 3**). Government bonds formed 60.2% of the region's issuance in Q1 2019. Increased issuances on a q-o-q basis were seen in all markets in the region except the Republic of Korea, which saw a decline of 8.3% q-o-q. On an annual basis, total LCY issuance rose 39.6% y-o-y in Q1 2019, accelerating from 9.7% y-o-y growth in Q4 2018, driven by increased issuance in both the government and corporate bond sectors.

LCY bond issuance in the region's government bond sector amounted to USD853.4 billion in Q1 2019, up 29.0% q-o-q and rebounding from a 34.2% q-o-q decline in Q4 2018 as issuances rose in all markets except Hong Kong, China. The strong issuance volumes were boosted by frontloading policies in a number of markets, including the PRC, Indonesia, and the Republic of Korea. Expansions on a q-o-q basis were seen across all government bond segments, the largest of which was for Treasury bonds and other securities at 46.1% q-o-q, which recovered from a 48.2% q-o-q decline in Q4 2018. On an annual basis, government bond issuance rose 37.6% y-o-y, with all segments exhibiting growth.

LCY bond issuance in the corporate sector amounted to USD563.9 billion in Q1 2019, down 10.0% q-o-q, driven by declines in most markets, including the PRC and the Republic of Korea—the two largest markets in the region. Together, these markets accounted for 91.9% of the region's corporate bond issuance in Q1 2019. The PRC saw a decline of 9.7% q-o-q in corporate bond sales, while the Republic of Korea saw an even sharper decline of 22.6% q-o-q. Markets that exhibited q-o-q growth include Hong Kong, China; Indonesia; Singapore; and Thailand. On an annual basis, the region's corporate bonds sales grew rapidly by 42.8% y-o-y.

The PRC's LCY bond issuance rose 11.6% q-o-q in Q1 2019, after falling 23.8% q-o-q in Q4 2018, to reach USD868.9 billion. The q-o-q growth was solely driven by the government bond segment, which surged 44.5% q-o-q to USD442.6 billion, reversing a 51.1% q-o-q decline in the previous quarter due to large issuances of local government bonds in the first 3 months of the year. The Ministry of Finance decided to frontload local government debt allocations in an effort to boost the economy, which posted its slowest annual growth in 2018 in almost 3 decades. More than half of the issuances were special purpose bonds used to finance construction projects in an effort to boost economic growth through infrastructure spending. In Q1 2019, government bonds accounted for over half (50.9%) of the PRC's total LCY bond issuance. The corporate bond segment, on the other hand, saw a decline of 9.7% q-o-q in Q1 2019 to USD426.3 billion, reversing the 19.4% q-o-q growth posted in the prior quarter. Among the PRC's corporate bond segments, only commercial paper saw increased issuance during the review period.

LCY bond issuance in the Republic of Korea amounted to USD162.9 billion in Q1 2019, down 8.3% q-o-q after growing 7.2% q-o-q in Q4 2018. Corporate bond issuance in Q1 2019 fell 22.6% q-o-q in Q1 2019, offsetting strong government bond issuance during the period. Government bond issuance in Q1 2019 rose 20.7% q-o-q, reversing the previous quarter's 23.3% q-o-q decline with a 45.4% q-o-q increase in the issuance of Treasury bonds and other government securities. The rise in issuance was driven by the government's funding needs as it frontloaded expenditures to help prop up the domestic economy.

Hong Kong, China's LCY bond issuance grew 3.8% q-o-q in Q1 2019, following modest growth of 1.4% q-o-q in Q4 2018, to reach USD117.4 billion at the end of March. Despite the issuance of corporate bonds doubling on a q-o-q basis during the period, government bond issuance was weak. Government bonds, which made up 88.2% of total issuance during the quarter, declined 2.4% q-o-q in Q1 2019 to USD103.6 billion, zeroing out the previous quarter's 2.5% q-o-q growth. Issuance of Hong Kong Special Administrative Region bonds, typically low at the start of the year, dropped 77.9% q-o-q in Q1 2019. This was coupled with a decline of 1.5% q-o-q in the issuance of Exchange Fund Bills and Notes by the Hong Kong Monetary Authority. Corporate bond issuance steeply climbed 99.6% q-o-q in Q1 2019 to USD13.8 billion, but only constituted 11.8% of total quarterly issuance in Hong Kong, China.

The aggregate LCY bond issuance of ASEAN member economies amounted to USD268.0 billion in Q1 2019,

Table 3: Local-Currency–Denominated Bond Issuance (gross)

	Q1 2018		Q4 2018		Q1 2019		Growth Rate (LCY-base %)		Growth Rate (USD-base %)	
							Q1 2019		Q1 2019	
	Amount (USD billion)	% share	Amount (USD billion)	% share	Amount (USD billion)	% share	q-o-q	y-o-y	q-o-q	y-o-y
China, People's Rep. of										
Total	536	100.0	760	100.0	869	100.0	11.6	73.3	14.4	62.0
Government	261	48.7	299	39.4	443	50.9	44.5	81.4	48.1	69.6
Central Bank	0	0.0	0	0.0	0	0.0	–	–	–	–
Treasury and Other Govt.	261	48.7	299	39.4	443	50.9	44.5	81.4	48.1	69.6
Corporate	275	51.3	461	60.6	426	49.1	(9.7)	65.6	(7.5)	54.8
Hong Kong, China										
Total	115	100.0	113	100.0	117	100.0	3.8	2.2	3.6	2.2
Government	101	88.0	106	93.9	104	88.2	(2.4)	2.5	(2.6)	2.5
Central Bank	101	87.8	105	92.8	103	88.0	(1.5)	2.5	(1.8)	2.5
Treasury and Other Govt.	0.2	0.2	1	1.1	0.3	0.2	(77.9)	16.7	(77.9)	16.6
Corporate	14	12.0	7	6.1	14	11.8	99.6	(0.04)	99.1	(0.1)
Indonesia										
Total	18	100.0	11	100.0	26	100.0	138.9	50.9	141.4	45.4
Government	16	90.5	10	91.3	25	94.1	146.3	57.0	148.8	51.3
Central Bank	0.3	1.7	2	15.4	7	28.5	341.5	2,396.4	346.0	2,306.2
Treasury and Other Govt.	16	88.7	8	75.9	17	65.6	106.5	11.5	108.7	7.5
Corporate	2	9.5	0.9	8.7	2	5.9	61.8	(6.9)	63.4	(10.2)
Korea, Rep. of										
Total	180	100.0	182	100.0	163	100.0	(8.3)	(3.4)	(10.3)	(9.5)
Government	82	45.7	60	33.0	71	43.4	20.7	(8.3)	18.2	(14.1)
Central Bank	38	21.1	33	17.9	32	19.6	0.1	(10.3)	(2.1)	(16.0)
Treasury and Other Govt.	44	24.7	27	15.1	39	23.9	45.4	(6.6)	42.3	(12.5)
Corporate	98	54.3	122	67.0	92	56.6	(22.6)	0.7	(24.3)	(5.6)
Malaysia										
Total	26	100.0	25	100.0	25	100.0	0.7	2.9	2.0	(2.6)
Government	15	57.5	14	57.7	15	58.5	2.2	4.7	3.5	(0.9)
Central Bank	4	16.9	7	30.0	5	19.2	(35.5)	17.2	(34.7)	10.9
Treasury and Other Govt.	11	40.6	7	27.7	10	39.3	43.1	(0.5)	44.9	(5.8)
Corporate	11	42.5	10	42.3	10	41.5	(1.3)	0.5	(0.02)	(4.9)
Philippines										
Total	6	100.0	7	100.0	14	100.0	94.0	147.5	94.1	145.8
Government	4	78.7	5	65.4	13	92.0	172.9	189.3	172.9	187.4
Central Bank	0	0.0	0	0.0	0	0.0	–	–	–	–
Treasury and Other Govt.	4	78.7	5	65.4	13	92.0	172.9	189.3	172.9	187.4
Corporate	1	21.3	2	34.6	1	8.0	(54.9)	(6.7)	(54.9)	(7.3)
Singapore										
Total	93	100.0	100	100.0	112	100.0	10.5	24.1	11.1	20.0
Government	89	95.5	97	96.9	108	96.7	10.3	25.7	10.9	21.6
Central Bank	83	89.7	94	93.2	103	92.0	9.1	27.2	9.7	23.1
Treasury and Other Govt.	5	5.8	4	3.7	5	4.8	41.2	1.4	41.9	(1.9)
Corporate	4	4.5	3	3.1	4	3.3	17.5	(9.9)	18.1	(12.9)
Thailand										
Total	72	100.0	70	100.0	85	100.0	18.8	19.6	21.1	17.5
Government	57	79.5	59	84.3	70	82.7	16.5	24.4	18.7	22.2
Central Bank	47	64.4	53	75.7	65	76.6	20.2	42.1	22.4	39.7
Treasury and Other Govt.	11	15.1	6	8.6	5	6.1	(15.7)	(51.5)	(14.2)	(52.4)
Corporate	15	20.5	11	15.7	15	17.3	31.2	0.9	33.6	(0.9)

continued on next page

Table 3 *continued*

	Q1 2018		Q4 2018		Q1 2019		Growth Rate (LCY-base %)		Growth Rate (USD-base %)	
							Q1 2019		Q1 2019	
	Amount (USD billion)	% share	Amount (USD billion)	% share	Amount (USD billion)	% share	q-o-q	y-o-y	q-o-q	y-o-y
Viet Nam										
Total	22	100.0	4	100.0	6	100.0	69.8	(71.9)	69.7	(72.4)
Government	22	99.6	3	87.4	6	97.5	89.4	(72.5)	89.3	(73.0)
Central Bank	19	86.7	0.7	18.3	3	42.2	291.6	(86.3)	291.3	(86.6)
Treasury and Other Govt.	3	12.9	2	69.1	3	55.4	36.0	20.5	35.9	18.5
Corporate	0.1	0.4	0.5	12.6	0.1	2.5	(66.8)	65.1	(66.8)	62.3
Emerging East Asia										
Total	1,068	100.0	1,272	100.0	1,417	100.0	10.0	39.6	11.5	32.7
Government	648	60.7	654	51.4	853	60.2	29.0	37.6	30.5	31.6
Central Bank	293	27.4	294	23.1	318	22.4	7.8	11.1	8.0	8.6
Treasury and Other Govt.	356	33.3	360	28.3	536	37.8	46.1	60.2	49.0	50.6
Corporate	420	39.3	618	48.6	564	39.8	(10.0)	42.8	(8.7)	34.3
Japan										
Total	415	100.0	417	100.0	404	100.0	(1.9)	1.7	(2.9)	(2.5)
Government	396	95.5	382	91.7	378	93.4	0.03	(0.4)	(1.0)	(4.5)
Central Bank	0	0.0	0	0.0	0	0.0	–	–	–	–
Treasury and Other Govt.	396	95.5	382	91.7	378	93.4	0.03	(0.4)	(1.0)	(4.5)
Corporate	19	4.5	35	8.3	27	6.6	(22.7)	47.7	(23.6)	41.6

( ) = negative, – = not applicable, LCY = local currency, q-o-q = quarter-on-quarter, Q1 = first quarter, Q4 = fourth quarter, USD = United States dollar, y-o-y = year-on-year.
Notes:
1. Corporate bonds include issues by financial institutions.
2. For Japan, Q1 2019 issuance data are based on data for the months of December 2018 to February 2019.
3. Bloomberg LP end-of-period LCY–USD rates are used.
4. For LCY-base, emerging East Asia growth figures are based on 31 March 2019 currency exchange rates and do not include currency effects.
Sources: People's Republic of China (*CEIC*); Hong Kong, China (Hong Kong Monetary Authority); Indonesia (Bank Indonesia; Directorate General of Budget Financing and Risk Management, Ministry of Finance; and Indonesia Stock Exchange); Republic of Korea (*EDAILY Bondweb* and The Bank of Korea); Malaysia (Bank Negara Malaysia); Philippines (Bloomberg LP); Singapore (Singapore Government Securities and Bloomberg LP); Thailand (Bank of Thailand and ThaiBMA); Viet Nam (Bloomberg LP and Vietnam Bond Market Association); and Japan (Japan Securities Dealers Association).

accounting for 18.9% of the total issuance in emerging East Asia. Singapore was the largest ASEAN issuer, while Viet Nam was the smallest. Issuance across all ASEAN markets grew on a quarterly basis, with Indonesia and the Philippines having the highest q-o-q growth rates. Total issuance in Q1 2019 comprised 88.2% government bonds and 11.8% corporate bonds.

Indonesia's LCY bond issuance was exceptionally high at USD26.2 billion in Q1 2019, with growth of 138.9% q-o-q reversing a decline of 29.7% q-o-q in Q4 2018, propelled by triple-digit growth in the government sector, making Indonesia the top gainer among its ASEAN peers. The Ministry of Finance regularly adopts a frontloading policy by issuing more Treasury instruments in the first half of the year to finance the government's budget spending. Issuance of central government bonds reached USD17.2 billion in Q1 2019 from the sale of Treasury bills and bonds, with growth rising to 106.5% q-o-q from a contraction of 25.0% q-o-q in Q4 2018. Issuances in Q1 2019 were met with hefty demand from investors interested in Indonesian government bonds following the Federal Reserve's dovish policy statements. Issuance of central bank instruments, comprising of Sertifikat Bank Indonesia (SBI) and Sukuk Bank Indonesia (SukBI) amounted to USD7.5 billion in Q1 2019. The q-o-q growth in central bank issuance, which rose more than four-fold from a low base in the previous quarter, was due to increased issuance of SBI and a substantial rise in the issuance of SukBI. (The government commenced issuance of SukBI in December 2018.) Corporate bond issuance advanced more slowly than government bonds in Q1 2019 at 61.8% q-o-q, amounting to USD1.5 billion. Good market conditions allowed corporates to tap the bond market for their funding needs during the quarter, recovering from a 59.3% q-o-q contraction in corporate issuance in the previous quarter.

Malaysia's LCY bond issuance grew 0.7% q-o-q in Q1 2019 to USD25.2 billion at the end of March, losing speed from growth of 11.1% q-o-q in Q4 2018, sustained by growth in the government sector. Buoyed by the

strong issuance of central government securities, the government sector grew 2.2% q-o-q in Q1 2019 to USD14.8 billion at the end of March, following growth of 3.9% q-o-q in Q4 2018. Government Investment Issues and Malaysian Government Securities, which made up 90.1% of total central government bond issuance, reached USD8.9 billion at the end of March on growth of 44.3% q-o-q, offsetting the 35.5% q-o-q decline in the issuance of central bank bonds. Buying interest in government bonds was high as indicated by a strong bid-to-cover ratio, which can be traced to benign inflation. Corporate bond issuance amounted to USD10.5 billion in Q1 2019, on a decline of 1.3% q-o-q. Negative sentiment over slowing economic growth and falling investment, both domestically and globally, led to the q-o-q decline after 22.6% q-o-q growth in Q4 2018.

Gross bond issuance in the Philippines totaled USD14.0 billion, up 94.0% q-o-q and accounting for the second-highest q-o-q growth rate in the region. The growth in Philippine bond issuance was solely driven by gains in government bonds, which grew 172.9% q-o-q. The strong growth in government bonds was led by the issuance of Retail Treasury Bonds in March, which accounted for 35.0% of total government bond issuance during the quarter. The government also issued more bonds in Q1 2019 as it took advantage of improved investor sentiment and demand. In contrast, Philippine corporate bond issuance declined 54.9% q-o-q.

Bond issuance in Singapore grew 10.5% q-o-q to reach USD111.7 billion in Q1 2019, reversing the previous quarter's decline of 5.9% q-o-q. Government bond issuance dominated with a share of 96.7%, mostly from the Monetary Authority of Singapore. Corporate bond issuance also grew 17.5% q-o-q from a low base.

Thailand's LCY bond issuance rose 18.8% q-o-q in Q1 2019 to USD84.9 billion, following a decline of 2.9% q-o-q in Q4 2018, on growth in both the government and corporate sectors. Issuance of government bonds amounted to USD70.2 billion in Q1 2019, growing 16.5% q-o-q after meager 1.9% q-o-q growth in Q4 2018. The quarterly growth was mainly driven by increased issuance of central bank bonds, which rose 20.2% q-o-q in Q1 2019 and formed 92.6% of total government bond issuance. Issuance of central government bills and state-owned enterprise bonds fell 15.7% q-o-q after also declining 21.6% q-o-q in Q4 2018. Corporate bond issuance in Q1 2019 rose 31.2% q-o-q to USD14.7 billion, following a decline of 22.2% q-o-q in Q4 2018, due to the substantial increase in the issuance of nonrated and noninvestment-grade, long-term corporate bonds. Issuance of highly rated, investment-grade bonds also rose, albeit at a much slower pace owing to the relatively low interest rate environment set. Bank of Thailand held off on further rate hikes in Q1 2019 following a 25 basis points (bps) increase in December 2018.

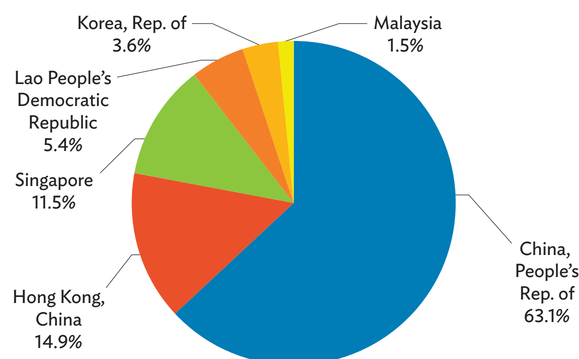
LCY bond issuance in Viet Nam rose 69.8% q-o-q in Q1 2019 to USD6.1 billion, reversing a 47.9% q-o-q contraction in Q4 2018, on account of increased issuance of government bonds during the period. Government bond issuance grew 89.4% q-o-q to reach USD5.9 billion in Q1 2019, benefitting from the strong issuance of central bank bills and the steady issuance of central government bonds. Issuance of central bank bills soared 291.6% q-o-q in Q1 2019 to USD2.6 billion, constituting a 42.2% share of total government issuance for the period. The State Bank of Vietnam resumed the issuance of bills for the first time in 5 months in March to withdraw Vietnamese dong from the banking system due to abundant liquidity. Issuance of central government bonds rose 36.0% q-o-q in Q1 2019, easing from growth of 41.3% q-o-q in Q4 2018. Issuance in the corporate sector, on the other hand, sharply fell 66.8% q-o-q to USD0.1 billion, accounting for only 2.5% of Viet Nam's aggregate issuance during the quarter.

Cross-Border Bond Issuance

Cross-border bond issuance in emerging East Asia totaled USD5.8 billion in Q1 2019.

Emerging East Asia's total intra-regional bond issuance increased 5.3% q-o-q in Q1 2019 to reach USD5.8 billion, up from USD5.5 billion in Q4 2018 but down from USD8.4 billion in Q1 2018. The PRC had the largest amount of cross-border issuance in Q1 2019 at USD3.6 billion, contributing 63.1% of the region's cross-border issuance total during the quarter (**Figure 4**). This was followed by Hong Kong, China with USD0.9 billion (14.9%), which was half the issued amount of USD1.8 billion in Q4 2018. Singapore issued USD0.7 billion (11.5%) and was followed by the Lao People's Democratic Republic (Lao PDR) with USD0.3 billion (5.4%), the Republic of Korea with USD0.2 billion (3.6%), and Malaysia with USD0.1 billion (1.5%).

Figure 4: Origin Economy of Intra-Emerging East Asian Bond Issuance in the First Quarter of 2019



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

Due to the close economic ties between the PRC and Hong Kong, China, most PRC-based firms engaged in cross-border bond issuances in Q1 2019 issued HKD-denominated bonds, which amounted to USD3.5 billion. Two other cross-border bonds were issued during the quarter: one denominated in Singapore dollars and the other in Malaysian ringgit. Issuances from the PRC carried tenors ranging from 6 months to 10 years. The largest issuance came from the Export–Import Bank of China with a USD0.5 billion 5-year bond carrying a coupon rate of 2.7%.

Most of Hong Kong, China's intra-regional bond issuances were in Chinese renminbi, totaling USD0.6 billion. The issuances carried maturities of 1–3 years, with the largest cross-border issuance coming from the Bank of East Asia at a coupon rate of 3.65%. Hong Kong, China also issued a USD0.2 billion bond with a 3-year tenor and a 6.75% coupon rate.

Cross-border bond issuances in Singapore were a mix of Chinese renminbi, Hong Kong dollars, Korean won, and Thai baht. The largest single issuance was a bond issued by United Overseas Bank amounting to USD0.3 billion.

The Lao PDR's cross-border issuances in Q1 2019 were all denominated in Thai baht for an aggregate amount of USD0.3 billion, mostly issued by Nam Ngum 2 Power Company.

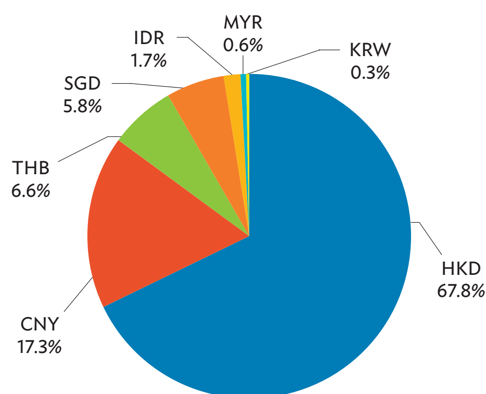
Cross-border issuances from the Republic of Korea were denominated in Chinese renminbi, Hong Kong dollars, and Indonesian rupiah, amounting to USD60 million, USD48 million, and USD97 million, respectively.

In Malaysia, Malayan Banking issued two intra-regional bonds totaling USD89 million in Q1 2019. The bonds each have a 1-year tenor and carry coupon rates of 2.15% and 2.20%.

The top 10 issuers in Q1 2019 in emerging East Asia accounted for over 70% of total cross-border bond issuance, of which six of the 10 issuers were from the PRC and denominated in Hong Kong dollars. The largest issuer was the Export–Import Bank of China with issuances amounting to USD955 million. It was followed by the China Development Bank, which had three cross-border issuances amounting to USD548 million. Other issuers included on the list were Bank of East Asia and ESR Cayman in Hong Kong, China; United Overseas Bank of Singapore; and Nam Ngum 2 Power Company from the Lao PDR.

The top three currencies utilized for cross-border issuances in emerging East Asia were the Hong Kong dollar, Chinese renminbi, and Thai baht (**Figure 5**). About 68% (USD3.9 billion) of the total issuance was denominated in Hong Kong dollars, of which about 90% was issued from entities in the PRC while the rest came

Figure 5: Currency Share of Intra-Emerging East Asian Bond Issuance in the First Quarter of 2019



CNY = Chinese yuan, HKD = Hong Kong dollar, IDR = Indonesian rupiah, KRW = Korean won, MYR = Malaysian ringgit, SGD = Singapore dollar, THB = Thai baht.
Source: *AsianBondsOnline* calculations based on Bloomberg LP data.

from issuers in Singapore, Malaysia, and the Republic of Korea. CNY-denominated bonds worth USD1.0 billion came from issuers in Hong Kong, China; the Republic of Korea; and Singapore. THB-denominated bonds from issuers in the Lao PDR amounted to USD0.3 billion and from issuers in Singapore to USD0.07 billion in Q1 2019.

Meanwhile, CJ Logistics Asia raised SGD70 million in March from the sale of AA-rated 5-year bonds that carry a guarantee from the Credit Guarantee and Investment Facility, marking the first bond issuance under the ASEAN+3 Multi Currency Bond Issuance Framework (AMBIF) in Singapore.[5] AMBIF is a policy program under the Asian Bond Markets Initiative that promotes standardized bond and note issuance processes with the aim of strengthening financial linkages among ASEAN+3 member economies.

The issuance from CJ Logistics Asia marked the region's fourth bond issued under the AMBIF initiative. The first such bond was Mizuho Bank's 3-year bond worth THB3.0 billion issued in 2015. Three more AMBIF bonds were issued in 2018, including Hattha Kaksekar's KHR120 billion 3-year bond and AEON Credit Services (Philippines) dual-tranche PHP900 million 3-year bond and PHP100 million 5-year bond.

G3 Currency Issuance

G3 currency bond issuance in emerging East Asia amounted to USD116.8 billion in January–April.

Total issuance of G3 currency bonds in emerging East Asia reached USD116.8 billion in January–April, down from USD119.1 billion during the same period in 2018 (**Table 4**).[6] This represented a decline of 1.9% y-o-y, a reversal from the growth experienced in January–April 2018, due to falling issuance for most economies in the region.

During the review period, all economies that issued G3 currency bonds sold USD-denominated debt, while some sparingly issued in euros and Japanese yen. Consequently, bonds issued in US dollars dominated with a 92.7% share of all G3 currency bond issuance; euros and Japanese yen accounted for issuance shares of 4.9% and 2.5%, respectively. In January–April, a total of USD108.2 billion worth of USD-denominated bonds were issued in emerging East Asia, representing a 0.3% y-o-y increase from the same period in 2018. The equivalent of USD5.7 billion of EUR-denominated bonds were issued in January–April, down 44.4% y-o-y from January–April 2018 as Hong Kong, China and Indonesia did not issue EUR-denominated bonds during the review period. On the other hand, bonds issued in Japanese yen more than doubled to USD2.8 billion as Malaysia issued samurai bonds worth USD1.8 billion.

The PRC issued the most G3 currency bonds in emerging East Asia in January–April, amounting to USD75.3 billion. The PRC was followed by Hong Kong, China at USD12.1 billion and the Republic of Korea at USD9.3 billion.

In the first 4 months of the year, G3 currency bond issuance increased in Malaysia (671.0% y-o-y), the Republic of Korea (9.1% y-o-y), and the PRC (0.7% y-o-y). On the other hand, G3 issuance declined in Singapore (–41.1% y-o-y); the Philippines (–37.4% y-o-y); Thailand (–31.8% y-o-y); Indonesia (–26.7% y-o-y); and Hong Kong, China (–6.6% y-o-y). Viet Nam issued G3 currency bonds in January–April 2018, but not in the same period in 2019.

The PRC led all economies in comprising a 64.5% share of emerging East Asia's total G3 currency bond issuance, issuing USD71.6 billion in US dollars and the equivalent of USD3.7 billion in euros. Multinational investment holding conglomerate Tencent Holdings led all issuers from the PRC with USD6.0 billion, the largest of which was a 10-year USD3.0 billion callable bond with a coupon rate of 3.98%. This was followed by property developer China Evergrande Group issuing six bonds all denominated in US dollars, the largest of which was a 3-year bond worth USD1.3 billion and with a 9.5% coupon.

The Republic of Korea accounted for an 8.0% share of all G3 currency bonds issued during the review period. By denomination, the Republic of Korea issued USD6.6 billion in US dollars, USD1.8 billion in euros, and USD0.9 billion in Japanese yen. The largest Korean chemical company, LG Chem, issued a total of USD1.6 billion via a combination of US dollars and euros, the largest of which was a USD0.6 billion 4-year green bond with coupon rate of 0.5% issued in euros, the proceeds of which will be used for its production expansion.

[5] ASEAN+3 refers to the 10 members of ASEAN plus the PRC, Japan, and the Republic of Korea.
[6] G3 currency bonds are denominated in either euros, Japanese yen, or US dollars.

Table 4: G3 Currency Bond Issuance

2018			January to April 2019		
Issuer	Amount (USD billion)	Issue Date	Issuer	Amount (USD billion)	Issue Date
Cambodia	**0.3**		**Cambodia**	**0.0**	
China, People's Rep. of	**183.5**		**China, People's Rep. of**	**75.3**	
Tencent Holdings 3.595% 2028	2.5	19-Jan-18	Tencent Holdings 3.975% 2029	3.0	11-Apr-19
CNAC (HK) Finbridge Company 5.125% 2028	1.8	14-Mar-18	China Construction Bank (Asia) 4.250% 2029	1.9	27-Feb-19
Scenery Journey 11.000% 2020	1.6	6-Nov-18	Tencent Holdings 3.280% 2024	1.3	11-Apr-19
Others	177.6		Others	69.2	
Hong Kong, China	**21.9**		**Hong Kong, China**	**12.1**	
CHMT Peaceful Development Asia Property 7.5% 2019	3.3	25-Apr-18	AIA Group 3.600% 2029	1.0	9-Apr-19
Bank of China (Hong Kong) 5.9% Perpetual	3.0	14-Sep-18	Celestial Miles 5.750% Perpetual	1.0	31-Jan-19
ICBC (Asia) 4.9% Perpetual	2.5	21-Mar-18	CK Hutchison International 3.625% 2029	0.8	11-Apr-19
Others	13.0		Others	9.3	
Indonesia	**26.1**		**Indonesia**	**6.4**	
Perusahaan Penerbit SBSN *Sukuk* 4.40% 2028	1.8	1-Mar-18	Perusahaan Penerbit SBSN *Sukuk* 4.450% 2029	1.3	20-Feb-19
Indonesia Asahan Aluminium 5.71% 2023	1.3	15-Nov-18	LLPL Capital 6.875% 2039	0.8	4-Feb-19
Republic of Indonesia (Sovereign) 4.75% 2029	1.3	11-Dec-18	Bank Mandiri (Persero) 3.750% 2024	0.8	11-Apr-19
Others	21.8		Others	3.6	
Korea, Rep. of	**30.0**		**Korea, Rep. of**	**9.3**	
Hanwha Life Insurance 4.700% 2048	1.0	23-Apr-18	Export–Import Bank of Korea 0.375% 2024	0.8	26-Mar-19
Korea Development Bank 0.625% 2023	0.9	17-Jul-18	Korea National Oil Corporation 0.240% 2022	0.6	22-Jan-19
Export-Import Bank of Korea 0.625% 2023	0.9	11-Jul-18	LG Chem 0.500% 2023	0.6	15-Apr-19
Others	27.3		Others	7.3	
Malaysia	**2.9**		**Malaysia**	**5.6**	
TNV Global Ventures Capital 4.85100% 2028	0.8	1-Nov-18	Malaysia (Sovereign) 0.530% 2029	1.8	15-Mar-19
Malayan Banking Berhad 3.51813% 2023	0.3	10-Aug-18	Resorts World Las Vegas 4.625% 2029	1.0	16-Apr-19
Others	1.9		Others	2.8	
Philippines	**6.2**		**Philippines**	**2.4**	
Republic of the Philippines (Sovereign) 3.00% 2028	2.0	1-Feb-18	Republic of the Philippines (Sovereign) 3.75% 2029	1.5	14-Jan-19
Republic of the Philippines (Sovereign) 0.38% 2021	1.0	15-Aug-18	SMC Global Power 6.50% Perpetual	0.5	25-Apr-19
Others	3.2		Others	0.4	
Singapore	**16.1**		**Singapore**	**4.6**	
Temasek Financial 3.625% 2028	1.4	1-Aug-18	DBS Group Holdings 2.85% 2022	0.8	16-Apr-19
DBS Bank 3.300% 2021	1.3	27-Nov-18	BOC Aviation 3.50% 2024	0.8	10-Apr-19
Others	13.5		Others	3.1	
Thailand	**5.9**		**Thailand**	**1.0**	
Bangkok Bank of Hong Kong 4.45% 2028	0.6	19-Sep-18	Siam Commercial Bank 3.9% 2024	0.5	11-Feb-19
Bangkok Bank of Hong Kong 4.05% 2024	0.6	19-Sep-18	Siam Commercial Bank 4.4% 2029	0.5	11-Feb-19
Others	4.7		Others	0.0	
Viet Nam	**0.7**		**Viet Nam**	**0.0**	
Emerging East Asia Total	**293.5**		**Emerging East Asia Total**	**116.8**	
Memo Items:			**Memo Items:**		
India	**6.4**		**India**	**9.9**	
Export–Import Bank of India 3.875% 2028	1.0	1-Feb-18	Indian Oil Corporation 4.75% 2024	0.9	16-Jan-19
Others	5.4		Others	9.0	
Sri Lanka	**3.9**		**Sri Lanka**	**2.6**	
Republic of Sri Lanka (Sovereign) 5.75% 2023	1.3	18-Apr-18	Republic of Sri Lanka (Sovereign) 7.85% 2029	1.4	14-Mar-19
Others	2.7		Others	1.2	

USD = United States dollar.
Notes:
1. Data exclude certificates of deposits.
2. G3 currency bonds are bonds denominated in either euros, Japanese yen, or US dollars.
3. Bloomberg LP end-of-period rates are used.
Source: *AsianBondsOnline* calculations based on Bloomberg LP data.

Hong Kong, China had a 10.4% share of G3 currency bond issuance in January–April. By currency, USD11.9 billion was issued in US dollars and USD0.2 billion in Japanese yen. Port investor, developer, and operator CK Hutchison International issued two USD-denominated callable bonds worth USD0.8 billion each in order to refinance existing borrowings.

G3 bond issuance of ASEAN member economies declined to USD20.1 billion in January–April from USD22.9 billion in the same 4-month period a year earlier. As a share of emerging East Asia's total, ASEAN's G3 issuance accounted for 17.2%, down from 19.2% in the same period in 2018. Indonesia issued the most G3 currency bonds among ASEAN members, totaling USD6.4 billion. Next were Malaysia and Singapore with G3 issuance amounting to USD5.6 billion and USD4.6 billion, respectively.

For the period January–April, Indonesia's regional share of G3 currency bonds issued was 5.4%. The issuances comprised USD6.4 billion in USD-denominated bonds. Perusahaan Penerbit SBSN issued a dual-tranche *sukuk* worth a total of USD2.0 billion, one was a USD1.3 billion 10-year conventional *sukuk* with a coupon rate of 4.45%, the proceeds of which will be used to partially meet the economy's general financing requirements. The other tranche was a USD0.8 billion 5.5-year green *sukuk* with a 3.90% coupon, the proceeds of which will be used to finance projects eligible under Indonesia's green bond and green *sukuk* framework.

Malaysia's 4.8% share of the region's G3 currency bond issuance comprised USD3.8 billion issued in US dollars and the equivalent of USD1.8 billion in Japanese yen. The Malaysian government issued a USD1.8 billion 10-year samurai bond with a 0.53% coupon in March. The proceeds of which will be used to finance infrastructure development.

Singapore's 4.0% regional share of total issuance of G3 currency bonds comprised bonds denominated in US dollars and euros amounting to USD4.5 billion and USD0.1 billion, respectively. The largest aircraft operating leasing company in Singapore, BOC Aviation, issued two callable bonds worth USD1.3 billion; both were denominated in US dollars. The issuance comprised a 6-year USD0.8 billion bond with a coupon rate of 3.5% and a 5-year USD0.5 billion bond with a 4.0% coupon.

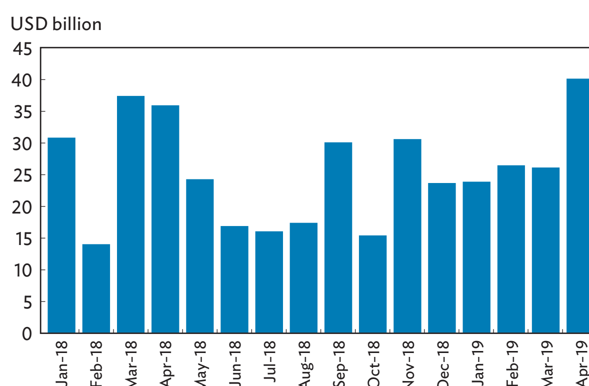
The Philippines' G3 currency bond issuances represented a 2.1% share, with USD2.4 billion sold in US dollars. The Government of the Philippines issued sovereign bonds in January as it took advantage of positive investor sentiment. The government issued a 10-year global bond worth USD1.5 billion with a 3.75% coupon rate, the proceeds of which will be used for general purposes, including budgetary support for government projects.

Thailand issued 0.9% of all G3 currency bonds in the region in January–April. The issuance comprised USD1.0 billion denominated in US dollars. Siam Commercial Bank issued a USD0.5 billion 5-year bond with a 3.9% coupon and a USD0.5 billion 10-year bond with a 4.4% coupon rate.

Cambodia and Viet Nam were the only economies that did not issue any G3 currency bond during the January–April period.

Monthly trends from January 2018–April 2019 showed that March 2018, April 2018, and April 2019 saw the highest levels of G3 currency bond issuance from emerging East Asia with USD37.5 billion, USD36.0 billion, and USD40.2 billion, respectively (**Figure 6**). The PRC was the main driver of growth every month as its real

Figure 6: G3 Currency Bond Issuance in Emerging East Asia



USD = United States dollar.
Notes:
1. Emerging East Asia comprises Cambodia; the People's Republic of China; Hong Kong, China; Indonesia; the Republic of Korea; the Lao People's Democratic Republic; Malaysia; the Philippines; Singapore; Thailand; and Viet Nam.
2. G3 currency bonds are bonds denominated in either euros, Japanese yen, or US dollars.
3. Figures were computed based on 30 April 2019 currency exchange rates and do not include currency effects.

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

estate operators and developers continue to favor issuances denominated in US dollars.

If 2018 saw volatile issuance volumes, the first part of 2019 saw issuance volumes increase. Indonesia's *sukuk* issuance in February helped drive G3 currency bond issuance growth for the month. In April, the markets of Hong Kong, China; the Republic of Korea; and Singapore boosted the supply of G3 bonds in the region.

Government Bond Yield Curves

Government bond yield curves fell for most emerging East Asian economies amid weaker global growth and easing monetary policy from some central banks.

Global economic growth continued to weaken in Q1 2019, with a number of uncertainties looming over the horizon such as the reemergence of the PRC–US trade dispute and unresolved Brexit issues. The exception so far has been the US, where economic growth remained stable with GDP expanding 3.1% y-o-y in Q1 2019, based on second estimates, after gaining 2.2% y-o-y in the previous quarter.

While US economic growth has been stable, uncertainties in the global economic environment led the Federal Reserve to leave policy rates unchanged during its 19–20 March and 30 April–1 May Federal Open Market Committee meetings. The Federal Reserve said that, given global economic developments and muted inflation, a patient approach was warranted.

Nevertheless, the minutes of the 19–20 March meeting showed that the Federal Reserve expects the US economy to continue to grow and that some members felt that an eventual rate hike was warranted, depending on economic conditions. The Federal Reserve's dot plot, however, shows that participants are not expecting a rate hike in 2019.

Both the European Central Bank (ECB) and the Bank of Japan (BOJ) have become more dovish as well. In the euro area, GDP grew 1.2% y-o-y in Q1 2019, the same rate as in Q4 2018. More significantly, the ECB downgraded its economic outlook in March, forecasting full-year 2019 GDP growth of 1.1%, down from a forecast of 1.7% made in December. The GDP growth forecast for 2020 was also slightly downgraded to 1.6% from 1.7%.

The language in ECB monetary policy statements also shifted between 24 January and 7 March, from previously indicating that it expected policy rates to remain unchanged through the middle of 2019 to predicting no increases for the whole of 2019.

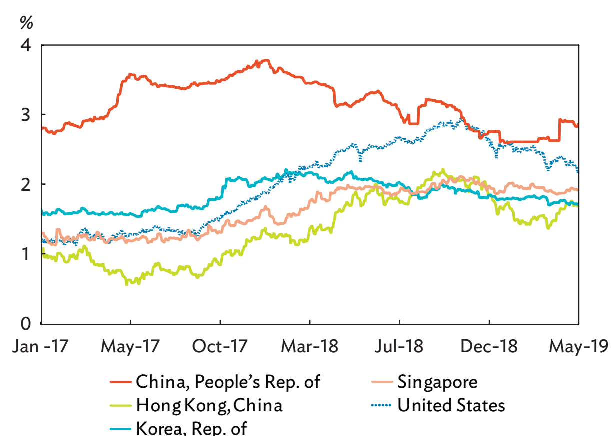
In Japan, economic growth climbed in Q1 2019 to reach an annualized rate of 2.1% from 1.6% in the previous quarter. While BOJ forecasts for fiscal year 2019 and beyond were relatively unchanged, the BOJ has noted some weakness in the domestic economy, with the fiscal year 2018 GDP growth forecast downgraded to 0.6% in April from 0.9% in January. This led the BOJ to provide explicit statements, for the first time, in its 25 April monetary policy meeting on the expected timing of its policy rates, saying that it expected current interest rates to stay at present levels at least through Q1 2020.

Uncertainties in the global economy and the more dovish tilt of central banks in advanced economies led interest rates in most emerging East Asian markets to trend downward between 1 March and 15 May.

However, there were some exceptions such as the PRC, where the 2-year yield rose during the review period. March economic indicators showed the PRC's economy growing at a faster pace than expected while a predicted easing by the People's Bank of China failed to materialize (**Figure 7a**). Hong Kong, China's 2-year yield also rose, despite historically tracking US yields, as efforts by the Hong Kong Monetary Authority to defend the Hong Kong dollar reduced liquidity, pushing short-term interest rates higher. Indonesia, Thailand, and Viet Nam also experienced a rise in their respective 2-year yields during the review period (**Figure 7b**). In Indonesia, the yield uptick resulted from both external and domestic issues, with some foreign investors exiting Indonesia's bond market in April amid expectations of a larger current account deficit than previously projected.

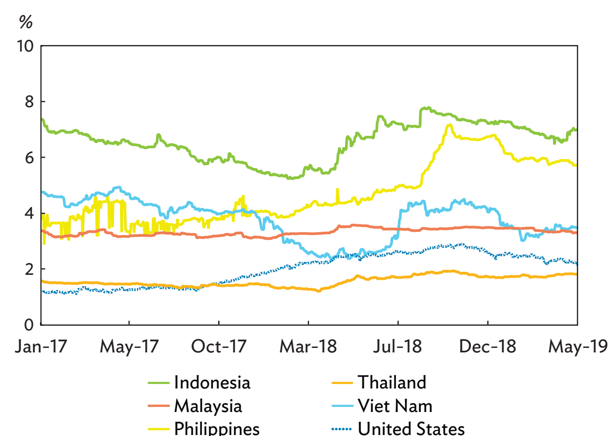
For most markets in emerging East Asia, 10-year yield movements roughly tracked the movements of 2-year yields. The one exception was Hong Kong, China, where the impact of Hong Kong dollar liquidity was mostly felt at the shorter-end of the curve, with the 10-year yield falling in line with declining US interest rates (**Figure 8a**). The Philippines' 10-year yield started to decline much more steeply than its 2-year yield beginning in March due to strong investor demand for longer-dated tenors (**Figure 8b**).

Figure 7a: 2-Year Local Currency Government Bond Yields



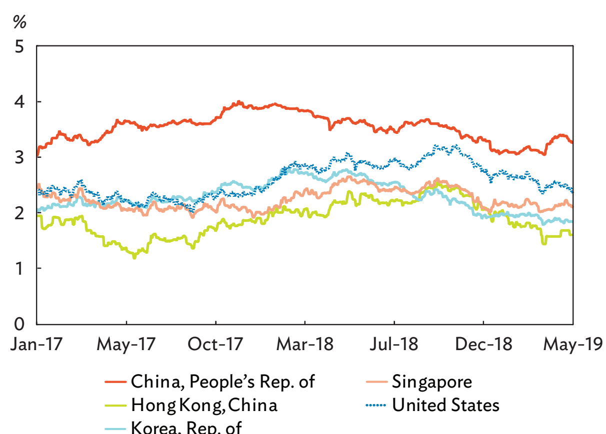
Note: Data as of 15 May 2019.
Source: Based on data from Bloomberg LP.

Figure 7b: 2-Year Local Currency Government Bond Yields



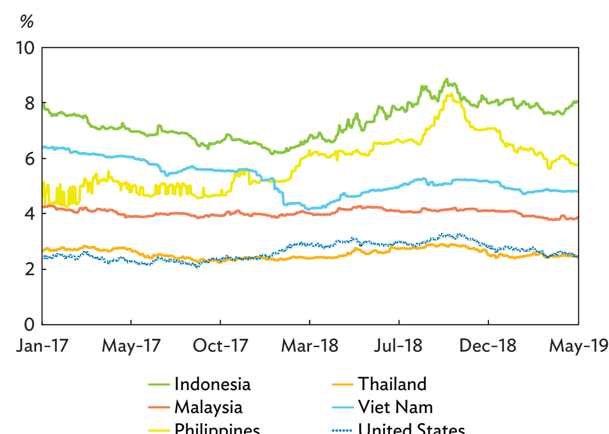
Note: Data as of 15 May 2019.
Source: Based on data from Bloomberg LP.

Figure 8a: 10-Year Local Currency Government Bond Yields



Note: Data as of 15 May 2019.
Source: Based on data from Bloomberg LP.

Figure 8b: 10-Year Local Currency Government Bond Yields

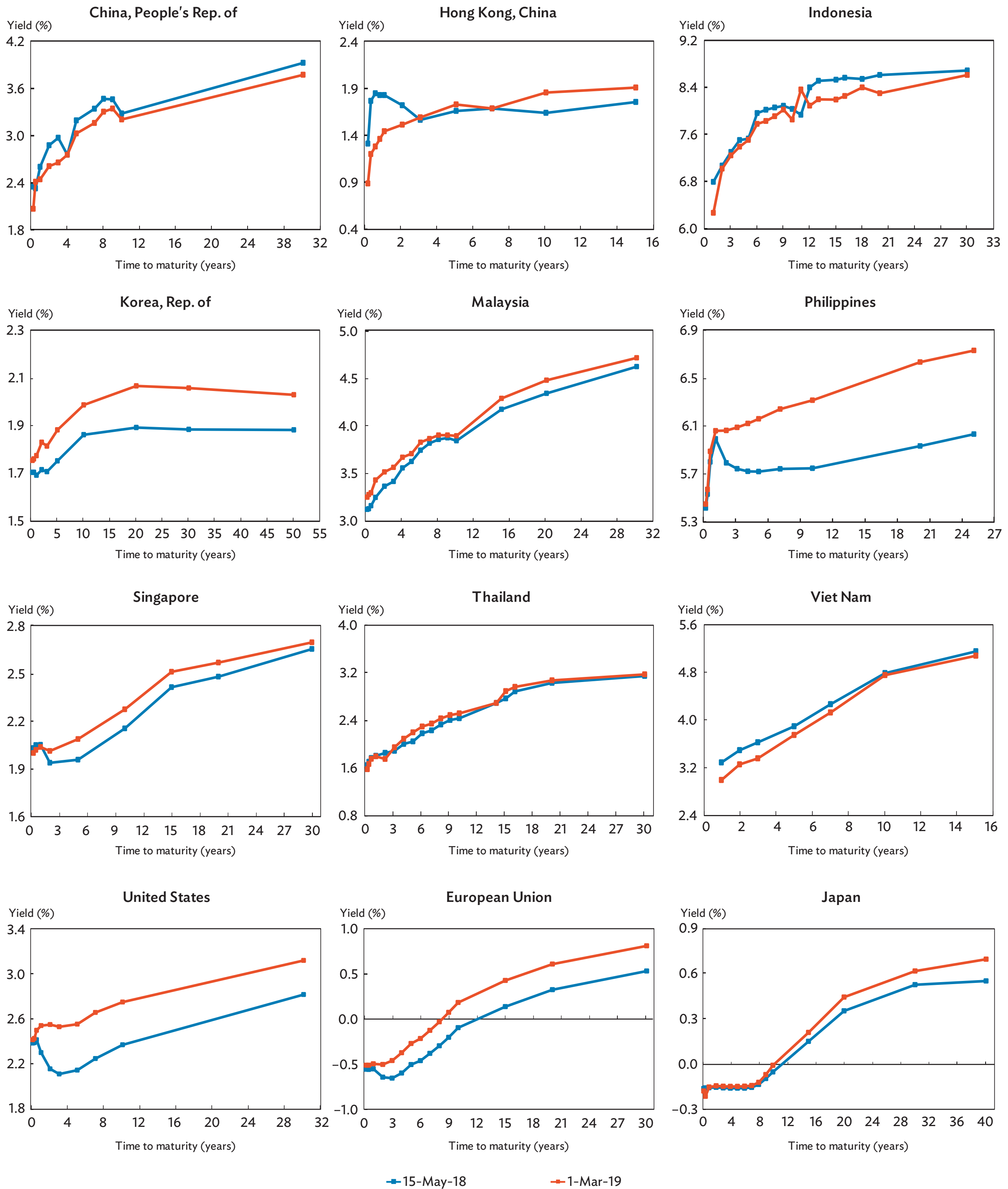


Note: Data as of 15 May 2019.
Source: Based on data from Bloomberg LP.

Similarly, most emerging East Asian government bond yield curves shifted downward between 1 March and 15 May (**Figure 9**).

Economic growth in most of emerging East Asia slowed in Q1 2019 in line with weakening growth in advanced economies. The exception was the PRC, where GDP grew 6.4% y-o-y in Q1 2019, the same pace as in Q4 2018. Hong Kong, China's GDP growth slowed to 0.6% y-o-y from 1.2% y-o-y, while the Republic of Korea's GDP growth slowed to 1.8% y-o-y from 3.1% y-o-y in the same period. Likewise, the Philippines' growth slowed to 5.6% y-o-y from 6.3% y-o-y in Q4 2018, but this was largely due to the delay in approving the 2019 budget. In Malaysia, GDP growth slowed to 4.5% y-o-y in Q1 2019 from 4.7% y-o-y in Q4 2018, while in Viet Nam growth slowed to 6.8% y-o-y from 7.3% y-o-y in the same period. Outside the PRC, the region's least affected economies were Indonesia, where GDP growth slowed marginally to 5.1% y-o-y in Q1 2019 from 5.2% y-o-y in Q2 2018, and Singapore, where GDP growth slowed to 1.2% y-o-y from 1.3% y-o-y.

Figure 9: Benchmark Yield Curves—Local Currency Government Bonds

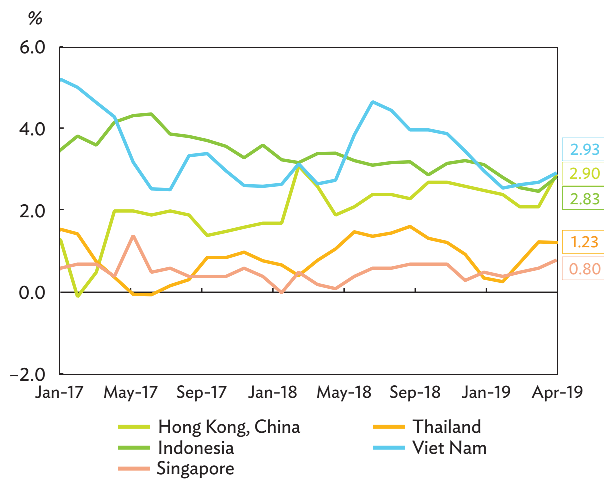


Sources: Based on data from Bloomberg LP and Thai Bond Market Association.

In contrast to weaker economic growth, inflation in emerging East Asia trended upward during the first 4 months of the year. However, overall levels of inflation remained low throughout the region. There were exceptions such as in Hong Kong, China and the Philippines, where inflation has significantly fallen since October, reversing one of the steepest increases among emerging East Asian economies in 2018 (**Figures 10a, 10b**).

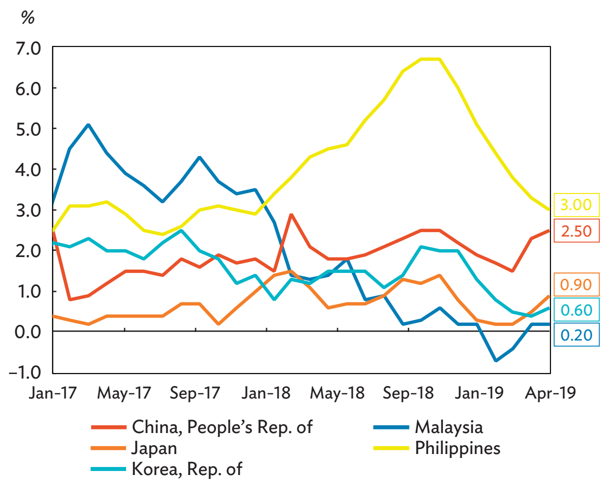
The significant decline in inflation allowed the Bangko Sentral ng Pilipinas to cut policy rates on 9 May (**Figure 11a**). In addition, the central bank reduced the reserve requirement ratio by 200 bps on 17 May. Malaysia also reduced its policy rate on 8 May by 25 bps. While all other central banks in the region have left policy rates unchanged in 2019, recent monetary policy statements from most central banks in emerging East Asia broadly indicate consensus regarding uncertainties over

Figure 10a: Headline Inflation Rates



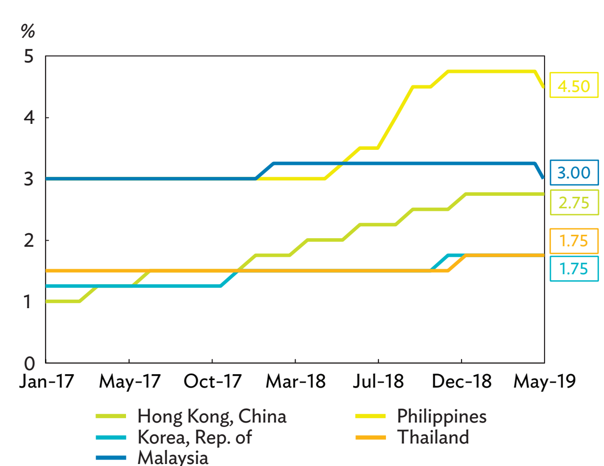
Note: Data as of April 2019.
Source: Based on data from Bloomberg LP.

Figure 10b: Headline Inflation Rates



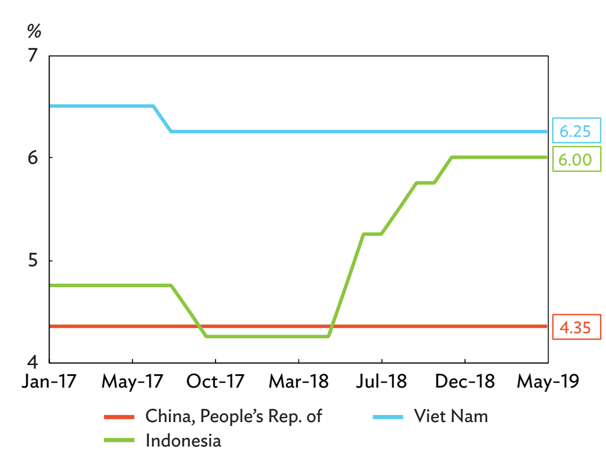
Note: Data as of April 2019.
Source: Based on data from Bloomberg LP.

Figure 11a: Policy Rates



Note: Data as of 15 May 2019.
Source: Based on data from Bloomberg LP.

Figure 11b: Policy Rates



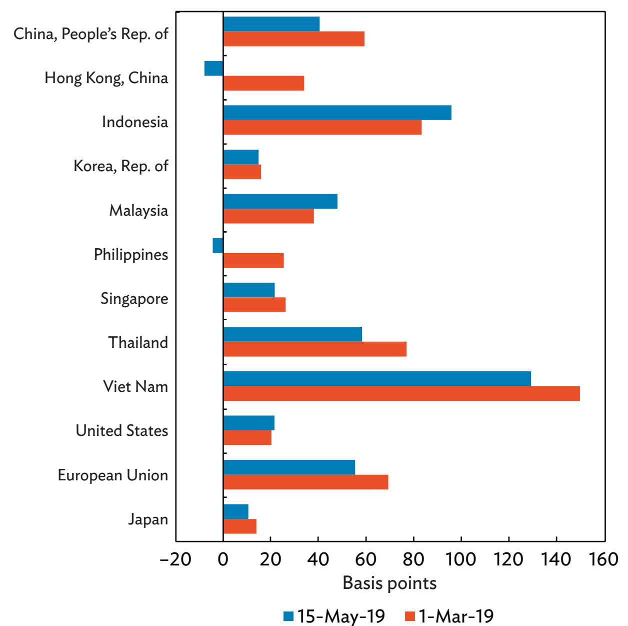
Note: Data as of 15 May 2019.
Source: Based on data from Bloomberg LP.

global economic growth and they stand ready to make adjustments as conditions warrant.

One exception is Indonesia, which has largely left policy rates unchanged after a series of policy rate increases in 2018 (**Figure 11b**). Bank Indonesia indicated that concerns remain over the current account deficit and the impact of capital outflows.

Consistent with expectations of slower growth, the 2-year versus 10-year yield spread fell in all emerging East Asian markets except Indonesia and Malaysia (**Figure 12**).

Figure 12: Yield Spreads Between 2-Year and 10-Year Government Bonds



Source: Based on data from Bloomberg LP.

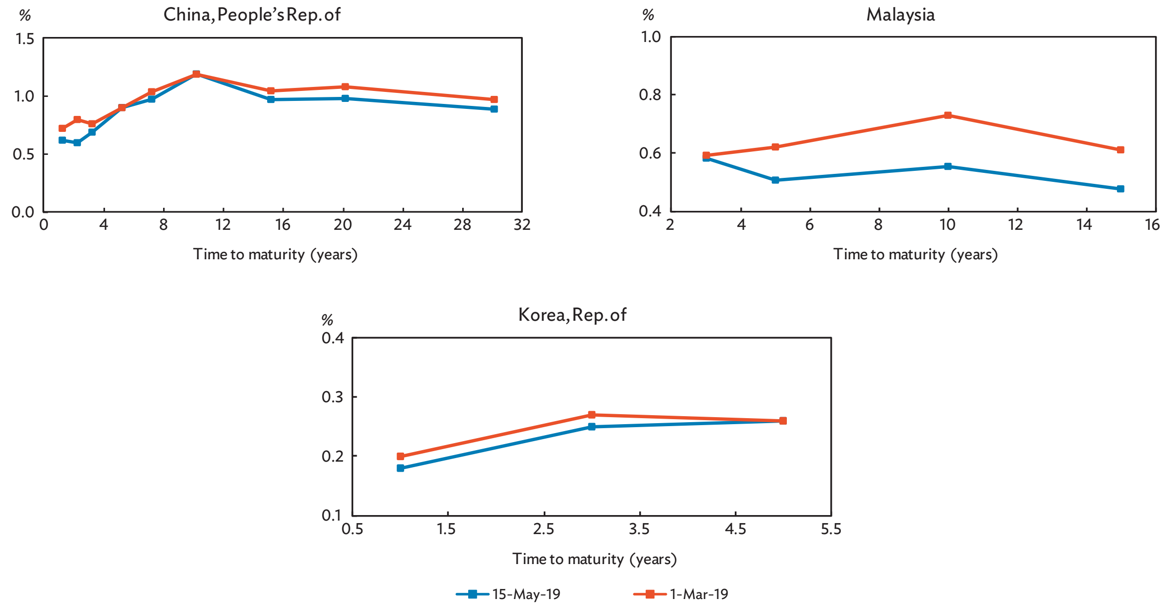
Corporate Bond Credit Spreads

The AAA-rated corporate versus government yield spread fell in all three regional markets for which data are available, but rose in the PRC and Malaysia for lower-rated bonds.

Investor sentiment toward AAA-rated corporate bonds improved in all three markets for which data are available (**Figure 13a**). In the PRC, investor sentiment was helped by government plans to stabilize the economy, while in Malaysia spreads fell amid rising oil prices between the end of December and the middle of May.

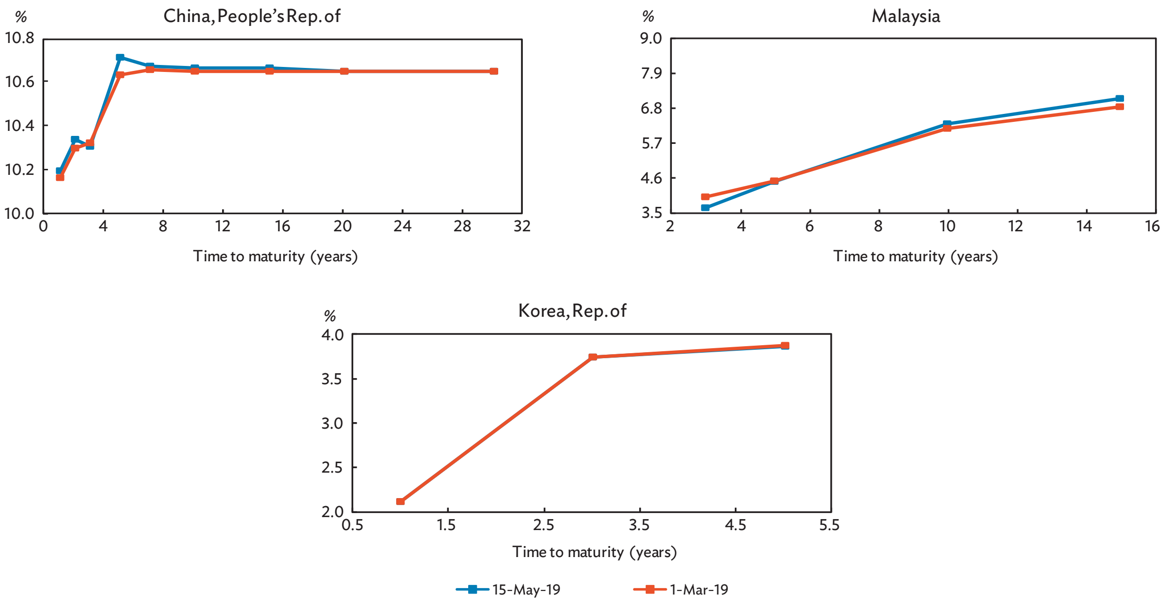
In contrast, credit spreads worsened in the PRC for lower-rated bonds due to continued corporate defaults in Q1 2019, though these occurred at a lower level than in 2018 (**Figure 13b**). In Malaysia, credit spreads for lower-rated bonds also rose during the review period.

Figure 13a: Credit Spreads—Local Currency Corporates Rated AAA vs. Government Bonds



Notes:
1. Credit spreads are obtained by subtracting government yields from corporate indicative yields.
2. For Malaysia, data on corporate bonds yields are as of 28 February 2019 and 14 May 2019.
3. For the Republic of Korea, data on corporate bonds yields are as of 28 February 2019 and 15 May 2019.
Sources: People's Republic of China (*Wind Information*), Republic of Korea (*EDAILY BondWeb*), and Malaysia (Bank Negara Malaysia).

Figure 13b: Credit Spreads—Lower-Rated Local Currency Corporates vs. AAA



Notes:
1. For the People's Republic of China and the Republic of Korea, credit spreads are obtained by subtracting corporate indicative yields rated AAA from corporate indicative yields rated BBB+.
2. For Malaysia, credit spreads are obtained by subtracting corporate indicative yields rated AAA from corporate indicative yields rated BBB. Data on corporate bond yields are as of 28 February 2019 and 14 May 2019.
3. For the Republic of Korea, data on corporate bonds yields are as of 28 February 2019 and 15 May 2019.
Sources: People's Republic of China (*Wind Information*), Republic of Korea (*EDAILY BondWeb*), and Malaysia (Bank Negara Malaysia).

Policy, Institutional, and Regulatory Developments

People's Republic of China

National People's Congress Annual Session Held in March

On 5 March, the Government of the People's Republic of China held its annual session of the National People's Congress. During the meeting, the government adjusted its annual gross domestic product (GDP) target for 2019 to 6.0%–6.5%, down from its previous target of 6.5%. According to Premier Li Keqiang, the lower growth target takes into account economic challenges such as the ongoing trade dispute with the United States (US) and credit risks in the domestic economy. The inflation target was set at 3.0% year-on-year for full-year 2019.

To meet the GDP growth target, Premier Li Keqiang said the government would utilize fiscal measures. A budget deficit target of 2.8% of GDP was set for 2019, up from the previous year's 2.6% target, reflecting an increase in planned infrastructure spending and a reduction in taxes. The government said that it would cut business and personal taxes by CNY1.3 trillion, up from the previous year's CNY1.1 trillion tax reduction. The government also announced that the value-added tax rate would be reduced from 16% to 13% for manufacturing firms and from 10% to 9% for transport and construction firms. The threshold for the application for the value-added system and the contribution rate for government pensions were also adjusted.

People's Bank of China Reduces Reserve Requirement Ratio for Rural Banks

On 5 May, the People's Bank of China (PBOC) announced that it would reduce the reserve requirement ratios for certain small and medium-sized banks that meet specified criteria. The PBOC said that rural commercial banks with a presence in rural counties and total assets of less than CNY10 billion will have their reserve requirement ratios set at 8%, the same level as credit cooperatives. The PBOC estimates that roughly 1,000 rural commercial banks will qualify for the reduced reserve requirement ratios and that a total of CNY280 billion will be released into the banking system.

Hong Kong, China

Hong Kong Monetary Authority Maintains Countercyclical Capital Buffer at 2.5%

In April, the Hong Kong Monetary Authority (HKMA) maintained its countercyclical capital buffer (CcyB) at 2.5%. The decision to keep the CcyB at its current rate was based on the significantly high level of credit to GDP gap of 12%, despite the indicative buffer guide signaling a lower CCyB of 0.75%. This resulted from a recent narrowing of the property price-to-rental gap to slightly below 3% from more than 10% in the previous quarter. The CCyB, as an integral part of the Basel III regulatory capital framework, was designed to increase the resilience of the banking sector in periods of excess credit growth allowing the latter to act as a "shock absorber" in times of stress.

Hong Kong Monetary Authority Launches Key Sustainable Banking and Green Finance Measures

In May, the HKMA launched three sets of measures to support and promote Hong Kong, China's green finance development at the HKMA Green Finance Forum. These measures include (i) green and sustainable banking, (ii) responsible investment, and (iii) a Centre for Green Finance. Green and sustainable banking involves developing a common framework to assess the "greenness baseline" of banks, engaging relevant stakeholders in consultations, and monitoring and evaluating banks' progress in meeting targets. Responsible investment implies that the HKMA will adopt a principle to give priority to green and environmental investments and social and governance investments for which long-term returns are comparable to other investments on a risk-adjusted basis. The HKMA already supports responsible investment, including investing in the Managed Co-Lending Portfolio Programme of the International Finance Corporation, with a substantial part of this initiative targeting sustainable investments across emerging markets. The third measure involves the establishment of the Centre for Green Finance under the HKMA Infrastructure Financing Facilitation Office to serve as a

platform for technical support and experience sharing for the green development of Hong Kong, China's banking and finance industry.

Hong Kong, China Joins Green Bond Pledge

In May, Hong Kong, China became the first Asian signatory to the Green Bond Pledge, a pledge that calls on signatories to support long-term infrastructure and capital projects that address environmental impact and climate risk, and issue green bonds to finance a low-carbon transition. In line with the objectives of the pledge, the government stated that its Climate Action Plan 2030+ is targeted to reduce Hong Kong, China's carbon intensity by 65%–70% below its 2005 level by 2030. This bond program encourages issuers to arrange financing for their green projects through capital markets in Hong Kong, China. Signing the pledge is among several ongoing efforts of the government to turn Hong Kong, China into a regional hub for green finance. The Green Bond Pledge is a joint initiative developed by international climate finance and sustainability groups including the Climate Bonds Initiative, Mission2020, Ceres, Cassa De Possiti e Prestiti, Citizens' Climate Lobby, California Governor's Office, California Treasurer's Office, Global Optimism, Natural Resources Defense Council, and The Climate Group. It was launched by former United Nations climate chief Christiana Figueres at the Climate Bonds Annual Conference in March 2018.

Cambodia

LOLC Lists Bonds on the Cambodia Securities Exchange

In May, microfinance firm LOLC (Cambodia) became the second corporate issuer to list bonds on the Cambodia Securities Exchange (CSX). The bonds amounted to an aggregate of KHR80 billion (USD20 million), comprising (i) a foreign-exchange-indexed bond with a coupon of 8.0%, and (ii) a 3-year bond with a fixed coupon of 9.0%. The bonds, which were mostly sold to institutional investors, were oversubscribed. The issuance is expected to encourage other corporate institutions to tap the bond market and take advantage of tax perks for bond issuers.

Prior to LOLC's issuance, Hattha Kaksekar Limited raised KHR120 billion from the sale of 3-year bonds in November. The bonds carried a coupon rate of 8.5% and was listed on the CSX in December. It was the first corporate bond to be listed on the CSX.

Indonesia

Bank Indonesia Announces Policy to Help Boost Domestic Demand

In April, Bank Indonesia expanded its accommodative policy to boost domestic demand by (i) increasing liquidity through monetary operations, (ii) enhancing retail payment efficiency, (iii) increasing the supply of nondeliverable forwards, (iv) improving regulation in the money market and foreign exchange market, (v) developing the commercial paper market, and (vi) expanding electronification of social programs.

Indonesia Launches Shariah Economy Masterplan, 2019–2024

In May, the Government of Indonesia launched the Shariah Economy Masterplan, 2019–2014, which highlights strategies to strengthen shariah finance; support micro, small, and medium-sized enterprises; and optimize the digital economy.

Republic of Korea

Financial Services Commission Releases Financial Policy Road Map for 2019

The Republic of Korea's Financial Services Commission (FSC) announced in March its 2019 financial policy aimed at promoting financial innovation, ensuring trust in finance, and securing financial stability. Financial innovation will be accelerated as the newly enacted laws for online banking and financial regulatory sandbox will take effect this year. The government will provide financial support to small and medium-sized enterprises and start-ups to boost economic vitality. The government will continue its policy efforts to curb household debt, keeping its growth between 5% and 6%, and will preemptively manage corporate debt risk with an enhanced evaluation system. The FSC will enact a comprehensive bill for better consumer information and protection. To ensure fairness and transparency in order to protect investors and shareholders, the FSC will remain vigilant against potential risks through the close monitoring of financial markets and active policy responses.

Republic of Korea to Cut Stock Transaction Tax

The Government of the Republic of Korea will cut taxes on stock transactions effective 3 June to support the secondary market for venture firms and promote venture capital. The trading tax for stocks listed on the Korea Composite Stock Price Index and Korea Securities Dealers Automated Quotation markets will be reduced by 0.05 percentage points each, for unlisted stocks by 0.05 percentage points, and for Korean New Exchange stocks by 0.2 percentage points to promote venture capital. A special tax for rural development of 0.15%, levied on Korea Composite Stock Price Index transactions, will remain unchanged.

Starting 1 January 2020, the government will change capital gains taxes on stock transactions to allow the transfer of losses between domestic and foreign stock transactions. Taxes will also only be imposed on net gains that are earned throughout the year.

Malaysia

Bank Negara Malaysia Liberalizes Foreign Exchange Policies

On 27 March, Bank Negara Malaysia liberalized its foreign exchange administration framework to allow investors to hedge their foreign exchange risks more effectively. Residents are now allowed to hedge their foreign exchange obligations for up to 12 months. Approval must be obtained from the central bank for obligations with a tenor of more than 1 year. To help small and medium-sized enterprises hedge their foreign currency risk, net importers are allowed to receive foreign currency payments for their domestic goods and services from resident exporters.

Philippines

Bangko Sentral ng Pilipinas Loosens Restrictions on Foreign Exchange Transactions

On 10 January, the Bangko Sentral ng Pilipinas (BSP) liberalized its rules governing the foreign exchange regulatory framework in order to encourage development and innovation in the country's capital market. Concerning investments in foreign currencies, the BSP allowed banks to register beyond the prescribed period. It also streamlined its requirements and expanded the number of banks eligible to register for investing in foreign currencies. If a bank desires to purchase foreign currencies beyond its threshold amount, it does not need prior approval from the central bank. It just needs to notify the BSP about its activities. Lastly, the liberalized framework allows banks to submit supporting documents electronically.

Bangko Sentral ng Pilipinas Eases Financial Services Licensing Requirements

On 22 February, the BSP relaxed its rules governing BSP-supervised financial institutions wanting to offer electronic payment and financial services. A financial institution simply needs to notify the BSP within 30 days of its launch of financial activities. However, services allowing clients to transfer funds and initiate other financial transactions require prior BSP approval. Furthermore, institutions with services with fund transfer capability must participate in automated clearing houses. The streamlined process for acquiring electronic payment and a financial services license is as follows: the financial institution conducts a self-assessment of its capabilities to offer such services; the BSP evaluates the institutions and provides a certificate of compliance; finally, the central bank issues the license to the financial institution. The licensed financial institution is required to provide periodic reports to the BSP. The new rules aim to promote digital innovation and efficiency in payments and remittances, paving the way for the smoother flow of funds in the Philippine financial system. They also promote interoperability between financial institutions.

Bangko Sentral ng Pilipinas Reduces Reserve Requirement Ratio of Big Banks

On 16 May, the BSP announced that it will cut the reserve requirement ratio of universal and commercial banks from 18% to 16%. The decrease will come in three phases: 100 basis points (bps) will be cut on 31 May, 50 bps on 28 June, and 50 bps on 26 July. The decision was made amid the Philippines' low inflation environment and lower-than-expected economic growth. Every 1 percentage point decrease in the reserve requirement ratio is expected to release about PHP90 billion–PHP100 billion into the economy. The announced cut was timely as the Philippine economy is experiencing tightening liquidity conditions, as evidenced by single-digit money supply growth, and high time-deposit rates. A decision on the reserve requirement ratio of smaller

banks is subject to discussion during the next monetary board meeting. The BSP plans to gradually decrease the reserve requirement ratio for big banks to the single-digit level by 2023.

Singapore

Monetary Authority of Singapore and the European Commission Agree on Common Approach to Trading Derivatives

On 20 February, the Monetary Authority of Singapore and the European Commission agreed to support reforms allowing derivatives to be traded between Singapore and the European Union through each other's trading platforms. The agreement specifies that participants must comply with both European Union and Singaporean regulations when they trade derivatives in each other's markets. The common approach aims to strengthen inter-regional connections and provides investors from Singapore and the European Union with options to hedge financial risks.

Thailand

Bank of Thailand and Bank Indonesia Sign Memorandum of Understanding on Payment Systems and Financial Innovation

The Bank of Thailand and Bank Indonesia signed a memorandum of understanding on 4 April to strengthen payment systems and financial innovation cooperation between Thailand and Indonesia. The agreement also aims to strengthen the implementation of central bank policies and address the increasingly complex challenges in payments between the two economies. It will also reinforce the implementation of policies against money laundering and terrorism financing.

Viet Nam

State Treasury to Sell VND80 Trillion Worth of Bonds in the Second Quarter of 2019

In April, the State Treasury announced that it plans to issue VND80 trillion bonds in the second quarter of 2019. The issuance plan is as follows: (i) 5-year Treasury bonds worth VND10 trillion, (ii) 7-year Treasury bonds worth VND5 trillion, (iii) 10-year Treasury bonds worth VND26 trillion, (iv) 15-year Treasury bonds worth VND30 trillion, (v) 20-year Treasury bonds worth VND5 trillion, and (vi) 30-year Treasury bonds worth VND4 trillion. For 2019 as a whole, the government is targeting to issue VND200 trillion.

Regional

Asian Bond Markets Initiative Launches Medium-Term Road Map for 2019–2022

In May, a new Asian Bond Markets Initiative road map was launched covering the period 2019–2022. The road map outlines the directions and major activities of the Asian Bond Markets Initiative for the next 4 years, including (i) deepening support for infrastructure finance, (ii) promoting green bonds and bonds issued via the ASEAN+3 Multi-Currency Bond Issuance Framework, (iii) fostering standardization and harmonization of bond market regulations, (iv) improving bond market infrastructure to facilitate cross-border transactions, and (v) enhancing collaboration among regional initiatives.

Developing the Housing Bond Market

Introduction

Securing a stable living space is essential to living a decent life. Demand for housing is influenced by population, income, urbanization, and household structure (Doling, Vandenberg, and Tolentino 2013). Due to relatively rapid income growth and accelerating urbanization, housing demand is inevitably higher in Asia than in other regions.

However, housing prices are often so expensive that households cannot afford to purchase a home with only labor income earned and saved over a short period. This is especially true in urban areas, where houses are more expensive. Amid rising affordability concerns, a mortgage system enables households to purchase homes if they have a stable source of income to make future mortgage payments.

Because traditional financial intermediaries acting as mortgage lenders relied on savings to finance mortgage loans, only limited loan amounts and tenures were available to home buyers in the simplest form of a mortgage system. Providing housing opportunities to more households required a differentiated housing finance system, capable of increasing mortgage lending and managing the resultant risks.

Money raised through mortgages is used as a factor of production in real sectors such as housing construction (supply side). But even so, there may be a timing gap between the demand for large-scale funding from the construction sector and the fund inflows from mortgages. For a properly functioning housing market where supply meets demand, housing finance should play a role in reducing the time friction that may exist between the demand and supply of finance in the housing construction sector.

To that end, it is necessary to enhance the role of financial intermediaries, mainly banks. Also, it is critical to invigorate housing bond finance based on the capital market. In developed economies with active housing bond markets, housing finance sources include not only financial intermediaries but also investors, both institutional and individual, in capital markets. As a result, the smooth supply of housing finance has stimulated the construction and financial services industries, leading to job creation and income generation, and ultimately contributing to economic growth.

Housing Finance and Housing Bond Market

Definitions of Housing Finance and Housing Bonds

Within any economic system, the demand for stable housing comes not only from individuals but also from society as a whole. Thus, a system that ensures stable housing for all is indispensable for the maintenance and growth of society. Houses are long-lived durable goods; therefore, buyers need a large sum of money to purchase a house. The need for housing finance arises because many home buyers face difficulties securing sufficient funds at their desired time of purchase.

Housing finance is generally known as the operation of the mortgage market in the form of housing loans or mortgage loans that enable consumers who wish to have their own home to borrow against the value of their housing asset. It allows consumers to spread the required payments over the period of the loan to own that asset (Lunde and Whitehead 2016).

But housing finance is actually a much broader and more diverse concept. The demand for housing varies with family structure, income level, and demographic factors. Housing may be acquired through purchase or other ways (e.g., rental or long-term lease) since the users of housing finance may have varying needs in terms of amount, maturity, interest rate, and early redemption method, among others, while different types of financial institutions may meet user needs in a variety of ways.

The International Union for Housing Finance stresses that housing finance can be defined in diverse ways. It describes the nature of housing finance as follows:

"Housing finance brings together complex and multisector issues that are driven by constantly changing local features, such as a country's legal environment or culture, economic makeup, regulatory environment, or political system."[7]

However, the meaning of housing finance, which is defined based on the perspective of housing demand, tends to neglect finance for housing supply. Although the funds borrowed from the mortgage market flow into the supply side of the housing market, namely the construction sector, there may be a timing mismatch between when funds are needed and when they are available. Therefore, the concept of housing finance, in a broad sense, needs to include the funding needs of the supply side to ensure the timely delivery of housing.

In spite of the complexity and scalability of the concept, housing finance also needs to achieve the primary purpose of finance, which is to efficiently mobilize capital needed for financial consumers (Goldsmith 1969). In addition, it should be a system that can reflect the characteristics of housing in the financing process.

In earlier years, in most advanced economies, including the United States (US), housing finance was bank-based finance. Banks provided loans secured by real property (mortgage loans), and short-term deposits were their main source of funding for mortgage loans. As a result, bank mortgages had a short-term variable rate that could not fully satisfy mortgagors in need of long-term financing (McConnell and Buser 2011). Furthermore, banks had to take on various risks—such as credit risk, liquidity risk, and prepayment risk—in the process of asset transformation for housing finance.

Against this backdrop, the advent of a housing bond market brought about fundamental changes to the structure of housing finance. For banks, which were the major provider of housing finance, long-term mortgages were illiquid assets. Therefore, once a mortgage loan was made, a new mortgage could not be made until the existing loan was repaid or unless new money inflows occurred. Furthermore, fluctuations in market interest rates, alongside nonperforming loans (NPLs), could cause substantial losses to banks with large holdings of long-term, fixed-rate mortgages.

Such a situation necessitates a financial system that provides protection against losses from mortgages held by banks and ensures the liquidity of mortgage assets. A mortgage guarantee or mortgage payment insurance scheme could be introduced to protect lenders against mortgage losses. A mortgage refinance agency funded by the public sector could also be established to facilitate asset liquidity.

Mortgage refinance agencies or entities, however, have funding constraints. Therefore, they have to raise funds on their own by issuing bonds and notes. Also, they need an effective funding vehicle to meet mortgage refinancing needs above and beyond the amount of funds raised. The most popular instrument are mortgage-backed securities (MBS), which give investors the right to receive cash flows from mortgages and are tradable in capital markets. MBS are the core product in the housing bond market. Covered bonds, which are also known as mortgage-backed bonds, are also housing bonds that are structurally similar to MBS in terms of the underlying asset pool, except that covered bonds are issued by different types of entities.

These are the financial instruments created through the process of securitization so that they can be traded in the capital markets. Investors trading in MBS or covered bonds can be institutions or individuals. Thus, the securities can be used to expand the base of funding for housing finance to include domestic and foreign investors.

The housing bond market refers to a capital market in which debt class instruments are issued and sold to raise funds for housing. Housing bonds are a type of bond classified by the purpose of issue, like social bonds and green bonds, rather than traditional standards such as the type of issuer or method of repayment.

In addition to MBS and covered bonds, there are various types of housing bonds. Government corporations issue debt securities to finance their operations: for example, refinancing existing mortgages, buying mortgages and issuing MBS, and providing guarantees or insurance for mortgages and MBS. These agency bonds are housing bonds as well.

[7] International Union for Housing Finance. Housing Finance. http://www.housingfinance.org/what-is-housing-finance; and Chiquier and Lea (2009).

Both central and local governments may use proceeds from the issuance of government bonds to provide housing finance for housing stability. However, it is difficult to consider these bonds as housing bonds because government bond proceeds are used for various purposes. If the government issues bonds solely for the purpose of implementing housing finance policy, then the bonds can be regarded as housing bonds.

Products and Investor Profile

MBS are generally considered debt securities (or bonds) in the capital market, though they can take different forms other than traditional debt securities (Fabozzi 2016a). The simplest form of MBS are pass-through securities whose structure involves borrowers, a bank (originator), a mortgage servicer, and a special purpose vehicle (issuer of MBS). Investors are entitled to receive cash flows from a pool of mortgages in proportion to the face value of the MBS they own.

But the pass-through MBS may be different from plain vanilla bonds that produce constant cash flows until maturity. This is because the cash flows of MBS vary depending on the method of determining the interest rates of the underlying mortgages and principal payment per period. Furthermore, MBS are subject to high cash flow uncertainty as mortgages are often paid off before maturity or sometimes default.

There are a wide range of MBS products in which different techniques are employed to reduce the uncertainty of cash flows. The most popular are collateralized mortgage obligations and stripped MBS.

Backed by a pool of mortgage loans, collateralized mortgage obligations are structured with multiple tranches separated by credit quality and maturity. Stripped MBS are favored by investors who do not wish to face reinvestment risk arising from multiple cash flow streams from the securities.

MBS use guarantees from guarantee institutions to mitigate credit risk. In this case, guarantees provide protection from investment risk but the guarantee fees charged reduce the rate of return on the investment.

Unlike MBS, which allow the originator to move the underlying mortgages off its books by selling them to the special purpose company, covered bonds are securities backed by a pool of mortgages that remain on the books of the originator. Accordingly, in contrast to MBS whose cash flow stability is determined by the quality of the underlying assets or external credit enhancement, covered bonds are an investment whose creditworthiness is based primarily on the issuer's credit quality and secondarily on the nature of collateral (that is, the underlying assets).

In other words, the issuer of covered bonds pays principal and interest as in the case of nonguaranteed, uncollateralized corporate bonds. When the issuer goes bankrupt, cash flows from the designated ring-fenced pool of assets, on which the bondholders have a priority claim, are used to pay the principal and interest on the covered bonds. While MBS have evolved mainly in the US, covered bonds have developed primarily in Europe.

Another investment product in the housing bond market are agency bonds issued by public corporations established to support MBS issuance. Most of these enterprises are explicitly government-funded, but some are privatized. Nevertheless, a dominant view in the capital markets is that housing agency bonds are guaranteed by the government. At the same time, agency bond yields tend to be a little bit higher than government bond yields.

The government (both central and local) usually covers housing-related expenditure, especially for low- and middle-income households, by means of taxation or government bond issuance because a stable housing market is the backbone of the economy.

In general, the proceeds of government bonds are used to fund not only housing projects but also other public projects. For some economies, however, governments issue bonds to fund housing projects only. These bonds are also government bonds, and thus they receive the same credit rating as the sovereign. If the bonds are different in liquidity from other government bonds, their market price may differ as well.

Also, bonds may be issued by local governments to finance housing projects. Among them, obligation bonds can hardly be classified as housing bonds in that local governments use tax revenues to repay the municipal bonds. On the other hand, revenue bonds whose interest and principal payments are funded by cash flows

generated from housing projects can be regarded as housing bonds (Fabozzi 2016b).

Housing bonds, which comprise one class of bonds, are financial products that are issued and traded in the capital markets. This means that these can be an investment alternative for investors pursuing returns. As with other major bonds, housing bonds tend to be traded in large volumes by institutional investors.

Noninstitutional investors with sufficient capital above a minimum investment threshold are allowed to directly buy and sell housing bonds in the wholesale market. Because MBS provide higher divisibility than mortgages thanks to securitization, investors can make small investments through institutional investors acting as housing bond dealers. Moreover, investors can invest indirectly in housing bonds by purchasing beneficiary certificates of investment trusts or mutual funds that include housing bonds in their portfolios.

The main investors in MBS and covered bonds are pension funds and insurance companies. This is because mortgages themselves are basically long-term loans, and structured securities backed by underlying mortgage pools are also issued for longer maturities. Also, pension funds and insurers with long-term debt obligations have strong demand for long-term bonds because of asset liability management.

Hedge funds and asset management firms generally invest in financial instruments with relatively high expected returns (Berliner, Quinones, and Bhattacharya 2016). These institutional investors tend to invest primarily in nonagency MBS.

Investors in housing agency bonds are not much different from those in other agency bonds. Agency bond investors are nearly the same as government bond investors. Given that most investors who want to hold risk-free assets invest in government bonds, investors in housing agency bonds, in practice, include both institutional and individual investors.

Apart from the institutional investors mentioned earlier, commercial banks, asset management companies, and securities companies (investment banks) also invest in housing bonds. Meanwhile, housing bond investment can also be undertaken as part of socially responsible or social impact investing, which has received increased attention in recent years.

Rationale for Developing the Housing Bond Market

Housing finance increases access to home ownership, thereby contributing to the well-being of people through residential stability. Not only that, it enables households to acquire properties that can generate long-term rental income. Housing construction is also known to affect employment, savings, investment, and productivity (Harris and Arku 2006). Funds raised through housing finance system generate demand in the real economy, including the housing construction sector, thereby becoming an important driver of economic growth. Therefore, housing finance development helps facilitate the growth of the economy.

The government may play a leading role in housing finance, in which case funding is mainly made through taxation and bond issuance. Financing via bond issuance can be challenging without a developed bond market. The same is true for funding through housing bond issuance.

From a historical point of view, however, housing finance has relied primarily on private sector capital, mostly bank loans. Such a phenomenon tends to be more pronounced in developing economies, especially those with bank-based financial system. Even in the US, where the housing finance system is most developed, the early stage of the housing finance was bank financing. Currently, however, the US has the world's most developed housing bond market.

We can draw out implications for the housing bond market with respect to the necessity and direction of development from the historical experiences of the US and other developed economies, which have overcome many obstacles.

In the US, mortgage lending was funded by short-term deposits in the early 1900s. Early mortgages were short-term, renewable loans that were secured by collateral. The availability and pricing of mortgages varied across regions, making them insufficient to satisfy the financing needs of potential home buyers. Meanwhile, the default rate for home mortgages originated by banks soared in the aftermath of the Great Depression. During the

financial catastrophe that accompanied the Great Depression, bank-based housing finance revealed its limitations in terms of scalability and risk management.

To resolve these issues, the Federal Home Loan Bank (FHLB) was founded in 1932, and the Home Owners' Loan Corporation was established in 1933 pursuant to the Home Owners' Loan Act. The FHLB system, originally comprising 12 local FHLBs, is a government-sponsored enterprise that provides capital for member financial institutions to fund mortgages. Today, it is collectively owned by 11 federal FHLBs, which are each separate, government-chartered, member-owned corporations; members include several kinds of financial institutions in the mortgage-lending business. The Home Owners' Loan Corporation was directed to help home owners refinance existing mortgages to reduce the rate of foreclosure. In response, it introduced long-term, fixed-rate, self-amortizing mortgages. Although these two government agencies assisted the US in overcoming the crisis posed by the Great Depression, they played only a limited role in improving the intended functions of the housing finance system.

Major milestones that reshaped the housing finance system include the enactment of the National Housing Act in 1934, which launched Financial Housing Administration (FHA) insurance to protect approved lenders against losses from mortgage defaults. By enhancing the stability of mortgage loans, these steps paved the way for widening the mortgage supply base.

The creation of the Federal National Mortgage Association (Fannie Mae) in 1938 resulted in an epoch-making expansion of sources of mortgage funding in the US. Fannie Mae was established as a federal government agency to provide a liquidity facility for mortgage lenders in the secondary mortgage market by buying, holding, and selling mortgages.

In 1952, Fannie Mae became a public–private mixed ownership corporation. In 1968, the Housing and Urban Development Act split the old Fannie Mae into a private, shareholder-owned company known as Fannie Mae, and a government-owned corporation, the Government National Mortgage Association, or Ginnie Mae (Weiss and Jones 2017).

Ginnie Mae was created to guarantee the timely payment of principal and interest on privately issued MBS backed by government-insured or guaranteed mortgages. In 1968, the very first MBS were issued and guaranteed by Ginnie Mae (McConnell and Buser 2011).

Fannie Mae, together with the Federal Home Loan Mortage Corporation (Freddie Mac), which was founded in 1970 to support thrift institutions, came to play a major role in the purchase of mortgages that are not guaranteed by the government but meet certain creditworthiness thresholds. (These loans are called conventional conforming mortgages.)

In addition, Fannie Mae and Freddie Mac either hold mortgages from lenders or package them into MBS that may be sold, and then guarantee the MBS they issue. In 1971, Freddie Mac issued its first MBS. For the early MBS, the underlying assets were mostly single-family mortgages before gradually diversifying into multifamily mortgages.

The issuance of MBS by Fannie Mae and Freddie Mac led to the issuance of private-label MBS (also called nonagency MBS). Private-label MBS refer to securities backed by nonconforming mortgages that do not meet Fannie Mae's or Freddie Mac's creditworthiness standards.

Private-label (or nonagency) MBS were credit-enhanced mainly in two ways. First, external credit enhancement was provided for the MBS in the form of third-party guarantees such as policies provided by insurance companies. Second, internal credit enhancement could be achieved by subordination or credit-tranching. This structure uses a financial engineering technique to divide securities into senior and subordinated (junior) tranches depending on the priority of payment over cash flows of the underlying assets. Overcollateralization was another form of internal credit enhancement.

The emergence of MBS was a breakthrough event that not only expanded the supply side of housing finance from various institutional investors to include the investing public, but also provided risk management tools to mortgage originators.

Promoting housing finance by developing the structured finance market requires the involvement of various capital market entities that carry out a mortgage valuation, provide credit enhancements, undertake MBS issuance activities (including multitranche structuring), collect

mortgage principal payments and transfer cash flows to investors, and provide marketing services. For the entities to perform their respective roles properly, it is imperative that a well-developed housing bond market exists.

The level of capital market development may vary from one economy to another. In the US, huge amounts of agency bonds are issued by government agencies to finance their operations. In many economies, housing finance agencies are increasing the share of funding through bond issuance in total funding. Given this, housing bond markets are becoming increasingly important across the world. Finally, the development of a housing bond market, which should be preceded by the adoption of advanced financial products and techniques, is very important for the growth of the real economy as well as the financial sector, including housing finance.

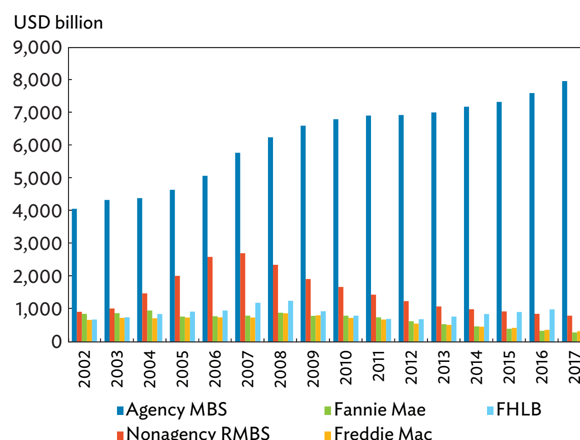
Housing Bond Markets in Advanced Economies

Despite differences in the development process, housing bond markets in most developed economies were created with the securitization of cash flows from loans extended by mortgage originators. The roles of the housing bond market are to expand the supply side of housing finance by providing a wide range of investors with access to the market and to provide risk management tools to mortgage originators. Notably, MBS have grown to become a substantial part of the US housing bond market, whereas covered bonds have driven growth in the European market.

In the US, which is home to the world's most developed MBS market, the volume of agency MBS outstanding grew steadily for decades, reaching nearly USD4.1 trillion in 2002 before slowing in subsequent years in the wake of the subprime mortgage woes and the global financial crisis (**Figure 14**). As the US rode out the crisis through the mid-2010s, agency MBS outstanding volume rebounded to reach USD8.0 trillion at the end of 2017.

In contrast, nonagency residential mortgage-backed securities (nonagency RMBS) grew faster than agency MBS in the pre-crisis period and peaked at USD2.7 trillion in 2007 just before the onset of the global financial crisis. Nonagency RMBS outstanding have since declined sharply, falling to USD0.8 trillion at the end of 2017, reflecting the fact that the increase in securitization of nonagency RMBS was a major triggering factor that led to the crisis.

Figure 14: Housing Bonds Outstanding in the United States



Fannie Mae = The Federal Mortgage Association, FHLB = Federal Home Loan Bank, Freddie Mac = The Federal Home Loan Mortgage Corporation, MBS = mortgage-backed securities, RMBS = residential mortgage-backed securities, USD = United States dollar.
Source: United States Securities Industry and Financial Markets Association.

Among housing agency bonds, the outstanding volumes issued by Fannie Mae and Freddie Mac reached their peaks during the global financial crisis. Since then, they have declined steadily. On the other hand, FHLB bonds outstanding decreased from 2008 until 2012 before rising again. In 2018, FHLB bonds comprised the largest proportion of total housing agency bonds. As a result, the proportion of FHLB bonds traded in the secondary market has been on the rise as well.

In Europe, the role and proportion of covered bonds in the housing bond market has been significant. Twenty-six out of 28 European Union economies had covered bond legislation as of 2014 (Lunde and Whitehead 2016). The total volume of covered bonds outstanding in Europe even increased during the global financial crisis, but subsequently dropped after reaching a peak in 2012. Nevertheless, the outstanding volume of covered bonds backed by mortgages has rebounded since 2015.

Among European economies, Germany has the covered bond market with the longest history and it uses a variety of asset classes as underlying collateral. The German financial market produces covered bonds backed not only by mortgages, but also by underlying assets such as ships and assets in the public sector, among others.

Recently, Denmark became the largest market in Europe for covered bonds backed by mortgages; outstanding covered bonds backed by mortgages accounted for 98.8% of the total covered bond market in Denmark in 2016 (**Figure 15**).

The main issuers of covered bonds in Europe are financial institutions acting as mortgage originators. Since bonds issued by financial institutions are generally classified as corporate bonds, it would be difficult to segment the European housing bond market into agency bonds and nonagency bonds in the same way that the US housing bond market is divided.

In Europe, MBS were introduced in the mid-1980s and have become an important source of funding, especially in Ireland and the United Kingdom. The growth in the use of MBS was supported by the subsidiaries of US financial institutions. The market almost collapsed after the global financial crisis because of the problems experienced in the US, only beginning to recover in 2014 (Scanlon and Whitehead 2011, Lunde and Whitehead 2016).

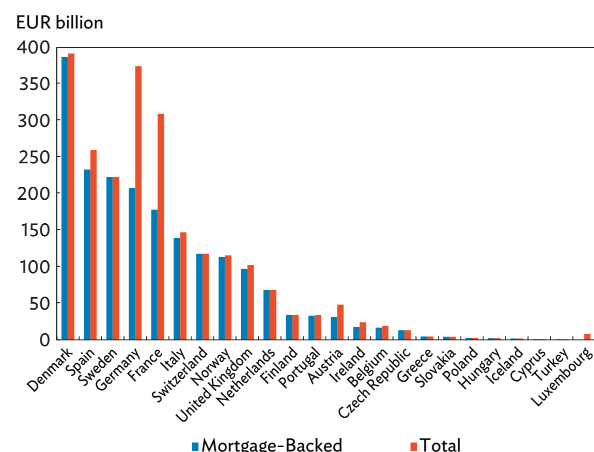
Japan was the first economy in Asia to establish a government housing finance agency, the Government Housing Loan Corporation (GHLC), in 1950. The GHLC provided long-term, fixed-rate mortgages to households through loan originators. Its sources of funding were borrowings from the Fiscal Investment and Loan Program and proceeds from the issuance of agency bonds. The GHLC also provided mortgage insurance to households.

In 2003, the GHLC began to participate directly in the housing bond market with a shift in its business focus to the issuance of MBS backed by mortgages from private mortgage originators. In addition, the GHLC started to guarantee the timely payment of principal and interest on MBS issued by financial institutions. It was renamed the Japan Housing Finance Agency (JHF) in 2007.

The MBS issuance of JHF has steadily increased over the past decade. The outstanding amount of MBS doubled from about JPY6.8 trillion at the end of 2007 to JPY12.7 trillion at the end of 2017 (**Figure 16**), accounting for 10.1% of the total value of mortgages in Japan (JPY125.9 trillion).

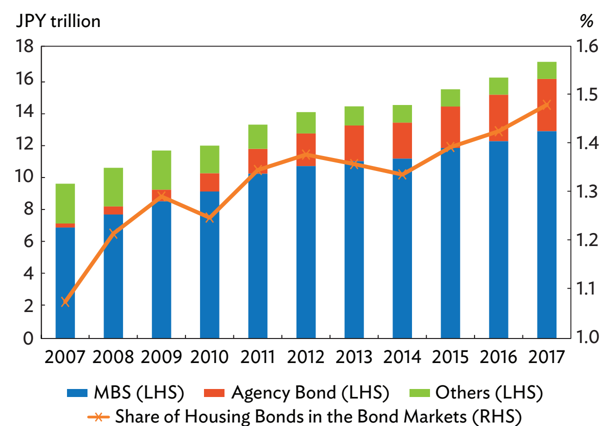
The increase in the amount of agency bonds outstanding has been remarkable. In terms of total bonds outstanding, agency bonds are smaller than MBS but their average annual growth rate between 2007 and 2017 was about 31%, expanding from only JPY0.3 trillion in 2007 to JPY3.2 trillion in 2017. However, this impressive growth rate gradually decreased during the review period. The proportion of other bonds issued by JHF, property accumulation saving scheme-tied housing bonds, and housing land bonds has also gradually decreased.

Figure 15: Outstanding Covered Bonds in the European Union, 2016



EUR = euro.
Source: European Mortgage Federation–European Covered Bond Council. 2017. *ECBC Covered Bond Fact Book 2017*. Brussels.

Figure 16: Growth of the Housing Bond Market in Japan



JPY = Japanese yen, LHS = left-hand side, MBS = mortgage-backed securities, RHS = right-hand side.
Sources: Japan Housing Finance Agency, Japan Securities Dealers Association.

The share of housing bonds in the Japanese bond market, which is dominated by government bonds, is very small. However, the share, which was about 1.1% at the end of 2007, rose to 1.5% at the end of 2017, as the importance of housing bonds in the overall bond market is gradually increasing.

Asian Housing Bond Markets

While per capita incomes in Asian economies are growing faster than those of other parts of the world, the urban population as a percentage of the total population in Asia is lower than on other continents, suggesting that the future rate of urbanization in Asia is expected to be relatively high, along with that of Africa (World Bank 2019, United Nations 2014). Accordingly, such a phenomenon is likely to accelerate housing demand in Asia.

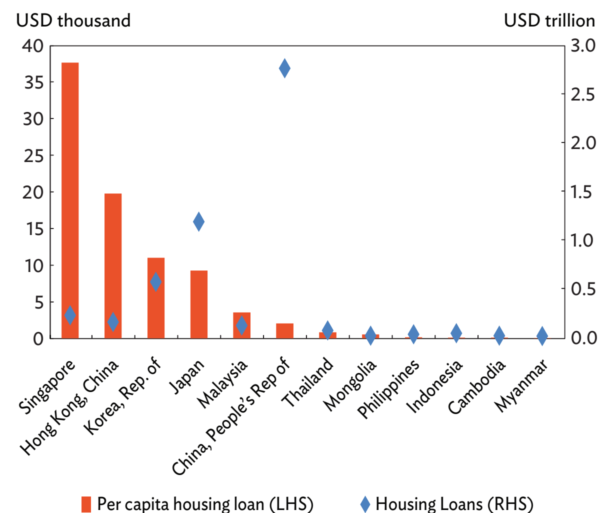
However, in the Asian economies where capital market development is relatively low, housing finance is indirectly channeled by way of commercial bank loans. Such a system is structurally limited in meeting the housing finance needs of home buyers.

The amount of total housing loans tends to be proportional to the gross domestic product (GDP) of each economy, but the amount of individual housing loans actually available to meet housing demand is affected by the level of development of the financial market, especially the capital market. In East Asian economies, as shown in **Figure 17**, relatively higher levels of capital market development lead to higher per capita housing loans.

Benefits of Housing Bond Market Development in Asian Economies

Capital markets are the mechanisms in which large amounts of long-term funds are raised from a large number of unspecified investors, thereby diversifying investment risks. The development of a housing bonding market enables financial intermediaries to attract more sources of funding and to transfer and diversify relevant risks through securitization and sales of mortgages to investors. In particular, long-term mortgages could satisfy investment demand from pension funds and insurance companies, which mainly invest in long-term instruments. In the case of MBS, mortgage assets are moved from the originator's books, which can help the financial institution better manage its liquidity and risks.

Figure 17: Per Capita Housing Loans in East Asia



LHS = left-hand side, RHS = right-hand side, USD = United States dollar.
Sources: Total housing loan data from the central bank of each economy; population data from International Monetary Fund. 2015. *World Economic Outlook 2015*. Washington, DC.

Thus, the development of the housing bond market will lead many Asian economies with bank-oriented housing finance to have a balanced and improved housing financial system. The development of the housing bond market can have several effects on the economy. First, it creates more funding sources for mortgages in Asian economies, which are currently limited to short-term bank savings. The scope of financing sources can be broadened to include domestic and foreign investors, thereby meeting the funding needs of more home buyers.

Second, the funds raised through the housing bond market are also used to finance the supply of housing, leading to expansion in housing construction and an increase in labor demand and income. This ultimately contributes to economic growth. Among academics, for several decades, housing has been regarded as an important contributor to economic growth (Harisa and Arku 2006, Tibaijuka 2009).

Third, the housing bond market, along with its contribution to the growth of the real economy, can contribute to overall financial development by enabling economies with less developed capital markets to experience the benefits of a capital market as a good place to raise large-scale, long-term funds over a relatively short period.

Fourth, with the development of the housing bond market, investors are provided with financial instruments with predictable cash flows and high credit quality. This allows investors to have relatively high expected rates of return and provides risk diversification.

Housing Bond Markets in Asia

Asian economies with relatively developed capital markets, such as Japan, have well-functioning housing bond markets. In contrast, the People's Republic of China (PRC) is an economy whose housing bond market began developing only recently. Thus, its housing bond market is a relatively pioneering and small market compared to the size of the PRC's overall capital market. In some members of the Association of Southeast Asian Nations, the housing bond market exists but does not function properly yet. In other words, housing finance is still provided only through financial intermediaries, primarily banks.

The mortgage market is divided into primary and secondary markets. In the primary mortgage market, a lender extends a loan to a borrower to purchase a house. In the secondary mortgage market, mortgage loans are held or sold (Weiss and Jones 2017).[8] The housing bond market is where housing bonds are issued and traded. Housing bonds include structured securities such as MBS and mortgaged-backed bonds whose underlying assets are mortgages in the secondary market and other securities issued by housing finance entities. The existence of a market for securities backed by mortgages in an economy means that the secondary mortgage market is functioning.

Among East Asian economies, Hong Kong, China; Indonesia; Japan; the Republic of Korea; Malaysia; Mongolia; the Philippines; and Thailand have such secondary mortgage markets. These markets are operated mainly by government agencies tasked with securitizing mortgages. Therefore, the analysis of the roles of these agencies is not much different from that of the housing bond market. In the PRC, however, RMBS are issued by multiple financial institutions rather than a government agency. This implies that the structure of the housing bond market in the PRC is different from that of housing bond markets in other economies.

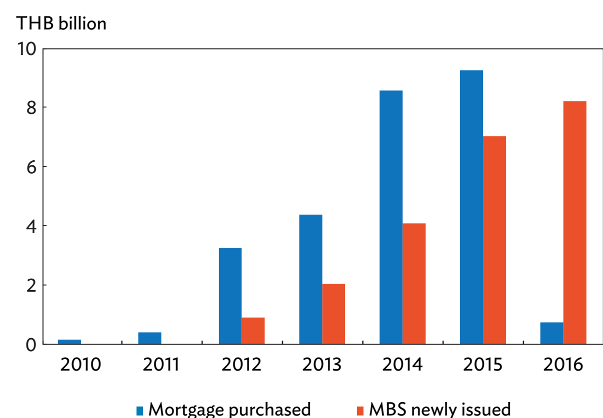
Thailand was first among all Asian economies, except for Japan, in establishing a housing finance agency when it created the Government Housing Bank in 1953. The agency's main focus has been providing housing finance to low- and middle-income households.

It was the establishment of the Second Mortgage Corporation (SMC) in 1997 by the Ministry of Finance that led to the formation of the housing bond market in Thailand. The agency aims to develop a secondary securitization for fund-raising to ensure the adequate and consistent expansion of housing mortgage financing.

In 2012, the SMC began actively buying mortgages from the National Housing Authority and raising its MBS issuance volume to provide opportunities for lower-income people to own homes.

In 2014, the SMC conducted its first public offer of MBS in Thailand, and mortgage purchases and MBS issues increased simultaneously (**Figure 18**). In 2016, mortgage purchases fell sharply due to credit problems in Thailand, but MBS issuances continued to increase. This was in line with the upward trend of local currency nongovernment bonds outstanding despite the overall stagnation of the Thai bond market since 2013 (Asian Development Bank 2016). Nonetheless, the ratio of MBS issuance to Thailand's GDP and the ratio of MBS issuance to housing loans were about 0.1% and 0.4%, respectively, in 2016.

Figure 18: Thailand's Housing Bond Market



MBS = mortgage-backed securities, THB = Thai baht.
Source: Second Mortgage Corporation.

[8] It is distinguished from the terminology in securities markets where the structure in which the securities are newly issued is the primary market and the structure the issued securities are transacted in is the secondary market.

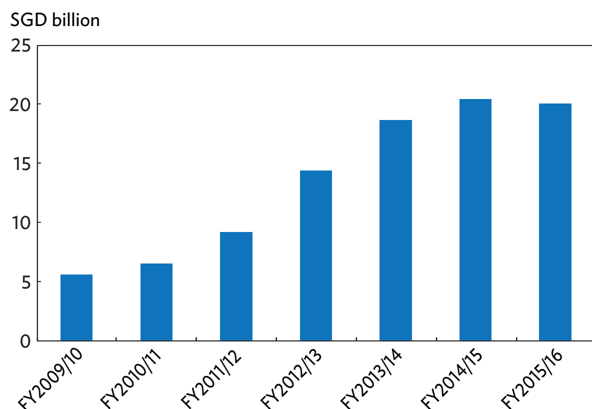
Housing finance in Singapore is implemented by the Housing and Development Board (HDB), which was founded in 1969. As a government-owned entity, HDB offers housing loans at concessionary interest rates to help eligible Singaporeans purchase homes. In addition, HDB provides funds for residential and urban improvements as well as for the development and management of commerce and industry.

Compared to the relatively high development level of the capital market, the growth of the MBS market in Singapore has been poor (**Figure 19**). In spite of its securitization experience and policy support since 1986, Singapore has not been active in the securitization of mortgages due to a high proportion of floating-rate mortgages and high liquidity in the market (Sing and Ong 2004). As a result, the proportion of funding for housing finance through the MBS market remains small.

Accordingly, HDB depends largely on borrowings from the government to finance its operations, but it also raises funds through the issuance of agency bonds. The volume of agency bonds issued under HDB's medium-term note program has increased steadily since the global financial crisis, as opposed to government borrowings, which have declined.

In the Philippines, the secondary mortgage market began in 1979 when the National Home Mortgage Finance Corporation (NHMFC) was established as an operating agency of the then Ministry for Human Settlements. Modeled after Freddie Mac in the US, the agency issued its own Bahayan Certificates and Bahayan Mortgage Participation Certificates with purchased mortgages as underlying assets (Boleat 1985).

Figure 19: Housing Bonds Outstanding in Singapore



FY = fiscal year, SGD = Singapore dollar.
Source: Housing and Development Board.

However, the role of NHMFC as a secondary mortgage institution has been negligible for more than 30 years ever since NHMFC transformed into a mortgage originator in response to a financial crisis in the Philippines in the 1980s. In 2004, the Securitization Act was enacted to develop capital markets through the creation of an asset-backed securities (ABS) market, paving the way for the institutionalization of securitization.

In 2009, NHMFC launched its securitization issue of a PHP2.06 billion Bahay Bond, the first RMBS issued by a government agency in the Philippines. In addition, NHMFC was allowed to purchase housing loans under the Housing Loan Receivable Purchase Program and pool them together to issue MBS. In 2012, NHMFC issued its second Bahay Bond, the first retail MBS in the Philippines.

Compared to NHMFC, which focuses on mortgage purchases and securitization, the Home Guaranty Corporation, a government-owned corporation established in 1950, provides cash flow guarantees for mortgages. The role of the Home Guaranty Corporation in the development of the secondary mortgage market was clarified through the Home Guaranty Corporation Act enacted in 2000.

NHMFC stopped issuing MBS in 2017. To make MBS issuance more active in the Philippines, constraints on MBS issuance need to be addressed, including the high cost of securitization, inadequate credit information on mortgage borrowers, and the lack of institutional arrangements (Ballesteros and Dulay 2013).

Cagamas Berhad, the National Mortgage Corporation of Malaysia, was created in 1986 to promote home ownership and growth of the secondary mortgage market. At the end of 2016, its shareholders were Bank Negara Malaysia (20.0%), commercial banks (72.8%), and investment banks (7.2%).

Cagamas issues agency bonds and MBS—corporate bonds and *sukuk* (Islamic bonds)—to finance the purchase of housing loans (conventional and Islamic) from financial institutions. It is the largest issuer of debt instruments in the domestic capital market.

Two noteworthy features are seen in the issuance of Cagamas debt securities (**Figure 20**). First, the outstanding volume of agency bonds exceeds that of MBS. Second, the difference between the outstanding volumes of agency bonds and MBS has been gradually increasing. Following the global financial crisis, the total volume of debt instruments issued by Cagamas declined until 2012.

However, with a rapid increase in the issuance of conventional agency bonds since then, the proportion of agency bonds that are outstanding Cagamas debt securities, which remained at slightly higher than 70% for years, increased to 88.4% in 2016.

As a result, the portion of Islamic securities (agency bonds and MBS) in the outstanding debt securities declined gradually from 54.0% in 2012 to 36.5% at the end of 2016. Cagamas housing bonds outstanding totaled MYR36.4 billion in 2016, accounting for 7.6% of total housing debt and 2.9% of GDP.

Hong Kong, China's housing finance government agency is the Hong Kong Mortgage Corporation (HKMC), which was established in 1997. The HKMC purchases mortgages from loan originators, such as commercial banks, and provides mortgage insurance. Its businesses are funded through the issuance of agency bonds and MBS, as well as equity capital and credit from the Exchange Fund, which is made up of the government's fiscal reserves.

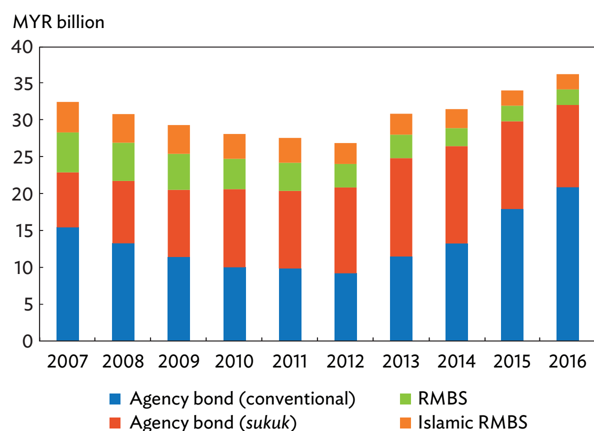
Since 1998, the HKMC has been implementing the Debt Issuance Programme under which it issues HKD-denominated agency bonds, targeting domestic institutional investors. As mortgages, which were on a steady growth path, soared after the global financial crisis, the HKMC launched the multicurrency Medium-Term Note Programme in 2007 to issue agency bonds to foreign investors. In 2001, the Retail Bond Issuance Programme was introduced to attract small domestic investors (HKMC 2017).

The HKMC began issuing MBS in 1999 and launched the Bauhinia Mortgage-Backed Securitization Programme in 2001 (HKMC 2017). However, its MBS outstanding decreased gradually from 2006 until 2013 when it reached zero (**Figure 21**).

The main driver of Hong Kong, China's housing bond market in recent years has been the multicurrency medium-term note, which reflects the globalization of Hong Kong, China's overall bond market. At the end of 2017, the housing bond market represented only about 2.8% of total mortgages in Hong Kong, China.

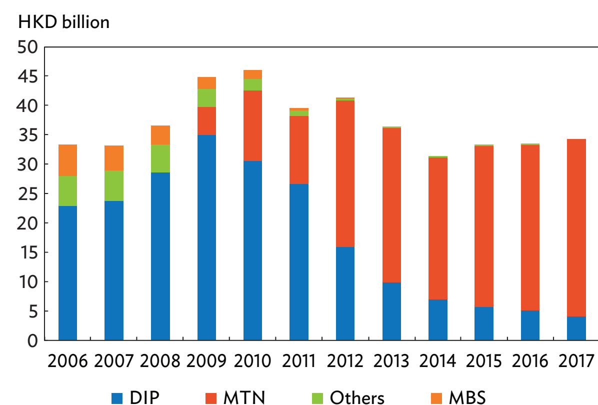
Since its recovery from the 1997/98 Asian financial crisis, which began in the early 2000s, Indonesia has tried to secure sources of funding that match the duration of mortgages, which are long-term loans, amid rapidly increasing housing and mortgage demand. In the wake of the global financial crisis, Indonesia strived to introduce

Figure 20: Cagamas Housing Bonds Outstanding in Malaysia



MYR = Malaysian ringgit, RMBS = residential mortgage-backed securities.
Source: Cagamas Holdings Berhard *Annual Report 2016*.

Figure 21: Hong Kong Mortgage Corporation Housing Bonds Outstanding



DIP = Debt Issuance Programme, HKD = Hong Kong dollar, MBS = mortgage-backed securities, MTN = medium-term notes.
Source: Hong Kong Mortgage Corporation. 2017. *HKMC Annual Report 2017*. Hong Kong, China.

the securitization of assets, including loans, as the way to develop the capital market and solve liquidity problems. However, there were several institutional weaknesses (Ahmed 1998). As a result, the development of the MBS market has been slow.

Established as a wholly owned government corporation in 2005, Sarana Multigriya Finansial (SMF) addressed the need to resolve duration mismatch problems caused by the traditional mortgage supply and demand mechanism, which was dependent on bank-oriented, short-term deposits. SMF was allowed to issue long-term and short-term MBS and/or promissory notes to raise funds from the public to provide housing finance, and to purchase mortgages from financial institutions such as banks. SMF securitized mortgages that it purchased from Bank Tabungan Negara in 2008 and issued its first MBS in January 2009.

Furthermore, SMF was allowed to offer credit enhancement service for MBS. However, the major business of SMF is to provide funds for mortgage originators. A significant portion of the funding is raised through agency bond issuance. SMF agency bonds outstanding in 2016 were about IDR6.5 trillion (**Figure 22**).

As at the end of 2016, the cumulative amount of SMF lending to mortgage originators was about three times the cumulative amount of its MBS issuance. Thus, agency bond issuance, the mainstay of SMF's funding sources, was larger than MBS issuance. Nevertheless, its agency bonds outstanding accounted for less than 0.1% of GDP and 1.8% of total housing loans at the end of 2016.

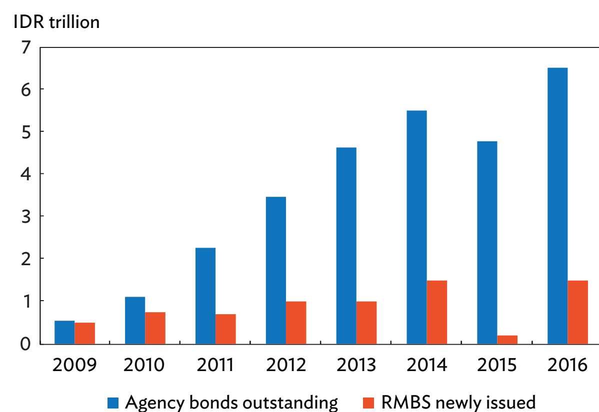
In 2006, the Government of Mongolia established the National Housing Center and the Mongolian Housing Finance Corporation to implement policy on providing low- and middle-income citizens with affordable housing. In the same year, the Mongolian Mortgage Corporation (Mongolyn Ipotekiin Korporatsi [MIK]) was established jointly by the Bank of Mongolia and 10 commercial banks.

MIK issued its own bonds for the first time in 2009. Based on the Procedure on Issuance of Asset-Backed Securities Financial Regulatory Commission enacted in 2011, MIK obtained a license for the issuance of asset-backed securities in 2012 and issued an initial RMBS of MNT322.9 billion in December 2013.

MIK's mortgage securitization has been used as a channel to supply low-interest policy mortgages since 2013. The issuance volume of securitized bonds in Mongolia has increased rapidly since 2015 and is relatively large compared to the Mongolian economy and the development level of the primary housing finance market. In 2015, MIK's RMBS issuance was MNT1.30 trillion, the equivalent of 5.6% of GDP in the same year. On the other hand, the outstanding amount of the MBS was MNT2.12 trillion in 2016, or 8.9% of the same year's GDP (**Figure 23**).

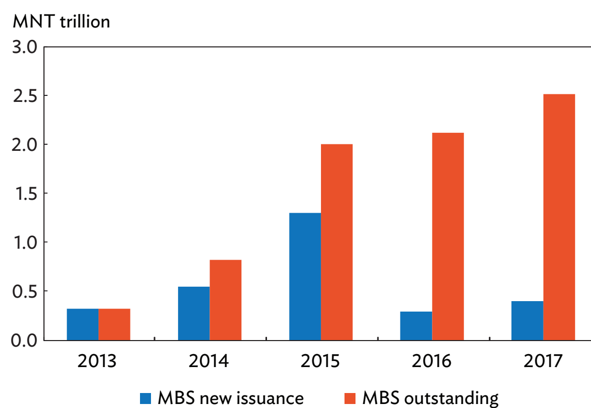
MBS issued by MIK are basically purchased by central banks and commercial banks in Mongolia. Such a structure may contribute to meeting long-term housing

Figure 22: Sarana Multigriya Finansial Housing Bonds Outstanding



IDR = Indonesian rupiah, RMBS = residential mortgage-backed securities.
Source: Sarana Multigriya Finansial (SMF). *Annual Report*. Jakarta (8 years: 2010–2017).

Figure 23: Housing Bond Market in Mongolia



MBS = mortgage-backed securities, MNT = Mongolian tögrög.
Sources: Mongolyn Ipotekiin Korporatsi and Central Bank of Mongolia.

finance demand, but it constrains the expansion of the base for housing finance in Mongolia by diversifying investors in the capital market.

MIK is a member of the Asian Secondary Mortgage Market Association, which was established in September 2014. Along with MIK, the members of the organization are Cagamas Berhad (Malaysia), JHP (Japan), Korea Housing Finance Corporation (Republic of Korea), NHMFC (Philippines), SMF (Indonesia), SMC (Thailand), and the Kazakhstan Mortgage Company (Kazakhstan).

The association aims to provide a platform for the exchange of ideas, opinions, and experiences to improve the conditions for obtaining housing loans and to provide a better quality of life. The association is expected to play an active role in invigorating the housing bond market and in improving housing finance through regional corporation among members.

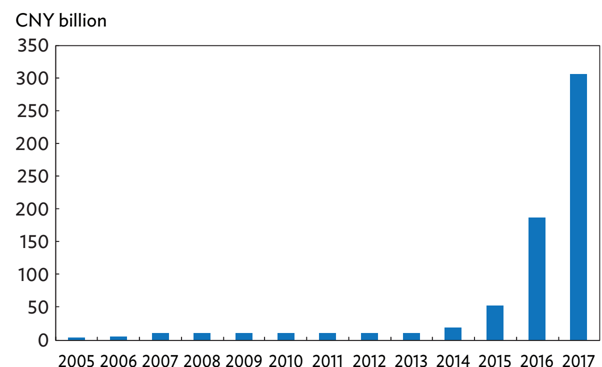
In the PRC, where most housing purchases before the mid-1990s resulted from the sales of welfare housing to sitting tenants by their employers (state-owned enterprises) at low prices, there has generally been little need for a mortgage (Zhihua 2015). Around 1990, housing savings banks and the Housing Provident Fund were established. When mortgages grew rapidly as a result, demand for mortgage securitization also increased, especially among commercial banks.

The PRC's housing bond market began with the issuance of CNY3.0 billion of MBS by the China Construction Bank in 2005 (**Figure 24**). An additional CNY4.2 billion of MBS was issued in 2007. These securitization deals were arranged through trust companies. After the pilot issues, the issuance of MBS was suspended due to the global financial crisis until the Government of the PRC decided to restart the securitization of credit assets in 2012 (Shaoze 2015), which laid the basis for the re-issuance of MBS.

Notably, CNY6.8 billion worth of MBS was issued in 2014 to revitalize the housing market that had started to slow down in 2013. MBS issuance rose sharply in 2016 and reached CNY170.8 billion in 2017, accounting for 10.8% of the PRC's gross ABS issuance volume.

The striking characteristic of the secondary mortgage market in the PRC is that there is little structural difference between the process of issuing MBS and

Figure 24: RMBS Outstanding in the People's Republic of China



CNY = Chinese yuan, RMBS = residential mortgage-backed securities.
Source: China Securitization Analytics.

other ABS, in that financial institutions, such as government-owned banks and commercial banks, directly hand over their assets to special purpose entities that issue MBS and/or other ABS. Therefore, the MBS market structure in the PRC is distinguished from that in other economies in which mortgage securitization is dominated by specific government agencies.

In the PRC, the issuer of MBS who has the right to receive cash flows from underlying assets transferred from the originator is a special purpose trust. This type of securitization is used not only because it is effective in separating MBS investors from the bankruptcy of the originator by transferring assets in the form of a trust, but also because there are many restrictions on the use of a special purpose company (paper company) as an MBS issuer in the PRC under the existing Company Act. Nonetheless, MBS in the PRC are structurally distinct from European covered bonds because mortgages are actually sold to the special purpose trust and mortgages are removed from the originator's books (that is, the transfer is deemed a true sale).

Despite the recent rapid increase in MBS issuance, the housing bond market still comprises a small share of the PRC's housing finance. Considering that mortgage loans amounted to CNY21.9 trillion at the end of 2017, the share of MBS outstanding in housing finance was just 1.5%.

However, the growth potential of the MBS market in the PRC is very strong, given the upward trend in the volume of outstanding mortgages, which have grown at a

quarterly average rate of nearly 25% since 2013, and the subsequent liquidity demand from originators.

Among the housing bonds issued in each of the economies mentioned above, the market yields of structured securities, including MBS, are basically determined by the characteristics of the underlying assets.

Agency bond yields may also vary depending on the creditworthiness of the bonds, which is determined by the degree of government support. The reason for the importance of the market yield is its role in determining the funding costs of the issuers and ultimately housing demanders.

MBS, or covered bonds, generally have higher credit ratings than their originators. In the capital market, the credit rating of housing agency bonds tends to be regarded as the same as that of government bonds, regardless of whether government support is explicit or not. Nevertheless, in reality, the agency bonds tend to be traded at a somewhat lower price and yield more than government bonds. For some Asian economies—including Hong Kong, China; India; Japan; the Republic of Korea; Malaysia; Singapore; and Thailand—agency bonds and agency MBS are traded at spreads of 11–57 basis points and 25–71 basis points above government bonds, respectively (Davies, Gyntelberg, and Chan 2007). This may be due to the fact that the credit quality of a government agency cannot be exactly the same as that of the government itself, so the value of agency bonds is considered to be somewhat lower than that of government bonds.

However, there is a view that the difference between yields on agency bonds and government bonds is attributable to the characteristics of the underlying assets, prepayment risk, and/or the smaller issuance volumes of agency bonds than government bonds and the resultant lower liquidity levels (Prokopczuk, Siewert, and Vonhoff 2013; Ejsing, Grothe, and Grothe 2015).

Housing Bond Market in the Republic of Korea

Market for National Housing Bonds

The creation of the housing bond market in the Republic of Korea was driven mainly by the government; that is, the supply side of housing versus the demand side.

As economic growth drove population growth and accelerated urbanization in the 1970s, the Government of the Republic of Korea concluded that the housing shortage being experienced was caused not only by the tighter home-buying budgets of households, but also by the lack of infrastructure for housing supply.

In 1972, the government enacted the Housing Construction Promotion Act. The purpose of this act was to prescribe matters concerning the supply of housing, capital-raising and management for housing supply, and the production and supply of building and construction materials, to ensure the residential stability of the population and contribute to the welfare of the society as a whole.

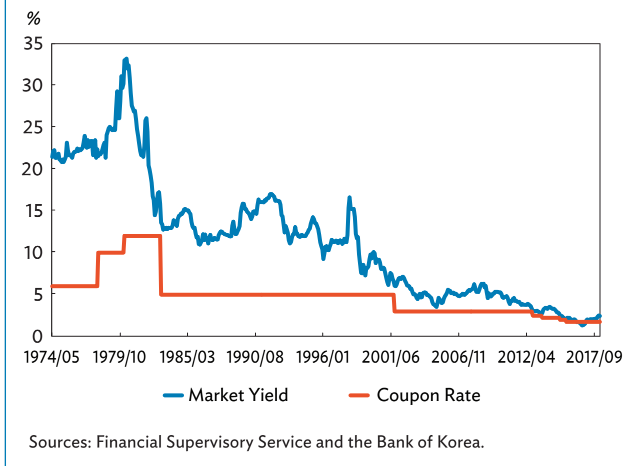
To achieve the objective of the act, various sources of financing were required to create a fund for the construction of affordable housing units (for sale or rent) targeted to nonhomeowners.

The sources of funding for housing construction included borrowings from domestic and foreign governments, and housing subscription deposits. The major source of financing was National Housing Bonds (NHBs). Type 1 NHBs were issued for the first time in 1973, with a 5-year maturity and a 6% coupon. The coupon rate was very low considering that the annual average rate of consumer price inflation for the previous 3 years was about 14%.

For that reason, the issuance of the bonds could not be made based on the price mechanism, which works through demand and supply. NHBs were issued on the basis of mandatory placement, meaning that the purchase of the bonds was required for companies who obtained a license, permission, or authorization related to the construction business from the central or local government, or individuals who applied for registration of their ownership of a property or mortgage.

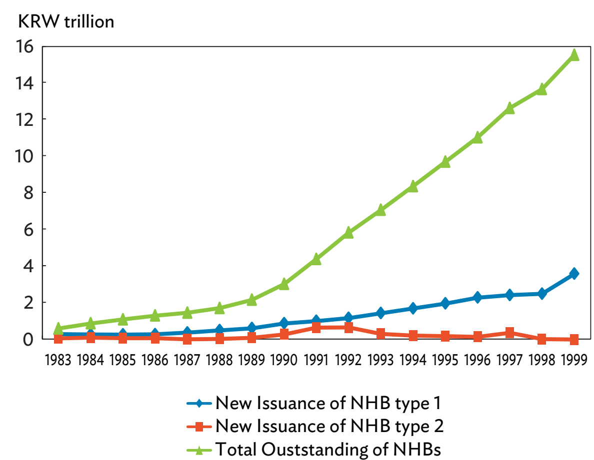
Since then, the coupon rate of Type 1 NHBs has been gradually adjusted in conformity to changes in the overall level of interest rates (**Figure 25**). However, it was always significantly lower than the market interest rate. Such a difference gradually diminished after interest rates were liberalized in the late 1990s. But the coupon rate of NHBs was still lower than that of other government bonds.

Figure 25: Historical Market Yield and Coupon Rate



Sources: Financial Supervisory Service and the Bank of Korea.

Figure 26: Trends in National Housing Bond Issuance and Volume



KRW = Korean won, NHB = National Housing Bond.
Source: Government of the Republic of Korea, Ministry of Land, Infrastructure and Transport.

By issuing bonds with such a low coupon rate, the government was able to obtain low-cost financing for the construction of affordable homes for low-and middle-income families. The issuance helped not only save costs but also redistribute resources.

Type 2 NHBs had a significantly lower coupon rate than Type 1 NHBs, consequently increasing its role in income redistribution. In the 1980s, a cap on the pricing of presale homes was introduced to prevent housing prices from rising. Unexpectedly, house buyers enjoyed large capital gains from the difference between the actual market price and the cap price. The phenomenon was more conspicuous in the case of large private apartments yielding greater capital gains. To collect such windfall gains and facilitate capital-raising for national housing projects, the government introduced a bidding system for Type 2 NHBs, selling private housing units only to bidders who bought a larger amount of the bonds. Type 2 NHBs were first issued in May 1983, having a 10-year maturity and a zero coupon rate.

With the rise in apartment prices, the volume of Type 2 NHB issuance skyrocketed owing to massive demand for the bonds from buyers of presale apartment units built under new town development plans in the Seoul metropolitan area in the late 1980s (**Figure 26**). The increase in new NHB issues further accelerated the increase in the volume of NHBs outstanding, resulting in the expansion of the housing finance market.

As such, NHBs played a key role in financing public housing construction, thereby invigorating the housing market. This, in turn, increased demand for NHBs and expanded financing for housing construction, which created a virtuous cycle as a consequence.

In addition, the housing bond market contributed to the development of the early-stage bond market in the Republic of Korea, especially the government bond market. A lot of NHB purchasers became more familiar with government bonds, and the over-the-counter bond market was also vitalized to meet purchasers' liquidity needs.

Within 2 years since their first issuance, NHBs comprised the largest proportion of new medium- to long-term government securities. In the early 1980s, NHBs accounted for more than 90% of government bonds listed on Korea Exchange. As a result, NHB trades represented the majority of government bond trades on the exchange. Not only that, NHB trading was active in the over-the-counter market too. NHBs were the most meaningful assets for investors who favored safe long-term assets, while corporate bonds dominated the domestic bond market and the majority of government bonds were short-term bonds.

Not only did the NHB market serve as a key engine to vitalize the Republic of Korea's housing finance,

but it also shored up the fledgling medium- and long-term government bond market and laid the basis for a developed long-term government bond market mainly composed of Korea Treasury Bonds (KTBs) after the 1997/98 Asian financial crisis. In addition, although the share of NHB issuance in the government bond market has decreased due to an increase in KTB issuance, NHB listed on the exchange stood at KRW68 trillion at the end of 2017, representing 11.1 % of total government bonds outstanding. NHBs are also the most frequently traded debt instrument among retail investors on the exchange because the bonds can be traded in small lots.

Market for Housing Agency Bonds and Structured Bonds Backed by Mortgages

If the NHB market is the housing bond market created with the aim of funding housing supply, the housing agency and MBS market is the housing bond market formed for financing on the housing demand side.

For the Republic of Korea, the impact of 1997/98 Asian financial crisis necessitated asset securitization to efficiently resolve nonperforming assets and restructure distressed businesses. As a result, the Asset Backed Securitization Act was enacted in September 1998. Assets securitized during this time were mainly distressed debt and NPLs.

The experience of nonperforming asset securitization could be applied to the housing finance market. To get the economy out of recession, the government had to implement various policies to revive the economy, including stimulating housing demand.

The Special Purpose Companies for Mortgage-Backed Bonds Act was enacted in January 1999. In September of the same year, the Korea Mortgage Corporation (KoMoCo) was created. Its shareholders consisted of the Korean Ministry of Construction and Transportation, major domestic financial institutions, and overseas investment institutions including the International Financial Corporation.

In April 2000, KoMoCo undertook its first securitization of mortgage loans made by the National Housing Fund, with the technical support of overseas investment institutions. The total par value of MBS was KRW375.6 billion and the MBS structure comprised 10 tranches. Eight of these were senior tranches whose principal and interest payments were guaranteed, while the remaining two were subordinated tranches of KRW28.6 billion in par value whose principal and interest payments were not guaranteed.

The senior tranches were classified by maturity period; the longer the maturity period, the higher the coupon rate. The tranche with a call option attached had a higher coupon rate than the other senior tranches with the same maturity.

A total of nine MBS deals were made by KoMoCo based on mortgages from the National Housing Fund until the transfer of the securitization business to the Korea Housing Finance Corporation (KHFC) was completed in March 2004. Meanwhile, most ABS issues were intended for nonperforming loans (NPL) resolution and corporate restructuring before and after 2000, and nonmortgage assets including primary collateralized bond obligation, secondary collateralized bond obligation, and NPLs were primarily used as underlying assets. Subsequently, the proportion of MBS issuance in total ABS issuance was insignificant before 2004, accounting for only 0.8% of total ABS in 2003 (**Table 5**).

It showed a sharp contrast to developed economies in which mortgages were the main underlying assets. Accordingly, as part of the restructuring of the MBS market, KHFC was founded as a public entity, wholly owned by the government and the Bank of Korea in accordance with the Korea Housing Finance Corporation Act, 2003. KHFC's core activities are to securitize mortgage loans and issue MBS, and to provide credit guarantees for housing finance.

Table 5: Asset-Backed Securitization Issuance by Asset Type
(KRW trillion)

Asset	1999	2000	2001	2002	2003
Securities	0.53 (7.9)	28.64 (58.0)	8.65 (17.0)	1.94 (4.9)	6.88 (17.2)
Mortgage	0.0 (0.0)	1.38 (2.8)	0.84 (1.6)	0.95 (2.4)	0.33 (0.8)
Other Loans (including NPLs)	5.68 (84.0)	18.18 (36.8)	40.56 (79.6)	36.33 (91.2)	31.82 (79.8)
Real Estate	0.56 (8.2)	1.19 (2.4)	0.88 (1.7)	0.61 (1.5)	0.86 (2.2)
Total	**6.77 (100.0)**	**49.38 (100.0)**	**50.93 (100.0)**	**39.83 (100.0)**	**39.88 (100.0)**

KRW = Korean won, NPLs = nonperforming loans.
Note: Percentages are in parentheses.
Source: Financial Supervisory Service.

As a government-owned entity, KHFC was able to raise funds at a lower cost than KoMoCo and provide more credit support for MBS. As a consequence, MBS issuance by KHFC increased sharply.

In 2004, the first year of KHFC's establishment, MBS issuance amounted to just KRW3.0 trillion, but rose to KRW21.7 trillion in 2010 and KRW113 trillion in 2017. In 2009, 2012, and 2015, issuance jumped by more than 50% year-on-year. Such increases were attributed to the selective purchase of mortgages from financial institutions, and the active development of its own mortgage products, which could be used as underlying assets for MBS issued by KHFC.

KHFC launched a new Bogeumjari Loan, its flagship mortgage product, in 2004. It raised loan limits, broadened the scope of eligible houses, and increased participating banks offering Bogeumjari loans over the internet as the demand for housing finance grew in response to the global financial crisis. These contributed to the sharp increase in mortgage loans and the rise in assets that MBS would be based on.

The main driver of the uptick in mortgage loans in 2012 was the release of a Preferential Rate Bogeumjari Loan. Under the loan program, first-time small home buyers were offered preferential rates with the government providing interest subsidies for mortgages. In 2015, however, the surge of Relief Loans launched as part of the government-led mortgage refinancing program was the main contributor to the increase in MBS issuance. A Relief Loan is an amortized fixed-rate mortgage product targeting existing mortgage borrowers who want to switch out their variable rate bullet mortgages. The introduction of this mortgage product was aimed at reducing macroeconomic instability arising from household debt, a large portion of which was comprised of variable rate bullet mortgages.

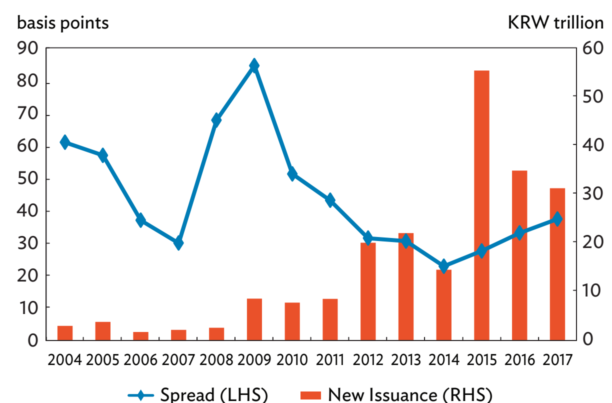
As a result, the proportion of MBS, of which the underlying assets are only the mortgages selected and purchased from financial institutions, reached 33.8% at the end of March 2014 and fell to 23.0% at the end of 2017. On the other hand, the proportion of MBS, of which the underlying assets mainly comprise its own mortgage products, increased to 71.2%.

Unlike NHBs for which the coupon rate—the reflection of the financing cost of bond issuer—is determined by government, coupon interests of the other housing bonds in the Republic of Korea are determined by the market depending on the supply and demand of the bonds. The interest rates of MBS and government agency bonds are determined by the addition of premium to KTB market yields (**Figure 27**).

Meanwhile, KHFC began to issue covered bonds in 2010, with covered bond issuance rising from KRW0.64 trillion in 2010 to KRW0.79 trillion in 2011. With a gradual decline in new issuance, however, only covered bonds denominated in foreign currencies were issued from 2015 onward. In contrast to MBS, which tend to be issued in terms of risk management and agency problems, the issuance demand for covered bonds tends to come from the liquidity problems of financial institutions (Carbo-Valverde, Rosen, and Rodriguez-Fernandez 2017). In view of the current business structure of KHFC, its own domestic liquidity demand does not seem to be large.

The role of housing agency bonds in the Korean housing bond market, unlike those in many other Asian economies, is small and insignificant because KHFC has rarely issued its own agency bonds since 2012. KHFC has been able to adequately meet demand for housing finance by issuing structured bonds, MBS, and covered bonds in the housing bond market, and also has covered costs and expenses related to the guarantee business through guarantee fee income. For these reasons, there has been little need for KHFC to raise long-term debt.

Figure 27: MBS New Issuance and Weighted Average Spread over KTBs



KTBs = Korea Treasury Bonds, KRW = Korean won, LHS = left-hand side, MBS = mortgage-backed securities, RHS = right-hand side.
Source: Korea Housing Finance Corporation.

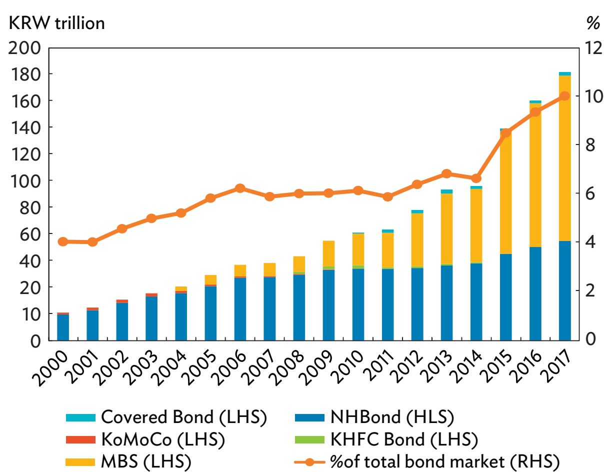
Nonetheless, MBS and covered bonds issues, together with NHB issues, have continued to drive higher the total volume of housing bonds outstanding. Housing bonds outstanding, which totaled KRW18.7 trillion in 2000, soared to KRW183.5 trillion at the end of 2017, representing about 25.5% of the Republic of Korea's aggregate mortgage loans of KRW719.7 trillion and accounting for 10.6% of GDP (**Figure 28**).

As a result, housing bonds are playing an increasing role in the overall bond market as their share of total bonds outstanding rises. Although the share of NHBs in total bond issuance stayed between 3.0% and 5.0% during the review period, the share of housing bonds reached 10.0%. This implies that the housing bond market is playing a growing role in the Korean bond market. It has also contributed to the development of the capital market through the sophistication of structuring securities. Furthermore, the development of the housing bond market has had a positive impact on housing construction in the Republic of Korea.

Conclusion and Policy Implications

Housing demand in Asia is inevitably growing because Asia is experiencing faster income growth and urbanization than any other region. However, there have been limits on the size and tenor of mortgage loans financed by the short-term savings of banks that have provided mortgage systems. To overcome such problems, it is necessary to activate the housing bond market as well as the role of financial intermediaries.

Figure 28: Housing Bonds Outstanding in the Republic of Korea



KHFC = Korea Housing Finance Corporation, KOMOCO = Korea Mortgage Corporation, KRW = Korean won, LHS = left-hand side, MBS = mortgage-backed securities, NHBs = National Housing Bonds, RHS = right-hand side.
Sources: The Bank of Korea; Korea Housing Finance Corporation; Korea Financial Investment Association; and Ministry of Land, Infrastructure and Transport.

The housing bond markets in developed economies mainly comprise MBS issued by government housing finance agencies and covered bonds issued by banks acting as mortgage originators. The former approach began in the US and the latter in Europe. Both markets have developed robustly.

In the US, the housing bond market is overwhelmingly large in terms of size and in the proportion of housing finance. This is attributable to the high demand for housing finance and because the demand is effectively linked to the supply side through a well-established bond market.

The US housing bond market has evolved through trial and error as it has moved from a bank-based housing finance system, in which bank deposits, a short-term funding source, were used to finance mortgages, toward the present form of the market in which long-term mortgages are available and lending sources are diverse thanks to the role of government housing finance agencies.

The US experience provides various policy implications for economies seeking to develop a well-functioning housing bond market. This is because its experience reflects a logical process that has formed the core structure of the housing bond market, including the functions to address various risks—such as credit risk, liquidity risk, and prepayment risk—in traditional bank-based housing finance.

Fixed-rate mortgages and mortgage refinancing were introduced in the early 1930s to manage the default rate for short-term, floating-rate mortgages. These can be used as policy options to manage financial risk in times of economic crisis. On the other hand, the introduction of mortgage insurance schemes to protect mortgage lenders against losses would help reduce credit risk inherent in mortgage lending, thereby curbing the burden of managing risks arising from the asset transformation of mortgage lenders. This policy tool may be used to increase the stability of the mortgage supply.

Thematic Box: Empirical Evidence of the Impact of the Housing Bond Market on Housing Construction in the Republic of Korea

This box provides empirical evidence of the effects of housing bonds on the construction of new housing in the Republic of Korea. Using annual data from 1981 to 2017, the basic association between new housing construction and outstanding housing bonds is estimated by regressing the annual growth rate of new housing construction (NHC_t) on the contemporary and 1-year lag terms for the annual growth rate of outstanding housing bonds (HBO_t and HBO_{t-1}), which include National Housing Bonds, agent bonds, and structured housing bonds such as mortgage-backed securities and covered bonds, among others. The lagged term of housing bonds is included to account for the time lag between securing the funding for housing construction in the bond market and actual construction.

To further explore the impact of the housing bond market in the Republic of Korea, the total number of houses constructed is further divided into housing constructed by the public sector and by the private sector.[a] Public sector housing construction is more consistent with the goal of developing a housing bond market, which seeks to offer low- and middle-income households more opportunities to buy a home.

The estimated results in the table offer a preliminary assessment of the effects of the housing bond market in the Republic of Korea. The estimate of the coefficient of size of contemporary housing bonds outstanding on total housing construction is 0.933, which means that a 1.0% increase in the current year's housing bond market growth is associated with 0.933% growth in new housing construction volume that same year. This estimate is statistically significant at the 5% level. Moreover, consistent with the purpose of setting up a housing bond market, there is clear evidence that the expansion of the housing bond market in the Republic of Korea is associated with growth in public sector housing construction: a 1.0% increase in outstanding housing bonds is associated with a 0.859% increase in public sector housing construction, which is also significant at the 5% level. This impact is not significant in terms of increased private sector housing construction. On the other hand, the effect of the lagged term of outstanding housing bonds does not have a statistically significant impact on total and public sector housing construction; however, it reduces private sector housing construction (significant at the 10% level). This result implies that the expansion of the housing bond market may have a less significant crowding-out effect on future private sector housing construction given the increased public sector housing supply.

Table: Impact of the Housing Bond Market on Housing Construction

	NHC_t–Total	NHC_t–Public	NHC_t–Private
HBO_t	0.933** (2.090)	0.859** (2.122)	1.098 (1.519)
HBO_{t-1}	–7.22 (–1.687)	0.062 (0.161)	–1.257* (–1.814)

Notes: ** is significant at the 5% level and * is significant at the 10% level. Figures in parentheses are t-values.
Source: Author's calculations.

Overall, the empirical evidence shows the direct effects of the housing bond market on the real sector via housing construction. In particular, increased financing through the housing bond market in a period leads to an increase in contemporary total and public sector new housing construction, while also having a crowding-out effect on private sector housing in the next period. This potential crowding-out impact of the housing bond market on private sector housing merits further consideration when assessing the impact of financing housing construction through the bond market, with a focus on providing homes for low- and middle-income households. Further investigation is needed to deepen our understanding of the role of the housing bond market in the real sector of the economy.

[a] The growth of housing bonds outstanding is based on nominal values. The reason for using the number, rather than the value, of newly constructed housing is because the total value of houses is also driven by changing housing prices as well as by housing supply.
Source: Jeong, H. Forthcoming.

It was the role of secondary mortgage agencies established by the government that brought about dramatic changes in the housing finance structure. Nurturing housing finance agencies, such as Fannie Mae and Freddie Mac (MBS issuers) and Ginnie Mae (MBS credit guarantor), can be an effective policy measure to diversify funding sources and lengthen the duration of funding for housing finance. In addition, agency bonds issued to finance their business operations, together with MBS, can be used as a driving force for the advancement of the financial system as well as capital markets through the development of primary and secondary markets.

However, the US experience cannot be applied to all economies because the distorted evolution of the housing bond market—resulting from, among other causes, government intervention, a lack of transparency in the market, and the complexity of financial products—can cause totally unexpected results. The most representative example is the global financial crisis, which was triggered by expansion and derivatization of nonagency RMBS.

MBS are not the only alternative that will lead to the development of the housing bond market. European economies have developed their housing bond markets without the role of a housing finance agency. In some Asian economies, the MBS market has been a major force behind the development of the housing bond market, as is the case in the US. But other economies have achieved the goals of housing finance—including the expansion of mortgage lending, liquidity management, and credit risk diversification—through the issuance of housing agency bonds rather than the expansion of the MBS market. In contrast, the PRC is an economy that strives to facilitate housing finance without specific government housing finance agencies by fostering the growth of the housing bond market underpinned by ABS issuance.

Despite having a large volume of MBS issuance relative to the size of the economy, a country may not be able to accomplish the purpose of housing finance to diversify lending sources. The reason is that MBS issues are highly likely to be repurchased by mortgage originators in the absence of a well-functioning bond market where institutional investors such as pension funds and insurance companies can play an active role.

In addition, demand-side instruments such as MBS are not the only component in the housing bond market. Instruments that enable financing for housing supply can also be an important part of the housing bond market. The positive impact of the housing bond market on housing finance and the real economy has also been proven through the Korean experience.

NHBs have been issued in the Republic of Korea since 1973 under the Housing Construction Promotion Act, which aimed at building affordable housing for nonhomeowners. NHBs not only have contributed to the fund-raising needed to achieve the purpose of the law, but have also remained a major segment of the Korean housing bond market for a long time.

This is because the government has adjusted the issuance method and terms and conditions based on the Republic of Korea's evolving economic and financial situations, and it has continued to issue NHBs. The trading of the bonds enabled various market participants to gain and accumulate experiences in the early stages of capital market development. In addition, funds raised via bond issuance at lower than market interest rates perform the function of redistributing wealth through an increased housing supply.

The Republic of Korea's MBS market that started with NPL securitization after the 1997/98 Asian financial crisis has greatly contributed to the higher liquidity of mortgage assets, improved liquidity and credit risk management of mortgage originators, and expansion and diversification of mortgage funding sources through capital markets. This is not much different from the experiences of advanced economies that developed their housing bond markets earlier.

MBS issuance and credit risk management are carried out by KHFC, the government agency. The agency develops mortgage loan products, thereby playing a part in the development of the MBS market.

In addition to MBS, KHFC issues covered bonds, which in turn diversifies housing bonds and contributes to housing finance. The results of the analysis on the effects of housing bond market growth on housing construction in the Republic of Korea are empirical evidence of why developing economies should nurture their housing bond markets.

Conclusively, the housing bond market is not only a means to increase the amount and diversity of housing finance, but also is a pillar of the bond market that plays a role in financial deepening and economic growth. Although the policy direction for developing the housing bond market may be different depending on economy-specific conditions and constraints, the experiences of the Republic of Korea as well as those of developed economies—from which key elements driving the creation of a housing bond market can be identified—provide important policy implications for economies that want to develop their housing bond markets and thus housing finance.

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Market Summaries

People's Republic of China

Yield Movements

The People's Republic of China's (PRC) yield curve for local currency (LCY) bonds shifted upward between 1 March and 8 May with the exception of the 6-month and 4-year tenors (**Figure 1**). The PRC's yield curve shifted upward by an average of 19 basis points (bps) with the largest gain seen for the 3-year tenor, which rose 35 bps. The 2-year versus 10-year yield spread fell from 59 bps on 1 March to 49 bps on 8 May.

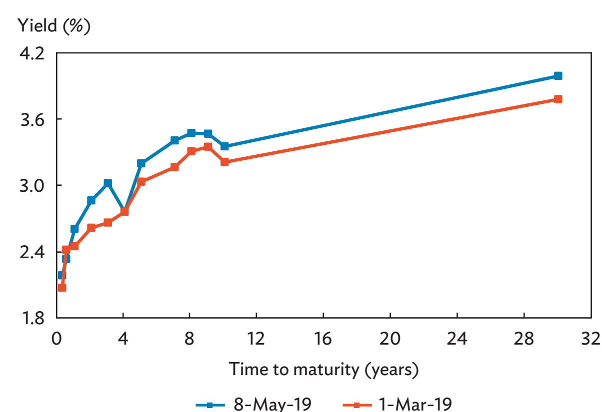
From 1 January to 31 March, the PRC's yields largely trended downward over expectations that the domestic economy would weaken and that the People's Bank of China (PBOC) would ease liquidity conditions. The PRC reduced the reserve requirement ratio of banks on 4 January and markets had been anticipating a possible reserve requirement ratio cut in April.

However, the PRC's yields trended upward in April as the anticipated reserve requirement ratio cut failed to materialize. In addition, economic indicators showed better-than-expected economic growth. The PRC reported a gross domestic product (GDP) growth rate of 6.4% year-on-year (y-o-y) in the first quarter (Q1) of 2019, the same rate as in the fourth quarter (Q4) of 2018. Industrial production was also strong in Q1 2019, with growth of 6.5% y-o-y in January–March, up from 5.3% y-o-y in January–February. In March, industrial production grew 8.5% y-o-y.

Inflation in the PRC generally trended upward in the first 4 months of the year, with the inflation rates for March and April at 2.3% y-o-y and 2.5% y-o-y, respectively, versus 1.7% y-o-y and 1.5% y-o-y for January and February, respectively. Rising inflation in the PRC was mostly due to supply-side factors such as the impact of an outbreak of swine flu on pork prices.

Yields trended downward in May, following the release of weaker-than-expected economic indicators in April as well as ongoing uncertainties regarding the PRC's trade dispute with the United States (US). Industrial production grew 5.4% y-o-y in April versus an earlier estimate of 6.5% y-o-y. Retail sales growth fell to 7.2% y-o-y in April from 8.7% y-o-y in March.

Figure 1: The People's Republic of China's Benchmark Yield Curve—Local Currency Government Bonds



Source: Based on data from Bloomberg LP.

The PBOC announced on 5 May a targeted reserve requirement ratio reduction for small county-level rural commercial banks. By doing so, the PBOC indicated a preference for more targeted adjustments in increasing liquidity and boosting lending, as opposed to broader easing measures. In contrast, the central government has opted for wider measures, such as during the National People's Congress in March when it adopted an increase in the budget deficit target as well as some tax reductions. In addition, the central government plans to use local government special bonds to help boost infrastructure investment at the municipal level.

Size and Composition

LCY bonds outstanding in the PRC rose 3.0% quarter-on-quarter (q-o-q) in Q1 2019, a deceleration from 3.4% q-o-q growth in Q4 2018. On a y-o-y basis, LCY bonds outstanding grew 16.7% (**Table 1**).

Table 1: Size and Composition of the Local Currency Bond Market in the People's Republic of China

	Outstanding Amount (billion)						Growth Rates (%)			
	Q1 2018		Q4 2018		Q1 2019		Q1 2018		Q1 2019	
	CNY	USD	CNY	USD	CNY	USD	q-o-q	y-o-y	q-o-q	y-o-y
Total	**65,152**	**10,382**	**73,770**	**10,725**	**76,012**	**11,325**	**1.3**	**38.4**	**3.0**	**16.7**
Government	42,263	6,735	47,883	6,961	49,061	7,309	0.7	71.0	2.5	16.1
Treasury Bonds and Other Government Bonds	13,459	2,145	14,922	2,169	14,882	2,217	(0.6)	11.1	(0.3)	10.6
Central Bank Bonds	0	0	0	0	2	0	0.0	0.0	0.0	0.0
Policy Bank Bonds	13,600	2,167	14,517	2,110	14,776	2,201	1.1	7.9	1.8	8.6
Local Government Bonds	15,204	2,423	18,444	2,681	19,401	2,890	1.4	35.0	5.2	27.6
Corporate	22,889	3,647	25,887	3,763	26,951	4,015	2.3	2.3	4.1	17.8
Policy Bank Bonds										
China Development Bank	7,571	1,206	8,147	1,184	8,328	1,241	0.4	5.4	2.2	10.0
Export–Import Bank of China	2,329	371	2,397	348	2,444	364	1.4	6.4	1.9	4.9
Agricultural Devt. Bank of China	3,700	590	3,973	578	4,005	597	2.3	14.6	0.8	8.2

( ) = negative, CNY = Chinese yuan, LCY = local currency, q-o-q = quarter-on-quarter, Q1 = first quarter, Q4 = fourth quarter, USD = United States dollar, y-o-y = year-on-year.
Notes:
1. Calculated using data from national sources.
2. Treasury bonds include savings bonds and local government bonds.
3. Bloomberg LP end-of-period LCY–USD rates are used.
4. Growth rates are calculated from an LCY base and do not include currency effects.
Sources: CEIC and Bloomberg LP.

Government bonds. The PRC's government bonds outstanding grew 2.5% q-o-q in Q1 2019, up from 2.2% q-o-q in Q4 2018. The slightly higher q-o-q growth rate was largely due to increases in local government bonds, which expanded 5.2% q-o-q in Q1 2019 after growth of less than 1.0% in Q4 2018. (Local governments had reached most of their annual issuance quotas during the third quarter of 2018.)

To provide economic stimulus to the domestic economy, the Government of the PRC frontloaded local government bond issuance and established an annual quota of CNY1.39 trillion at the start of 2019, which was to be realized mostly in the form of special bonds. At the National People's Congress in March, the central government announced that it had raised the local government issuance quota to CNY3.08 trillion, of which CNY2.15 trillion would be in the form of special bonds.

In contrast, Treasury bonds outstanding contracted 0.3% q-o-q in Q1 2019 on reduced issuance. The PRC also reported CNY1.5 trillion in central bank bonds outstanding at the end of March as a result of the central bank bond swap facility launched in February 2019, which allowed banks to swap their holdings of perpetual bank bonds for central bank bonds in order to improve liquidity.

Corporate bonds. The PRC's corporate bonds outstanding grew 4.1% q-o-q in Q1 2019, down from 5.9% q-o-q growth in Q4 2018. The slower corporate bond growth was largely due to uncertainties over the PRC's economy. Yields largely trended downward over the course of Q1 2019 in anticipation of lower funding costs. As a result, nearly all major bond categories posted lower q-o-q growth in Q1 2019, with the exception of commercial paper due to its short-term nature (**Table 2**). Outstanding commercial paper grew 14.1% q-o-q in Q1 2019 after rising 3.5% q-o-q in Q4 2018

Issuance for all major corporate bond types fell in Q1 2019 compared with Q4 2018, similar to the performance of corporate bonds outstanding during the same period (**Figure 2**).

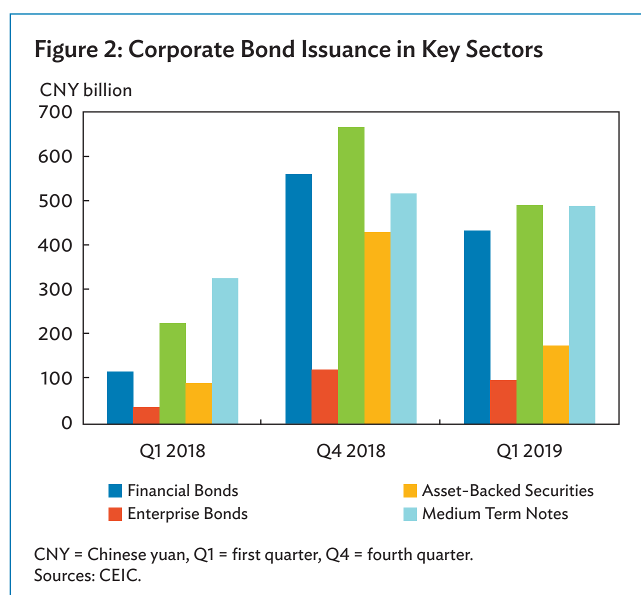
The PRC's LCY corporate bond market continued to be dominated by a few big issuers (**Table 3**). At the end of Q1 2019, the top 30 corporate bond issuers accounted for CNY7.7 trillion worth of corporate bonds outstanding, or about 28.5% of the total market. Of the top 30, the 10 largest issuers accounted for CNY4.8 trillion. China Railway, the top issuer, had more than four times the outstanding amount of bonds as Bank of China, the second-largest issuer. The top 30 issuers included 14 banks, which continued to generate funding to

Table 2: Corporate Bonds Outstanding in Key Categories

	Amount (CNY billion)			Growth Rate (%)			
				Q1 2018		Q1 2019	
	Q1 2018	Q4 2018	Q1 2019	q-o-q	y-o-y	q-o-q	y-o-y
Financial Bonds	3,687	4,531	4,744	1.0	24.7	4.7	28.7
Enterprise Bonds	4,387	3,929	3,872	1.0	(1.9)	(1.5)	(11.7)
Listed Corporate Bonds	5,440	6,393	6,608	1.0	25.5	3.4	21.5
Commercial Papers	1,765	1,963	2,240	1.2	(7.2)	14.1	26.9
Medium Term Notes	4,868	5,520	5,813	1.0	7.7	5.3	19.4
Asset-Backed Securities	1,002	1,706	1,728	1.0	50.8	1.3	72.4

( ) = negative, CNY = Chinese yuan, q-o-q = quarter-on-quarter, Q1 = first quarter, Q4 = fourth quarter, y-o-y = year-on-year.
Sources: CEIC.

Figure 2: Corporate Bond Issuance in Key Sectors



CNY = Chinese yuan, Q1 = first quarter, Q4 = fourth quarter.
Sources: CEIC.

strengthen their capital bases, improve liquidity, and lengthen their maturity profiles.

Table 4 lists the largest corporate bond issuances in Q1 2019. The top issuers consisted largely of banks and state-owned enterprises.

Investor Profile

Treasury bonds. Banks were the single-largest holder of Treasury bonds at the end of March (**Figure 3**), but with a slightly smaller share compared with a year earlier (60.4% versus 61.2%). In contrast, the share held by funds institutions rose to 5.8% from 5.4% during the same period.

Liquidity

The volume of interest rate swaps fell 24.0% q-o-q in Q1 2019. The 7-day repurchase rate remained the most used interest rate swap, comprising a 75.8% share of the total interest rate swap volume during the quarter (**Table 5**).

Policy, Institutional, and Regulatory Developments

National People's Congress Annual Session Held in March

On 5 March, the Government of the PRC held its annual session of the National People's Congress. During the meeting, the government adjusted its annual GDP target for 2019 to 6.0%–6.5%, down from its previous target of 6.5%. According to Premier Li Keqiang, the lower growth target takes into account economic challenges such as the ongoing trade dispute with the US and credit risks in the domestic economy. The inflation target was set at 3.0% y-o-y for full-year 2019.

To meet the GDP growth target, Premier Li Keqiang said the government would utilize fiscal measures. A budget deficit target of 2.8% of GDP was set for 2019, up from the previous year's 2.6% target, reflecting an increase in planned infrastructure spending and a reduction in taxes. The government said that it would cut business and personal taxes by CNY1.3 trillion, up from the previous year's CNY1.1 trillion tax reduction. The government also announced that the value-added tax rate would be reduced from 16% to 13% for manufacturing firms and

Table 3: Top 30 Issuers of Local Currency Corporate Bonds in the People's Republic of China

	Issuers	Outstanding Amount		State-Owned	Listed Company	Type of Industry
		LCY Bonds (CNY billion)	LCY Bonds (USD billion)			
1.	China Railway	1,765.5	263.0	Yes	No	Transportation
2.	Bank of China	439.7	65.5	Yes	Yes	Banking
3.	Agricultural Bank of China	418.2	62.3	Yes	Yes	Banking
4.	Industrial and Commercial Bank of China	412.0	61.4	Yes	Yes	Banking
5.	China Construction Bank	343.4	51.2	Yes	Yes	Banking
6.	State Grid Corporation of China	327.2	48.7	Yes	No	Public Utilities
7.	Central Huijin Investment	320.0	47.7	Yes	No	Asset Management
8.	China National Petroleum	290.0	43.2	Yes	No	Energy
9.	China CITIC Bank	267.6	39.9	No	Yes	Banking
10.	Bank of Communications	265.9	39.6	No	Yes	Banking
11.	China Minsheng Banking	265.3	39.5	No	Yes	Banking
12.	Shanghai Pudong Development Bank	260.8	38.8	No	Yes	Banking
13.	Industrial Bank	205.3	30.6	No	Yes	Banking
14.	China Everbright Bank	173.4	25.8	Yes	Yes	Banking
15.	State Power Investment	163.8	24.4	Yes	No	Energy
16.	Tianjin Infrastructure Construction and Investment Group	161.5	24.1	Yes	No	Industrial
17.	China Merchants Bank	143.9	21.4	Yes	Yes	Banking
18.	CITIC Securities	138.0	20.6	Yes	Yes	Brokerage
19.	Huaxia Bank	133.4	19.9	Yes	No	Banking
20.	Ping An Bank	126.7	18.9	No	Yes	Banking
21.	PetroChina	125.0	18.6	Yes	Yes	Energy
22.	Datong Coal Mine Group	120.8	18.0	Yes	No	Coal
23.	China Souther Power Grid	113.5	16.9	Yes	No	Energy
24.	China Datang	105.5	15.7	Yes	Yes	Energy
25.	China Life Insurance	103.0	15.3	Yes	Yes	Insurance
26.	China Merchants Securities	102.1	15.2	No	Yes	Brokerage
27.	China Cinda Asset Management	100.0	14.9	Yes	Yes	Asset Management
28.	GF Securities	98.0	14.6	No	Yes	Brokerage
29.	Dalian Wanda Commercial Properties	93.0	13.9	No	Yes	Real Estate
30.	Bank of Beijing	93.0	13.8	Yes	Yes	Banking
Total Top 30 LCY Corporate Issuers		**7,675.3**	**1,143.5**			
Total LCY Corporate Bonds		**26,951.5**	**4,015.4**			
Top 30 as % of Total LCY Corporate Bonds		**28.5%**	**28.5%**			

CNY = Chinese yuan, LCY = local currency, USD = United States dollar.
Notes:
1. Data as of 31 March 2019.
2. State-owned firms are defined as those in which the government has more than a 50% ownership stake.
Source: *AsianBondsOnline* calculations based on Bloomberg LP data.

Table 4: Notable Local Currency Corporate Bond Issuance in the First Quarter of 2019

Corporate Issuers	Coupon Rate (%)	Issued Amount (CNY billion)
Agricultural Bank of China		
10-year bond	4.28	50
15-year bond	4.53	10
Industrial and Commercial Bank of China		
10-year bond	4.26	45
15-year bond	4.51	10
Shanghai Pudong Development Bank		
3-year bond	3.50	50
Bank of China		
1-year bond	3.00	7
1-year bond	3.00	8
3-year bond	3.42	10
3-year bond	3.40	10
5-year bond	3.67	2
5-year bond	3.76	5
China Southern Power Grid		
3-year bond	3.65	5
3-year bond	3.53	5
5-year bond	3.76	5
5-year bond	3.73	5

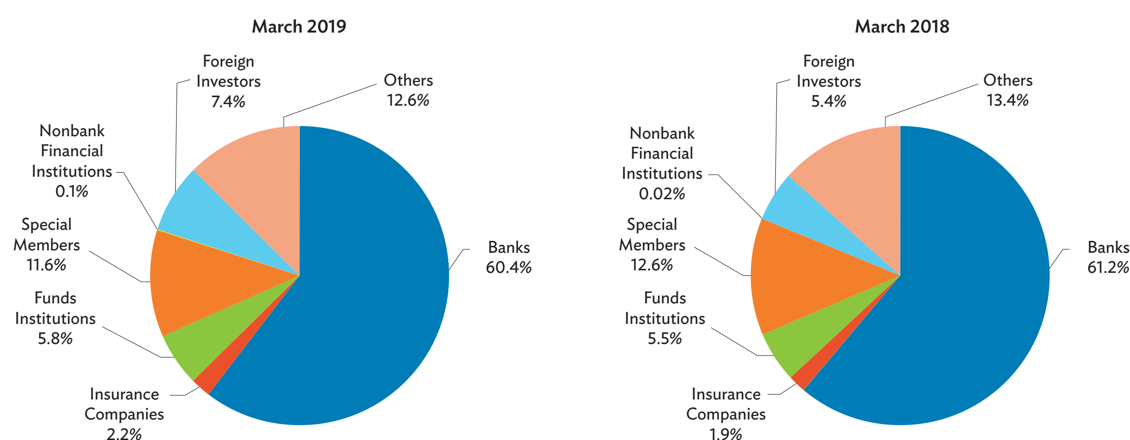
CNY = Chinese yuan.
Source: Based on data from Bloomberg LP.

Table 5: Notional Values of the People's Republic of China's Interest Rate Swap Market in the First Quarter of 2019

Interest Rate Swap Benchmarks	Notional Amount (CNY billion)	Share of Total Notional Amount (%)	Growth Rate (%)
	Q1 2019		q-o-q
7-Day Repo Rate	2,839.3	74.1	(26.1)
Overnight SHIBOR	16.1	0.4	46.4
3-Month SHIBOR	915.9	23.9	(14.6)
1-Year Lending Rate	1.3	0.03	292.4
Loan Interest Rate 1 Year	1.8	0.05	(73.0)
3-Year Lending Rate	0.0	–	(100.0)
5-Year Lending Rate	0.0	–	(100.0)
Depository Institution 7-Day Repo Rate	1.7	0.04	3,260.0
10-Year Bond Yield	10.3	0.3	(56.2)
10-Year Treasury Yield	40.5	1.1	(47.9)
3-Year AAA Short-Term Notes/ Government Debt	0.0	–	(100.0)
10-Year Bond Yield/10-Year Government Bond Yield	0.9	0.02	840.0
Loan Interest Rate—1 Year * 1.1	1.4	0.04	(34.8)
Loan Interest Rate—1 Year * 1.05	0.4	0.01	–
Loan Interest Rate—1 Year * 1.35	0.0	–	(100.0)
Loan Interest Rate—5 Year * 1.05	0.04	0.001	(94.4)
Total	**3,829.5**	**100.0**	**(24.0)**

( ) = negative, – = not applicable, CNY = Chinese yuan, q-o-q = quarter-on-quarter, Q1 = first quarter, Repo = repurchase, SHIBOR = Shanghai Interbank Offered Rate.
Note: Growth rate computed based on notional amounts.
Sources: *AsianBondsOnline* and *ChinaMoney*.

Figure 3: Local Currency Treasury Bonds Investor Profile



Source: Bloomberg LP.

from 10% to 9% for transport and construction firms. The threshold for the application for the value-added system and the contribution rate for government pensions were also adjusted.

PBOC Reduces Reserve Requirement Ratio for Rural Banks

On 5 May, the PBOC announced that it would reduce the reserve requirement ratios for certain small and medium-sized banks that meet specified criteria. The PBOC said that rural commercial banks with a presence in rural counties and total assets of less than CNY10 billion will have their reserve requirement ratios set at 8%, the same level as credit cooperatives. The PBOC estimates that roughly 1,000 rural commercial banks will qualify for the reduced reserve requirement ratios and that a total of CNY280 billion will be released into the banking system.

PBOC Issues Bills in Hong Kong, China

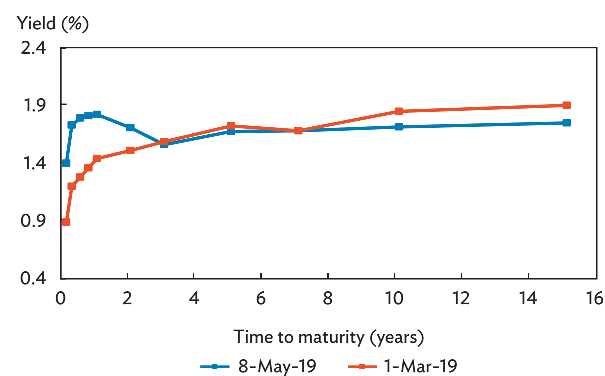
On 15 May, the PBOC issued CNY20 billion worth of central bank bills in Hong Kong, China. By tenor, the PBOC issued CNY10 billion worth of 3-month bills with an average rate of 2.87%. The PBOC also issued CNY10 billion worth of 1-year bills with an average rate of 2.96%.

Hong Kong, China

Yield Movements

Hong Kong, China's local currency (LCY) government bond yield curve exhibited mixed movements between 1 March and 8 May (**Figure 1**). For bonds with maturities of 2 years or less, yields rose an average of 43 basis points (bps), with the 2-year tenor posting the smallest gain at 20 bps. For bonds with maturities of 10 years or more, yields fell an average of 14 bps. Yields barely moved between the 3-year and 7-year tenor, falling an average of 4 bps for 3-year and 5-year tenors, and rising less than 1 bp for 7-year bonds. The slight decline in yields for bonds with tenors between 3 years and 7 years drove the yield curve down sharply in the belly, from a steep climb at the short-end until it flattened toward the long-end. The gap between the 2-year and 10-year tenors closed to less than 1 bp.

Figure 1: Hong Kong, China's Benchmark Yield Curve—Exchange Fund Bills and Notes



Source: Based on data from Bloomberg LP.

Despite Hong Kong, China's policy rate being in lockstep with the United States (US) Federal Reserve rate to maintain its currency peg to the US dollar, the market's yield curve has not been moving in sync with the US Treasury yield curve. Weaker demand for loans, caused by a cooling property market and lack of appetite to invest amid trade tensions between the People's Republic of China (PRC) and the US, caused the interbank rate for Hong Kong dollars to rise at a slower pace than the interbank rate for US dollars, leaving banks with excess liquidity and negatively affecting the value of the Hong Kong dollar. To prop up the domestic currency and raise borrowing costs, the Hong Kong Monetary Authority (HKMA) purchased HKD22.1 billion (USD2.8 billion) worth of Hong Kong dollar when it repeatedly fell to the weak-end of its trading band in March. The intervention reduced the aggregate balance to around HKD55 billion, resulting in tighter liquidity in the market. The Hong Kong Interbank Offered Rate rose, easing pressure on the Hong Kong dollar. Yields for shorter-dated bonds also rose, causing the yield curve to steepen at the short-end.

The lackluster yield performance of longer-dated bonds reflected Hong Kong, China's slowing economy. Gross domestic product growth eased to 0.6% year-on-year (y-o-y) in the first quarter (Q1) of 2019 from 1.2% y-o-y in the fourth quarter (Q4) of 2018, weakened by a slowdown in external demand and investment. Merchandise exports and imports fell 4.1% y-o-y and 4.7% y-o-y, respectively, while gross domestic fixed capital formation saw a decline of 7.1% y-o-y in Q1 2019. Private consumption rose only 0.2% y-o-y during the period.

Inflation in March was 2.1% y-o-y, maintaining its February pace but slowing from the average inflation rate for January–February, which according to the government was due to smaller increases in package tour charges caused by the timing of the Easter holiday, which arrived in April in 2019 versus March in 2018. The Easter holiday subsequently led to April's inflation rate accelerating to 2.9% y-o-y.

Size and Composition

Hong Kong, China's LCY bonds outstanding reached HKD1,960 billion at the end of March, up both on a quarter-on-quarter (q-o-q) and y-o-y basis in Q1 2019 (**Table 1**). Growth moderated to 0.5% q-o-q in Q1 2019 from 1.2% q-o-q in Q4 2018 due to a decline in the government bond segment coupled with marginal growth in the corporate bond segment. Growth climbed to 3.7% y-o-y in Q1 2019 from 2.3% y-o-y in Q4 2018, driven mainly by the corporate bond segment. Despite sluggish issuance in Q1 2019, government bonds continued to comprise the larger share of the bond market, accounting for 59.0% of total LCY bonds outstanding at the end of March.

Table 1: Size and Composition of the Local Currency Bond Market in Hong Kong, China

	Outstanding Amount (billion)						Growth Rate (%)			
	Q1 2018		Q4 2018		Q1 2019		Q1 2018		Q1 2019	
	HKD	USD	HKD	USD	HKD	USD	q-o-q	y-o-y	q-o-q	y-o-y
Total	**1,890**	**241**	**1,950**	**249**	**1,960**	**250**	**(0.9)**	**2.1**	**0.5**	**3.7**
Government	1,149	146	1,169	149	1,161	148	(0.4)	7.6	(0.6)	1.1
Exchange Fund Bills	1,014	129	1,031	132	1,035	132	0.3	10.4	0.5	2.1
Exchange Fund Notes	37	5	32	4	31	4	(2.6)	(20.0)	(3.1)	(15.2)
HKSAR Bonds	98	13	106	14	95	12	(6.3)	(4.7)	(10.5)	(3.5)
Corporate	741	94	782	100	799	102	(1.6)	(5.5)	2.2	7.7

( ) = negative, HKD = Hong Kong dollar, HKSAR = Hong Kong Special Administrative Region, LCY = local currency, q-o-q = quarter-on-quarter, Q1 = first quarter, Q4 = fourth quarter, USD = United States dollar, y-o-y = year-on-year.
Notes:
1. Calculated using data from national sources.
2. Bloomberg LP end-of-period LCY–USD rates are used.
3. Growth rates are calculated from an LCY base and do not include currency effects.
Source: Hong Kong Monetary Authority.

Government bonds. LCY government bonds outstanding amounted to HKD1,161 billion at the end of March. Contractions in both Exchange Fund Notes (EFNs) and Hong Kong Special Administrative Region (HKSAR) bonds outstanding in Q1 2019 caused the government bond market's growth to ease to 0.6% q-o-q from 1.2% q-o-q in the previous quarter and to grow at a slightly slower pace of 1.1% y-o-y versus 1.3% y-o-y in Q4 2018.

Exchange Fund Bills. Exchange Fund Bills outstanding amounted to HKD1,035 billion at the end of March, growing on both a q-o-q and y-o-y basis as issuance remained strong in the face of maturing bills, totaling HKD810 billion during the review period. However, due to maturities, the growth of Exchange Fund Bills was marginal in Q1 2019 at 0.5% q-o-q and 2.1% y-o-y.

Exchange Fund Notes. EFN outstanding continued their downward trend that has been in place since the HKMA started limiting the issuance of EFNs to 2-year tenors in 2015, falling 3.1% q-o-q and 15.2% y-o-y to HKD31 billion at the end of March. In February, the HKMA issued a 2-year EFN worth HKD1.2 billion.

HKSAR bonds. HKSAR bonds outstanding amounted to HKD95 billion at the end of March, down 10.5% q-o-q and 3.5% y-o-y, reversing growth of 9.8% q-o-q and 1.0% y-o-y in Q4 2018. In Q1 2019, the government issued a 10-year bond worth HKD1.5 billion and a 15-year bond worth HKD600 million under the Institutional Bond Issuance Programme.

Corporate bonds. Corporate bonds outstanding amounted to HKD799 billion at the end of March, growing 2.2% q-o-q after expanding 2.7% q-o-q in Q4 2018 and accelerating to 7.7% y-o-y growth from 3.7% y-o-y in Q4 2018. Hong Kong, China's top 30 nonbank corporate issuers together accounted for outstanding bonds of HKD212 billion, or 26.6% of total corporate bond market (**Table 2**). Government-owned financial firm Hong Kong Mortgage Corporation, the top issuer in Hong Kong, China, had outstanding bonds of HKD32.4 billion. It was followed by another financial firm, Sun Hung Kai & Co., with outstanding bonds of HKD16.9 billion, and MTR Corporation, a government-owned transport company, with outstanding bonds of HKD12.2 billion. The top 30 issuers were predominantly real estate companies and financing firms. Of the top 30 list, two-thirds are listed on the Hong Kong Stock Exchange and four are government-owned corporations.

Corporate issuances reached HKD108 billion in Q1 2019, or double the amount in Q4 2018. Among the top nonbank issuers in Q1 2019, government-owned Hong Kong Mortgage Corporation was the largest with aggregate issuance of HKD9.8 billion from 24 issuances, the largest of which was a zero-coupon, 5-year bond worth HKD1.0 billion (**Table 3**). The next top issuer was Sun Hung Kai & Co. with aggregate issuance of HKD2.6 billion from five issuances. AIA Group, an insurance company, was the third-largest issuer and had the two single-largest bonds in Q1 2019. One was a 3.5-year bond worth HKD1.3 billion and carrying a 4.12% coupon, and the other was a 10-year bond worth HKD1.1 billion and carrying a 3.68% coupon.

Table 2: Top 31 Nonbank Corporate Issuers of Local Currency Corporate Bonds in Hong Kong, China

	Issuers	Outstanding Amount		State-Owned	Listed Company	Type of Industry
		LCY Bonds (HKD billion)	LCY Bonds (USD billion)			
1.	Hong Kong Mortgage Corporation	32.4	4.1	Yes	No	Finance
2.	Sun Hung Kai	16.9	2.2	No	Yes	Finance
3.	MTR Corporation	12.2	1.6	Yes	Yes	Transportation
4.	Hong Kong Land	11.8	1.5	No	No	Real Estate
5.	The Hong Kong and China Gas Company	11.6	1.5	No	Yes	Utilities
6.	New World Development	9.4	1.2	No	Yes	Diversified
7.	Haitong International Securities Group	9.0	1.2	No	Yes	Finance
8.	CLP Power Hong Kong Financing	8.8	1.1	No	No	Finance
9.	The Wharf (Holdings)	8.6	1.1	No	Yes	Finance
10.	Henderson Land Development	7.7	1.0	No	No	Real Estate
11.	Swire Pacific	7.6	1.0	No	Yes	Diversified
12.	Link Holdings	7.4	0.9	No	No	Finance
13.	AIA Group	6.3	0.8	No	Yes	Insurance
14.	CK Asset Holdings	6.2	0.8	No	Yes	Real Estate
15.	Swire Properties	5.9	0.8	No	Yes	Real Estate
16.	Hongkong Electric	5.8	0.7	No	No	Utilities
17.	China Merchants Port Holdings	5.7	0.7	No	Yes	Transportation
18.	Hang Lung Properties	4.6	0.6	No	Yes	Real Estate
19.	IFC Development Corporation	3.5	0.4	No	No	Finance
20.	Kowloon-Canton Railway	3.4	0.4	Yes	No	Transportation
21.	Lerthai Group	3.0	0.4	No	Yes	Real Estate
22.	Hysan Development Company	3.0	0.4	No	Yes	Real Estate
23.	Urban Renewal Authority	2.8	0.4	Yes	No	Real Estate
24.	Emperor International Holdings	2.6	0.3	No	Yes	Real Estate
25.	Wharf Real Estate Investment	2.6	0.3	No	Yes	Real Estate
26.	Champion REIT	2.5	0.3	No	Yes	Real Estate
27.	China Dynamics (Holdings)	2.4	0.3	No	Yes	Diversified
28.	The 13 Holdings	2.2	0.3	No	Yes	Industrial
29.	CK Hutchison Holdings	2.0	0.3	No	Yes	Diversified
30.	Gluon Xima International	2.0	0.3	No	No	Real Estate
31.	China Agri-Products Exchange	2.0	0.3	No	Yes	Consumer, non-cyclical
Total Top 30 Nonbank LCY Corporate Issuers		**212.1**	**27.0**			
Total LCY Corporate Bonds		**798.7**	**101.7**			
Top 30 as % of Total LCY Corporate Bonds		**26.6%**	**26.6%**			

LCY = local currency.
Notes:
1. Data as of 31 March 2019.
2. State-owned firms are defined as those in which the government has more than a 50% ownership stake.
Source: *AsianBondsOnline* calculations based on Bloomberg LP data.

Table 3: Notable Local Currency Corporate Bond Issuance in the First Quarter of 2019

Corporate Issuers	Coupon Rate (%)	Issued Amount (HKD billion)
Hong Kong Mortgage Corporation		
3-month bond	0.00	0.66
5-year bond	0.00	1.00
30-year bond	3.15	0.58
Sun Hung Kai & Co.		
7-year bond	3.12	0.62
10-year bond	3.21	1.00
AIA Group		
3.5-year bond	2.95	1.30
12-year bond	3.68	1.10
Hong Kong Land		
15-year bond	3.67	0.60

HKD = Hong Kong dollar.
Source: Bloomberg LP.

Policy, Institutional, and Regulatory Developments

HKMA Maintains Countercyclical Capital Buffer at 2.5%

In April, the HKMA maintained its countercyclical capital buffer (CcyB) at 2.5%. The decision to keep the CcyB at its current rate was based on the significantly high level of credit to gross domestic product gap of 12%, despite the indicative buffer guide signaling a lower CCyB of 0.75%. This resulted from a recent narrowing of the property price-to-rental gap to slightly below 3% from more than 10% in the previous quarter. The CCyB, as an integral part of the Basel III regulatory capital framework, was designed to increase the resilience of the banking sector in periods of excess credit growth allowing the latter to act as a "shock absorber" in times of stress.

HKMA Launches Key Sustainable Banking and Green Finance Measures

In May, the HKMA launched three sets of measures to support and promote Hong Kong, China's green finance development at the HKMA Green Finance Forum. These measures include (i) green and sustainable banking, (ii) responsible investment, and (iii) a Centre for Green Finance. Green and sustainable banking involves developing a common framework to assess the "greenness baseline" of banks, engaging relevant stakeholders in consultations, and monitoring and evaluating banks' progress in meeting targets. Responsible investment implies that the HKMA will adopt a principle to give priority to green and environmental investments and social and governance investments for which long-term returns are comparable to other investments on a risk-adjusted basis. The HKMA already supports responsible investment, including investing in the Managed Co-Lending Portfolio Programme of the International Finance Corporation, with a substantial part of this initiative targeting sustainable investments across emerging markets. The third measure involves the establishment of the Centre for Green Finance under the HKMA Infrastructure Financing Facilitation Office to serve as a platform for technical support and experience sharing for the green development of Hong Kong, China's banking and finance industry.

Hong Kong, China Joins Green Bond Pledge

In May, Hong Kong, China became the first Asian signatory to the Green Bond Pledge, a pledge that calls on signatories to support long-term infrastructure and capital projects that address environmental impact and climate risk, and issue green bonds to finance a low-carbon transition. In line with the objectives of the pledge, the government stated that its Climate Action Plan 2030+ is targeted to reduce Hong Kong, China's carbon intensity by 65%–70% below its 2005 level by 2030. This bond program encourages issuers to arrange financing for their green projects through capital markets in Hong Kong, China. Signing the pledge is among several ongoing efforts of the government to turn Hong Kong, China into a regional hub for green finance. The Green Bond Pledge is a joint initiative developed by international climate finance and sustainability groups including the Climate Bonds Initiative, Mission2020, Ceres, Cassa De Possiti e Prestiti, Citizens' Climate Lobby, California Governor's Office, California Treasurer's Office, Global Optimism, Natural Resources Defense Council, and The Climate Group. It was launched by former United Nations climate chief Christiana Figueres at the Climate Bonds Annual Conference in March 2018.

Indonesia

Yield Movements

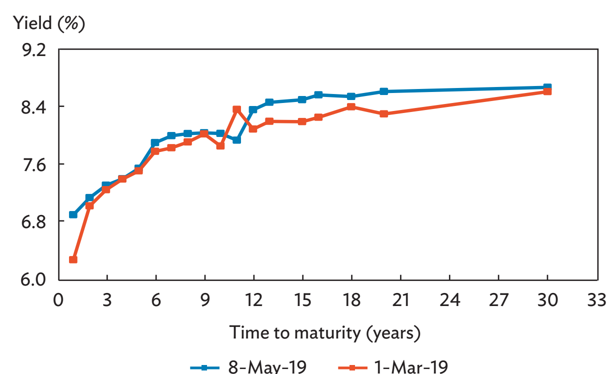
Between 1 March and 8 May, local currency (LCY) government bond yields in Indonesia edged higher for nearly all maturities (**Figure 1**). Yields gained the most for the 1-year maturity, which rose 63 basis points (bps). Yield upticks for 2-year through 10-year maturities averaged 9 bps, while gains for 12-year through 30-year tenors averaged 24 bps. The yield spread between the 2-year and 10-year maturities widened from 83 bps on 1 March to 89 bps on 8 May.

The overall trend of rising yields in Indonesia stemmed from the resurgence of uncertainties in global financial markets as well as concerns over trade tensions between the People's Republic of China (PRC) and the United States (US). In addition, concerns over the current account deficit weighed on investor sentiment. A trade deficit of USD2.5 billion was recorded in April, the widest since 2013, which may further worsen the current account deficit.

The Indonesian rupiah came under pressure in the middle of April as some investors locked in profits and adopted a wait-and-see attitude. Indonesia's LCY government bond market benefitted from strong foreign fund inflows of USD5.2 billion in the first quarter (Q1) of 2019. The trend of monthly inflows reversed in April when the bond market saw net outflows of USD0.5 billion. Indonesia's LCY government bond market remains highly sensitive to developments in the global market, with foreign investors still holding the single-largest share of its LCY government bonds among all investor groups. As such, Bank Indonesia engaged in market intervention to maintain the stability of the Indonesian rupiah and the US dollar exchange rate. In addition, it intervened in the government bond market through bond buybacks as well as in the domestic nondeliverable forward market.

In a meeting held on 24–25 April, Bank Indonesia held steady the 7-day reverse repurchase (repo) rate at 6.00%, the deposit facility rate at 5.25%, and the lending facility rate at 6.75%. The central bank deemed that at their current levels these rates are supportive of efforts to narrow the current account deficit and keep inflation within its full-year 2019 target range of 2.5%–4.5%.

Figure 1: Indonesia's Benchmark Yield Curve—Local Currency Government Bonds



Source: Based on data from Bloomberg LP.

Economic growth in Indonesia, as measured by gross domestic product (GDP), slipped to 5.1% year-on-year (y-o-y) in the first quarter (Q1) of 2019 from 5.2% y-o-y in the fourth quarter (Q4) of 2018. According to Bank Indonesia, seasonal factors and the slowdown in global economic growth contributed to the slower GDP growth. Private consumption, which is the largest contributor to GDP, grew 5.0% y-o-y in Q1 2019, buoyed by tame inflation, rising incomes, and improving consumer confidence. The Q1 2019 y-o-y growth in domestic consumption was weaker than the 5.1% y-o-y growth posted in Q4 2018. Exports and imports of goods and services contracted on a y-o-y basis in Q1 2019, influenced by a slowdown in global demand and softer commodity prices. Gross fixed capital formation also moderated, with growth easing to 5.0% y-o-y in Q1 2019 from 6.0% y-o-y in Q4 2018. On a quarter-on-quarter (q-o-q) basis, the economy contracted 0.5% in Q1 2019.

Size and Composition

Indonesia LCY bonds outstanding expanded to reach IDR3,083.7 trillion (USD216.5 billion) at the end of March, with growth accelerating to 8.7% q-o-q in Q1 2019 from 2.7% q-o-q in Q4 2018 (**Table 1**). Annual growth in bonds outstanding also quickened to 18.7% y-o-y from 13.7% y-o-y during the same period. All bond segments posted positive growth during the review period, with much of the growth driven by government bonds.

Table 1: Size and Composition of the Local Currency Bond Market in Indonesia

	Outstanding Amount (billion)						Growth Rate (%)			
	Q1 2018		Q4 2018		Q1 2019		Q1 2018		Q1 2019	
	IDR	USD	IDR	USD	IDR	USD	q-o-q	y-o-y	q-o-q	y-o-y
Total	**2,598,075**	**189**	**2,838,177**	**197**	**3,083,746**	**217**	**4.0**	**13.4**	**8.7**	**18.7**
Government	2,197,585	160	2,426,320	169	2,659,664	187	4.2	11.5	9.6	21.0
Central Govt. Bonds	2,184,588	159	2,368,451	165	2,527,993	177	4.0	15.5	6.7	15.7
of which: *Sukuk*	329,204	24	392,985	27	427,277	30	(4.0)	19.9	8.7	29.8
Central Bank Bonds	12,997	0.9	57,869	4	131,671	9	29.7	(83.6)	127.5	913.1
of which: *Sukuk*	12,997	0.9	10,043	0.7	24,915	2	29.7	5.9	148.1	91.7
Corporate	400,490	29	411,857	29	424,082	30	3.4	24.8	3.0	5.9
of which: *Sukuk*	16,449	1	21,298	1	24,606	2	6.9	39.0	15.5	49.6

( ) = negative, IDR = Indonesian rupiah, LCY = local currency, q-o-q = quarter-on-quarter, Q1 = first quarter, Q4 = fourth quarter, USD = United States dollar, y-o-y = year-on-year.
Notes:
1. Calculated using data from national sources.
2. Bloomberg LP end-of-period LCY–USD rates are used.
3. Growth rates are calculated from an LCY base and do not include currency effects.
4. The total stock of nontradable bonds as of 31 March 2019 stood at IDR234.0 trillion.
Sources: Bank Indonesia; Directorate General of Budget Financing and Risk Management, Ministry of Finance; Indonesia Stock Exchange; and Bloomberg LP.

Indonesia's bond market remains dominated by government bonds, with its share rising to 86.2% of the aggregate bond stock at the end of March from 85.5% at the end of December and from 84.6% at the end of March 2018. The majority of LCY bonds in Indonesia are conventional bonds, which accounted an 84.5% share of the total at the end of Q1 2019. The share of *sukuk* (Islamic bonds), while relatively much smaller at 15.5%, rose from 15.0% at the end of December 2018 and 13.8% at the end of March 2018.

Government bonds. Total outstanding LCY government bonds stood at IDR2,659.7 trillion at the end of March on growth of 9.6% q-o-q and 21.0% y-o-y. Treasury instruments issued by the Ministry of Finance, which are used mainly for budget financing, accounted for a larger share of the total government bond stock at the end of Q1 2019. While the stock of central bank instruments accounted for a smaller share, central bank instruments posted the fastest growth rate among all bond market segments during the review period.

Central government bonds. The outstanding amount of central government bonds expanded to IDR2,528.0 trillion at the end of Q1 2019 on growth of 6.7% q-o-q and 15.7% y-o-y. As in past years, the Ministry of Finance has adopted a frontloading issuance policy in 2019 and plans to conduct the majority of its annual issuance during the first half of the year. The first quarter of the year is generally a slow period for revenue collection; thus, the government opted to issue higher volumes in Q1 2019 to support its budget spending.

The government took advantage of hefty demand from investors as market sentiments toward Indonesian government bonds attracted strong interest following the Federal Reserve's announcement of a dovish outlook for its monetary policy. The total volume of newly issued Treasury bills and Treasury bonds amounted to IDR244.6 trillion at the end of March, with growth rebounding to 106.5% q-o-q and 11.5% y-o-y in Q1 2019 after contracting 25.0% q-o-q and posting a marginal 0.7% y-o-y hike in the preceding quarter. The government issued in higher volumes in Q1 2019, accepting bids over its targeted amount for 12 of 13 scheduled conventional and Islamic Treasury auctions. In addition, the government raised IDR21.1 trillion from the sale of retail *sukuk* in March, more than double its target of IDR10.0 trillion. An additional auction for Islamic Treasury bills and the private placement of a project-based *sukuk* were conducted in January and February, respectively.

Central bank bonds. The outstanding size of central bank bonds, comprising central bank certificates known as Sertifikat Bank Indonesia (SBI) and Sukuk Bank Indonesia (SukBI), climbed more than two-fold during the quarter to reach IDR131.7 trillion at the end of March. The rapid growth was the result of expanding from a low base as Bank Indonesia had only resumed the issuance of conventional SBI in July 2018.

(Bank Indonesia had ceased issuance of conventional SBI beginning in January 2017.) Similar with the trends of Treasury instruments, conventional SBI are issued in much larger volumes than their *sukuk* counterparts. In addition, beginning in December 2018, the central bank commenced the issuance of Bank Indonesia *sukuk* as a tool in guiding monetary policy.

In Q1 2019, total issuance by the central bank surged to IDR106.5 trillion from IDR24.1 trillion in Q4 2018 and IDR4.3 trillion in Q1 2018. Of this amount, IDR35.8 trillion comprised conventional SBI and IDR9.7 trillion were shariah-compliant SBI. The largest issuance share comprised IDR61.0 trillion of SukBI. While the issuance volume for SukBI was quite large, the instrument's overall impact on LCY bonds outstanding was not significant owing to the short-term nature of this type of bond: Bank Indonesia *sukuk* carry short-term maturities of 7, 14, and 28 days.

Corporate bonds. The total corporate bond stock stood at IDR424.1 trillion at the end of March, with growth expanding 3.0% q-o-q and 5.9% y-o-y. Good market conditions allowed corporates to tap the bond market for their funding needs in Q1 2019. A smaller volume of maturities was also observed than in the preceding quarter, resulting in an overall increase in the corporate bond stock.

At the end of March, a total of 117 corporate entities comprised the Indonesian corporate bond market. By type of industry, banks and financial institutions had the most bonds outstanding, accounting for a 61.0% share of the total. The banking and financial sector was followed by the infrastructure, utilities, and transportation sector, whose outstanding bond stock represented 20.5% of the corporate total at the end of March. All other sectors had a share of 6.8% or less at the end of the review period.

The 30 largest corporate bond issuers had aggregate bonds outstanding of IDR315.4 trillion, representing nearly three-fourths of the corporate total during the review period (**Table 2**). Of the 30 firms on the list, 21 came from the banking and financial sector. Nearly half of the firms were state-owned entities, of which seven firms landed in the list's top 10.

The top 30 list was led by three state-owned firms; the ranking of each was unchanged from the previous quarter. In the top spot was Indonesia Eximbank with outstanding bonds valued at IDR33.5 trillion at the end of March. It was followed by Bank Rakyat Indonesia (IDR23.4 trillion) and Perusahaan Listrik Negara (IDR22.8 trillion). Moving up one ranking to the fourth spot was Indosat, with its outstanding bond total pulled up by a multitranche issuance during the quarter. Bank Tabungan Negara dropped from the fourth to fifth spot during the quarter.

In Q1 2019, new corporate bond issuance totaled IDR22.0 trillion, with growth accelerating 61.8% q-o-q but falling 6.9% y-o-y. This compares with contractions of 59.3% q-o-q and 73.3% y-o-y in Q4 2018. A total of 64 new corporate bond series were added to the corporate bond stock during the quarter, including 22 series of *sukuk*. In January, Adira Dinamika Multi Finance issued three series of *sukuk mudharabah* (Islamic bonds backed by a profit-sharing scheme from a business venture or partnership). Also, in March, two series of *sukuk mudharabah* were issued by Sarana Multi Infrastruktur. Multitranche issuances of *sukuk ijarah* (Islamic bonds backed by a lease agreement) came from XL Axiata, Perusahaan Listrik Negara, and Indosat during the quarter. Also, a *sukuk ijarah* was issued by Aneka Gas Industri in March.

The five largest corporate bond issuers and their respective bond issuances in Q1 2019 are provided in **Table 3**. In the top spot was state-owned Sarana Multigriya Finansial, which tapped the bond market twice during the quarter, in February and again in March, for an aggregate issuance total of IDR4.4 trillion. State-owned energy firm Perusahaan Listrik Negara followed with an issuance of IDR3.3 trillion via a multitranche deal in February. Next on the list was Federal International Finance with a dual-tranche issuance worth IDR2.4 trillion in March.

Foreign currency bonds. In February, the Government of Indonesia raised USD2.0 billion from a dual-tranche sale of global *sukuk*. The sale comprised (i) a USD750 million 5.5-year global green *sukuk* with a profit rate of 3.9%, and (ii) a USD1.25 billion of 10-year global *sukuk* with a profit rate of 4.45%. The proceeds from the 5.5-year global green *sukuk* were targeted for funding or refinancing eligible green projects as outlined in the government's Green Bond and Green Sukuk Framework, while the proceeds from the 10-year global *sukuk* were to be used to meet general financing requirements. The *sukuk* were structured following the *wakalah* principle (an Islamic bond backed by an agreement nominating another entity to act on its behalf).

Table 2: Top 30 Issuers of Local Currency Corporate Bonds in Indonesia

	Issuers	Outstanding Amount		State-Owned	Listed Company	Type of Industry
		LCY Bonds (IDR billion)	LCY Bonds (USD billion)			
1.	Indonesia Eximbank	33,504.9	2.4	Yes	No	Banking
2.	Bank Rakyat Indonesia	23,426.5	1.6	Yes	Yes	Banking
3.	Perusahaan Listrik Negara	22,783.0	1.6	Yes	No	Energy
4.	Indosat	18,081.0	1.3	No	Yes	Telecommunications
5.	Bank Tabungan Negara	17,050.0	1.2	Yes	Yes	Banking
6.	Bank Pan Indonesia	15,427.0	1.1	No	Yes	Banking
7.	Sarana Multi Infrastruktur	15,245.3	1.1	Yes	No	Finance
8.	Bank Mandiri	14,000.0	1.0	Yes	Yes	Banking
9.	Waskita Karya	13,861.3	1.0	Yes	Yes	Building Construction
10.	Federal International Finance	13,471.8	0.9	No	No	Finance
11.	Sarana Multigriya Finansial	12,797.0	0.9	Yes	No	Finance
12.	Adira Dinamika Multifinance	10,708.5	0.8	No	Yes	Finance
13.	Pupuk Indonesia	9,076.0	0.6	Yes	No	Chemical Manufacturing
14.	Telekomunikasi Indonesia	8,995.0	0.6	Yes	Yes	Telecommunications
15.	Astra Sedaya Finance	8,250.0	0.6	No	No	Finance
16.	Perum Pegadaian	7,649.0	0.5	Yes	No	Finance
17.	Bank CIMB Niaga	7,037.0	0.5	No	Yes	Banking
18.	Hutama Karya	6,825.0	0.5	Yes	No	Nonbuilding Construction
19.	Bank Maybank Indonesia	6,766.0	0.5	No	Yes	Banking
20.	Medco-Energi Internasional	6,454.2	0.5	No	Yes	Petroleum and Natural Gas
21.	Permodalan Nasional Madani	5,746.0	0.4	Yes	No	Finance
22.	XL Axiata	5,103.0	0.4	No	Yes	Telecommunications
23.	BFI Finance Indonesia	4,602.0	0.3	No	Yes	Finance
24.	Bank OCBC NISP	4,381.0	0.3	No	Yes	Banking
25.	Bank Pembangunan Daerah Jawa Barat Dan Banten	4,252.0	0.3	Yes	Yes	Banking
26.	Maybank Indonesia Finance	4,100.0	0.3	No	No	Finance
27.	Bank Permata	4,060.0	0.3	No	Yes	Banking
28.	Indofood Sukses Makmur	4,000.0	0.3	No	Yes	Food and Beverages
29.	Bank UOB Buana	3,900.0	0.3	No	No	Banking
30.	Mandiri Tunas Finance	3,850.0	0.3	No	No	Finance
Total Top 30 LCY Corporate Issuers		**315,402.3**	**22.1**			
Total LCY Corporate Bonds		**424,081.7**	**29.8**			
Top 30 as % of Total LCY Corporate Bonds		**74.4%**	**74.4%**			

IDR = Indonesian rupiah, LCY = local currency, USD = United States dollar.
Notes:
1. Data as of 31 March 2019.
2. State-owned firms are defined as those in which the government has more than a 50% ownership stake.
Source: *AsianBondsOnline* calculations based on Indonesia Stock Exchange data.

Table 3: Notable Local Currency Corporate Bond Issuance in the First Quarter of 2019

Corporate Issuers	Coupon Rate (%)	Issued Amount (IDR billion)
Sarana Multigriya Finansial		
370-day bond	8.00	677.00
370-day bond	7.75	522.00
3-year bond	8.80	748.50
3-year bond	8.45	1,989.00
5-year bond	9.25	425.00
Perusahaan Listrik Negara		
3-year bond	8.50	369.00
3-year *sukuk ijarah*	8.50	263.00
5-year bond	9.10	1,212.00
5-year *sukuk ijarah*	9.10	263.00
7-year bond	9.35	183.00
7-year *sukuk ijarah*	9.35	204.00
10-year bond	9.60	211.00
10-year *sukuk ijarah*	9.60	45.00
15-year bond	9.80	263.00
15-year *sukuk ijarah*	9.80	60.00
20-year bond	9.95	155.00
20-year *sukuk ijarah*	9.95	28.00
Federal International Finance		
370-day bond	8.00	990.85
3-year bond	8.80	1,369.47
Astra Sedaya Finance		
370-day bond	8.00	932.00
3-year bond	8.80	670.00
5-year bond	9.20	623.00
Indosat		
370-day bond	8.25	815.00
370-day *sukuk ijarah*	8.25	348.00
3-year bond	9.25	408.00
3-year *sukuk ijarah*	9.25	91.00
5-year bond	9.75	185.00
5-year *sukuk ijarah*	9.75	29.00
7-year bond	10.10	45.00
7-year *sukuk ijarah*	10.10	11.00
10-year bond	10.35	47.00
10-year *sukuk ijarah*	10.35	21.00

IDR = Indonesian rupiah.
Note: *Sukuk ijarah* are Islamic bonds backed by lease agreements.
Source: Indonesia Stock Exchange.

Investor Profiles

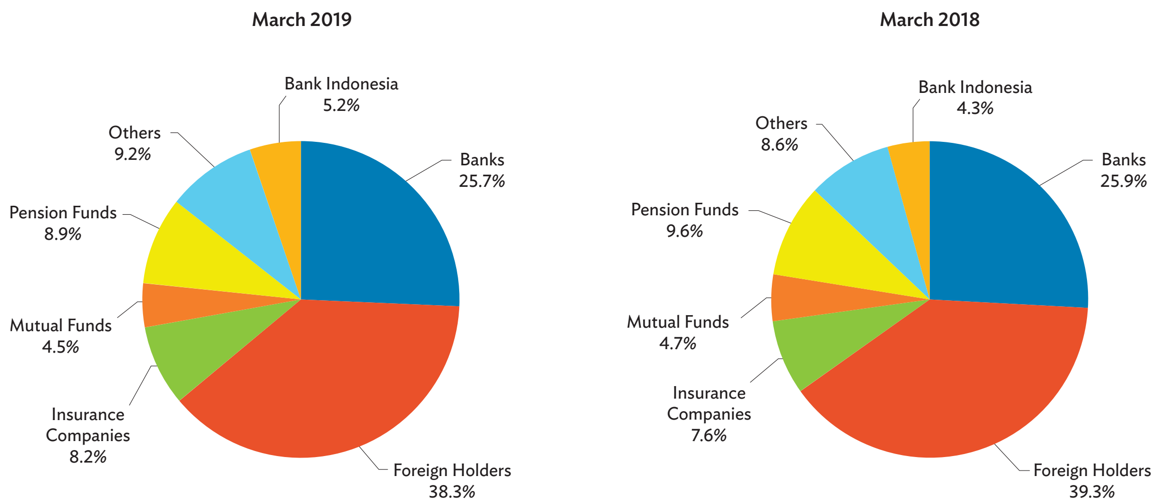
Central government bonds. As an investor group, foreign investors remained the largest holder of LCY government bonds in Indonesia with a 38.3% share of the total at the end of March (**Figure 2**). While the foreign holdings' share was down from 39.3% at the end of March 2018, it rose steadily throughout Q1 2019. Improved sentiments in the bond market led foreign investors to shore up their holdings of central government bonds, influenced by the Federal Reserve's shift to a dovish policy stance.

At the end of March, foreign investors held a total of IDR967.1 trillion worth of LCY central government bonds, which was higher than the IDR858.8 trillion at the end of March 2018. Foreign investor holdings also include bonds held by foreign governments and central banks, whose holdings climbed to IDR182.0 trillion at the end of March from IDR143.8 trillion in the same period a year earlier. This reflects the confidence of other governments and central banks in Indonesia's economy and its resilience to market shocks, particularly following the market sell-off in 2018.

Nonresident investors largely placed their holdings in long-dated maturities. At the end of March, foreign bond holdings in maturities of more than 5 years to 10 years and of more than 10 years accounted for 33.9% and 35.5% of the foreign holdings total, respectively (**Figure 3**). Bonds with maturities of more than 2 years to 5 years accounted for a 25.6% share, while bonds with maturities of 2 years or less accounted for a 5.0% share.

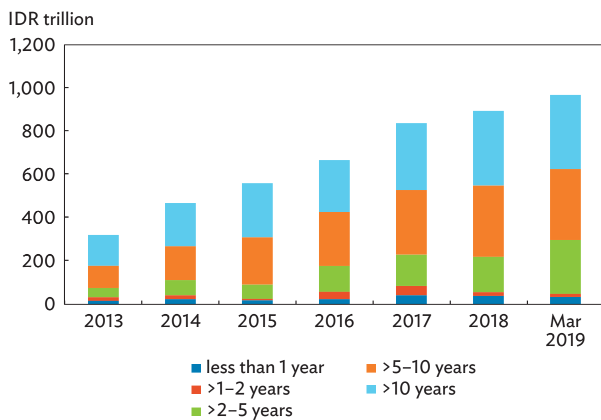
Among domestic investors, the largest holders of LCY government bonds were banking institutions. As a percentage of the total, however, bank holdings were slightly lower at 25.7% at the end of March versus 25.9% a year earlier. During the same period, bond holdings of mutual funds and pension funds slipped to shares of 4.5% and 8.9%, respectively, from 4.7% and 9.6%.
On the other hand, Bank Indonesia increased its bond holdings by nearly 1 percentage point to 5.2% at the end of March from 4.3% a year earlier, as the central bank engaged in bond buybacks as part of its market intervention to support the Indonesian rupiah. Insurance companies also increased their bond holdings to an 8.2% share from 7.6% during the same period.

Figure 2: Local Currency Central Government Bonds Investor Profile



Source: Directorate General of Budget Financing and Risk Management, Ministry of Finance.

Figure 3: Foreign Holdings of Local Currency Central Government Bonds by Maturity



IDR = Indonesian rupiah.
Source: Directorate General of Budget Financing and Risk Management, Ministry of Finance.

Ratings Update

On 14 March, Fitch Ratings (Fitch) affirmed Indonesia's sovereign credit rating at BBB with a stable outlook. In making its decision, Fitch cited Indonesia's favorable GDP growth outlook and low government debt burden, while also noting risks in the global environment. Fitch expects inflation to average 3.4% in full-year 2019 and for policy rates to remain stable.

On 26 April, Ratings and Investment Information (R&I) affirmed Indonesia's sovereign credit rating at BBB with a stable outlook. In its decision, R&I noted Indonesia's solid economic growth performance, narrow fiscal deficit-to-GDP ratio in 2018, and low government debt-to-GDP ratio. R&I also cited Indonesia's resilience to external shocks on the back of government and central bank efforts to maintain macroeconomic stability.

On 26 April, the Japan Credit Rating Agency (JCR) affirmed Indonesia's foreign currency long-term issuer rating at BBB and LCY long-term issuer rating at BBB+. The outlook for the ratings was revised from stable to positive. According to JCR, the ratings were based on Indonesia's solid economic growth, restrained budget deficit and levels of public debt, and resilience to external shocks. With regard to the change in the outlook, JCR cited (i) Indonesia's large-scale infrastructure development program, which is proceeding faster than planned; (ii) expanded infrastructure and human capital expenditures amid budget deficit reductions; and (iii) the possibility of enhanced economic growth supported by the government's policy reforms and initiatives.

Policy, Institutional, and Regulatory Developments

Indonesia Plans to Raise IDR129 Trillion in Q2 2019

The Government of Indonesia plans to raise IDR129 trillion from the sale of Treasury bills and bonds in the second quarter (Q2) of 2019. Scheduled auctions for the quarter comprise five conventional bond auctions and six *sukuk* auctions. (The Q2 2019 auction schedule will be cut short due to holidays relating to Ramadan.) For the conventional bond auctions, the following maturities will be offered: 3 months, 9 months, 12 months, 5 years, 10 years, 15 years, 20 years, and 30 years. *Sukuk* auctions will comprise the following tenors: 6 months, 2 years, 4 years, 7 years, 15 years, and 30 years.

Bank Indonesia Announces Policy to Help Boost Domestic Demand

In April, Bank Indonesia expanded its accommodative policy to boost domestic demand by (i) increasing liquidity through monetary operations, (ii) enhancing retail payment efficiency, (iii) increasing the supply of nondeliverable forwards, (iv) improving regulation in the money market and foreign exchange market, (v) developing the commercial paper market, and (vi) expanding electronification of social programs.

Indonesia Launches Shariah Economy Masterplan, 2019–2024

In May, the Government of Indonesia launched the Shariah Economy Masterplan, 2019–2014, which highlights strategies to strengthen shariah finance; support micro, small, and medium-sized enterprises; and optimize the digital economy.

Republic of Korea

Yield Movements

Local currency (LCY) government bond yields in the Republic of Korea fell for all tenors between 1 March and 8 May, resulting in the entire yield curve shifting downward (**Figure 1**). Yields for short-term tenors fell 3 basis points (bps) on average, while yields for maturities of between 2 years and 50 years declined an average of 12 bps. The largest decline in yields was noted for the 20-year and 30-year maturities, which fell 15 bps each. The spread for the 2-year and 10-year tenors slipped to 15 bps on 8 May from 16 bps on 1 March.

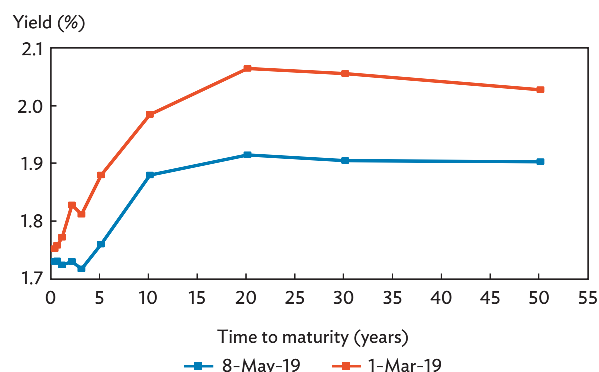
The downward trend in yields during the review period was due to market expectations that the Bank of Korea might cut its key rate this year as export growth weakens, inflation remains subdued, and uncertainties over global trade disputes persist. Recent domestic and global developments contributed to the overall decline in yields. Aside from trade tensions between the United States (US) and the People's Republic of China, Brexit also poses uncertainties, which could lead to increased international financial market volatility and a further slowdown in the global economy. The pace of domestic economic growth also moderated during the review period as consumption slowed, investments adjusted, and export growth weakened.

On 18 April, the Monetary Policy Board of the Bank of Korea decided to maintain the base rate at 1.75%, where it has been since the last adjustment in November 2018. The board noted that risks have increased and it therefore will ensure that economic growth continues and inflation remains stable.

The Republic of Korea's real gross domestic product (GDP) grew 1.7% year-on-year (y-o-y) in the first quarter (Q1) of 2019, down from 3.1% y-o-y growth in the fourth quarter (Q4) of 2018. Growth was weighed down by the decline in gross capital formation, a slowdown in final consumption expenditure, and a slump in exports. The economy shrank 0.4% on a seasonally adjusted quarter-on-quarter (q-o-q) in Q1 2019 following the previous quarter's 1.0% q-o-q expansion.

Consumer price inflation in the Republic of Korea was subdued in Q1 2019 with a quarterly average of 0.6% y-o-y, down from the 1.8% y-o-y in Q4 2018. In April, inflation slightly picked up to 0.6% y-o-y from 0.4% y-o-y in March, while prices for services and oil products remained stable.

Figure 1: The Republic of Korea's Benchmark Yield Curve—Local Currency Government Bonds



Source: Based on data from Bloomberg LP.

Size and Composition

The Republic of Korea's LCY bond market grew 1.8% q-o-q in Q1 2019 with outstanding bonds amounting to KRW2,278.7 trillion (USD2.0 trillion) at the end of March on account of increases in the stocks of central government bonds and corporate bonds (**Table 1**).

Government bonds. The Republic of Korea's LCY government bond market grew 1.9% q-o-q in Q1 2019 to reach KRW930.9 trillion at the end of March. The stocks of central government bonds and National Housing Bonds expanded during the review period, while the outstanding amount of Monetary Stabilization Bonds issued by the Bank of Korea slightly contracted 0.3% q-o-q in Q1 2019.

The government issued a higher volume of Korea Treasury Bonds during the review period to fund its fiscal spending. The government frontloaded its spending plan in the first half of the year to help boost economic growth and create jobs. The stock of central government bonds posted growth of 3.0% q-o-q in Q1 2019.

In Q1 2019, issuances of government bonds registered hefty growth of 20.7% q-o-q, amounting to KRW80.3 trillion, mainly through large issuances from the Treasury and other government agencies. Issuances from the Bank of Korea slightly increased 0.1% q-o-q in Q1 2019.

Corporate bonds. The outstanding amount of LCY corporate bonds increased 1.8% q-o-q to reach KRW1,347.8 trillion at the end of March. **Table 2** lists the top 30 LCY corporate bond issuers in the Republic of Korea with aggregate bonds outstanding of KRW1,104.2 trillion, comprising 67.4% of total LCY corporate bonds at the end of March. Financial institutions such as banks and investment and securities firms continued to dominate the top 30 list in the Republic of Korea. Mirae Asset Daewoo Company, the brokerage arm of Mirae Asset Financial Group, was the largest issuer at the end of March with outstanding bonds of KRW132.0 trillion.

Issuances of corporate bonds declined 22.6% q-o-q in Q1 2019 due to a drop in private corporate issuances. **Table 3** presents notable corporate bond issuances in Q1 2019. Financial firms such as Shinhan Bank, KEB Hana Bank, Woori Bank, and Hyundai Capital Services were the top issuers during the quarter.

Investor Profile

Insurance companies and pension funds were still the top holders of LCY government bonds with a share of 36.0% at the end of December 2018 (**Figure 2**). Next was the general government with a share of 19.2%, which was slightly lower than its 19.9% share in December 2017. Next were banks whose shareholdings increased to 16.8% of the total local government bonds at the end of December 2018 from 16.0% a year earlier.

For the LCY corporate bond market, insurance companies and pension funds remained the largest investor group in December 2018, maintaining their share at around 40% (**Figure 3**). The share of other nonbank financial institutions declined to 33.3% from 34.8% a year earlier. Meanwhile, the general government increased its share to 13.7% from 13.2% during the review period.

Net foreign investment inflows into the Republic of Korea's LCY bond market dropped in the first 2 months of 2019 following net inflows in most of 2018 (**Figure 4**). January saw net foreign investment outflows amounting to KRW3,739 billion, which eased in February to KRW2,719 billion before rebounding in March when net foreign investment inflows surged to KRW1,468 billion. In April, net foreign bond inflows slowed to KRW526 billion.

Ratings Update

In May, RAM Ratings reaffirmed the Republic of Korea's rating at gAA3(pi) and seaAAA(pi) on the global and ASEAN scales, respectively, with a stable rating for both. In making its decision, RAM Ratings took note of the Republic of Korea's economic resilience, sturdy external balance sheet, and prudent fiscal management.

Table 1: Size and Composition of the Local Currency Bond Market in the Republic of Korea

	Outstanding Amount (billion)						Growth Rate (%)			
	Q1 2018		Q4 2018		Q1 2019		Q1 2018		Q1 2019	
	KRW	USD	KRW	USD	KRW	USD	q-o-q	y-o-y	q-o-q	y-o-y
Total	**2,186,590**	**2,056**	**2,237,400**	**2,014**	**2,278,665**	**2,007**	**1.2**	**4.4**	**1.8**	**4.2**
Government	915,155	860	913,966	823	930,886	820	3.0	4.9	1.9	1.7
Central Government Bonds	568,774	535	567,044	510	584,006	514	4.0	6.7	3.0	2.7
Central Bank Bonds	174,790	164	171,640	154	171,150	151	2.3	(0.04)	(0.3)	(2.1)
Others	171,591	161	175,282	158	175,730	155	0.5	4.6	0.3	2.4
Corporate	1,271,435	1,195	1,323,434	1,191	1,347,779	1,187	(0.1)	4.0	1.8	6.0

( ) = negative, KRW = Korean won, LCY = local currency, q-o-q = quarter-on-quarter, Q1 = first quarter, Q4 = fourth quarter, USD = United States dollar, y-o-y = year-on-year.
Notes:
1. "Others" comprise Korea Development Bank Bonds, National Housing Bonds, and Seoul Metro Bonds.
2. Calculated using data from national sources.
3. Bloomberg LP end-of-period LCY–USD rates are used.
4. Growth rates are calculated from local currency (LCY) base and do not include currency effects.
5. Corporate bonds include equity-linked securities and derivatives-linked securities.
Sources: The Bank of Korea and *EDAILY BondWeb*.

Table 2: Top 30 Issuers of Local Currency Corporate Bonds in the Republic of Korea

	Issuers	Outstanding Amount		State-Owned	Listed on		Type of Industry
		LCY Bonds (KRW billion)	LCY Bonds (USD billion)		KOSPI	KOSDAQ	
1.	Mirae Asset Daewoo	131,965.8	116.3	No	Yes	No	Securities
2.	Korea Housing Finance Corporation	118,054.9	104.0	Yes	No	No	Housing Finance
3.	Korea Investment and Securities	112,888.0	99.4	No	No	No	Securities
4.	NH Investment & Securities	94,254.4	83.0	Yes	Yes	No	Securities
5.	KB Securities	80,250.0	70.7	No	No	No	Securities
6.	Hana Financial Investment	62,249.0	54.8	No	No	No	Securities
7.	Samsung Securities	52,085.2	45.9	No	Yes	No	Securities
8.	Industrial Bank of Korea	51,670.1	45.5	Yes	Yes	No	Banking
9.	Korea Land & Housing Corporation	30,857.4	27.2	Yes	No	No	Real Estate
10.	Shinyoung Securities	29,910.0	26.3	No	Yes	No	Securities
11.	Shinhan Bank	29,571.5	26.1	No	No	No	Banking
12.	Korea Electric Power Corporation	27,090.0	23.9	Yes	Yes	No	Electricity, Energy, and Power
13.	Korea Expressway	21,820.0	19.2	Yes	No	No	Transport Infrastructure
14.	Kookmin Bank	21,288.7	18.8	No	No	No	Banking
15.	Woori Bank	19,610.0	17.3	Yes	Yes	No	Banking
16.	KEB Hana Bank	19,250.0	17.0	No	No	No	Banking
17.	Korea Rail Network Authority	18,960.0	16.7	Yes	No	No	Transport Infrastructure
18.	Hanwha Investment and Security	18,570.6	16.4	No	No	No	Securities
19.	Daishin Securities	17,866.4	15.7	No	Yes	No	Securities
20.	Korea Deposit Insurance Corporation	15,630.0	13.8	Yes	No	No	Insurance
21.	The Export–Import Bank of Korea	15,375.0	13.5	Yes	No	No	Banking
22.	Shinhan Card	14,220.0	12.5	No	No	No	Banking
23.	Nonghyup	13,710.0	12.1	Yes	No	No	Banking
24.	Hyundai Capital Services	13,606.0	12.0	No	No	No	Consumer Finance
25.	Small & Medium Business Corporation	13,203.1	11.6	Yes	No	No	SME Development
26.	Korea Gas Corporation	12,738.6	11.2	Yes	Yes	No	Gas Utility
27.	Meritz Securities	12,715.5	11.2	No	Yes	No	Securities
28.	KB Kookmin Bank Card	12,190.0	10.7	No	No	No	Consumer Finance
29.	Standard Chartered Bank Korea	11,610.0	10.2	No	No	No	Banking
30.	Korea Student Aid Foundation	11,020.0	9.7	Yes	No	No	Student Loan
Total Top 30 LCY Corporate Issuers		**1,104,230.3**	**972.7**				
Total LCY Corporate Bonds		**1,637,371.3**	**1,442.4**				
Top 30 as % of Total LCY Corporate Bonds		**67.4%**	**67.4%**				

KOSDAQ = Korean Securities Dealers Automated Quotations, KOSPI = Korea Composite Stock Price Index, KRW = Korean won, LCY = local currency, SME = small and medium-sized enterprise, USD = United States dollar.
Notes:
1. Data as of 31 March 2019.
2. State-owned firms are defined as those in which the government has more than a 50% ownership stake.
3. Corporate bonds include equity-linked securities and derivatives-linked securities.
Sources: *AsianBondsOnline* calculations based on Bloomberg LP and *EDAILY BondWeb* data.

Table 3: Notable Local Currency Corporate Bond Issuance in the First Quarter of 2019

Corporate Issuers	Coupon Rate (%)	Issued Amount (KRW billion)
Shinhan Bank		
2-year bond	1.93	300
3-year bond	1.99	300
20-year bond	2.56	50
Woori Bank		
1-year bond	1.93	200
2-year bond	1.95	200
10-year bond	2.68	200
KEB Hana Bank		
1.5-year bond	1.95	100
2-year bond	1.96	100
3-year bond	1.96	100
Hyundai Capital Services		
5-year bond	2.45	10
7-year bond	2.52	35

KRW = Korean won.
Source: Based on data from Bloomberg LP.

RAM Ratings expects firmer growth in the Republic of Korea during the rest of 2019 given the recovery in the semiconductor industry. Although exports weakened in Q1 2019, the current account stayed in positive territory and foreign reserves remained adequate. In March, the government announced a supplementary budget of KRW6.7 trillion, or 0.3% of GDP, to counter near-term headwinds.

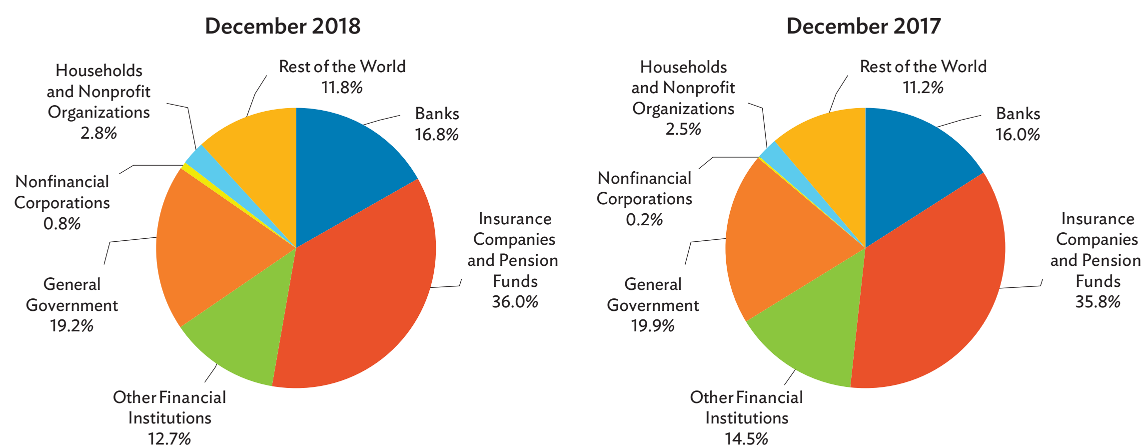
Due to the economy's growth resilience and the government's expansionary fiscal stance, RAM Ratings views the Republic of Korea as credit positive. However, if weakening GDP growth persists and/or fiscal prudence significantly diminishes, it could exert pressure on the ratings.

Policy, Institutional, and Regulatory Developments

Financial Services Commission Releases Financial Policy Road Map for 2019

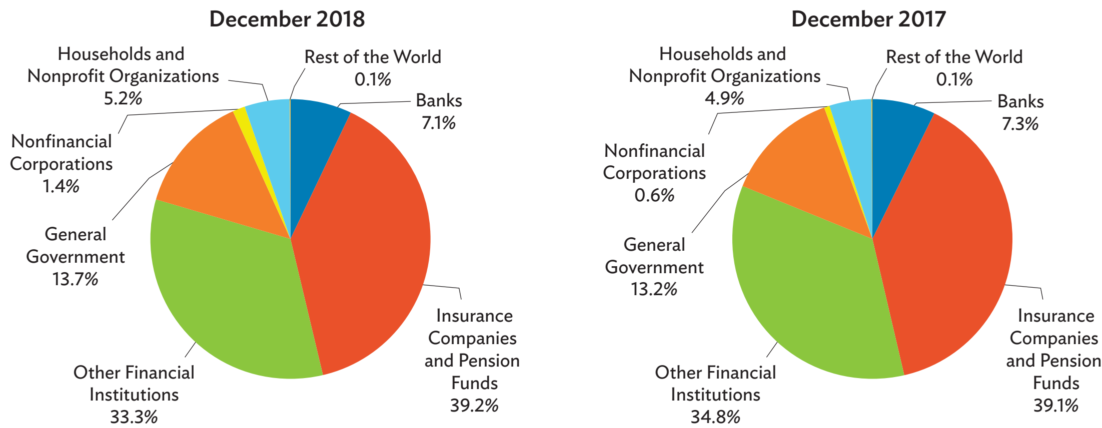
The Republic of Korea's Financial Services Commission (FSC) announced in March its 2019 financial policy aimed at promoting financial innovation, ensuring trust in finance, and securing financial stability. Financial innovation will be accelerated as the newly enacted laws for online banking and financial regulatory sandbox will take effect this year. The government will provide financial support to small and medium-sized enterprises and start-ups to boost economic vitality. The government will continue its policy efforts to curb household debt, keeping its growth between 5% and 6%, and will preemptively manage corporate debt risk with an enhanced evaluation system. The FSC will enact a comprehensive bill for better consumer information and protection. To ensure fairness and transparency in order to protect investors and shareholders, the FSC will remain vigilant against potential risks through the close monitoring of financial markets and active policy responses.

Figure 2: Local Currency Government Bonds Investor Profile



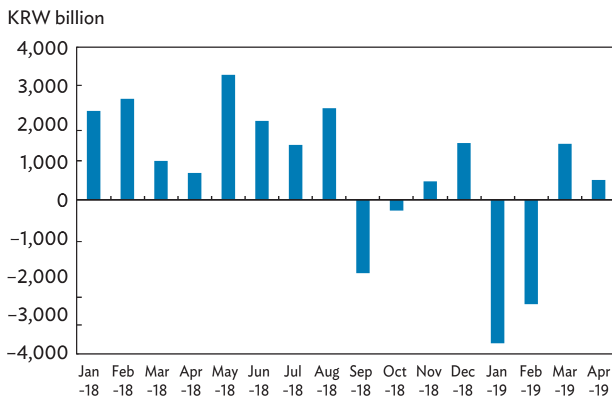
Sources: *AsianBondsOnline* and the Bank of Korea.

Figure 3: Local Currency Corporate Bonds Investor Profile



Sources: *AsianBondsOnline* and the Bank of Korea.

Figure 4: Net Foreign Investment in Local Currency Bonds in the Republic of Korea



KRW = Korean won.
Source: Financial Supervisory Service.

Republic of Korea to Cut Stock Transaction Tax

The Government of the Republic of Korea will cut taxes on stock transactions effective 3 June to support the secondary market for venture firms and promote venture capital. The trading tax for stocks listed on the Korea Composite Stock Price Index and Korea Securities Dealers Automated Quotation markets will be reduced by 0.05 percentage points each, for unlisted stocks by 0.05 percentage points, and for Korean New Exchange stocks by 0.2 percentage points to promote venture capital. A special tax for rural development of 0.15%, levied on Korea Composite Stock Price Index transactions, will remain unchanged.

Starting 1 January 2020, the government will change capital gains taxes on stock transactions to allow the transfer of losses between domestic and foreign stock transactions. Taxes will also only be imposed on net gains that are earned throughout the year.

Malaysia

Yield Movements

Malaysia's local currency (LCY) government bond yield curve shifted downward across all tenors between 1 March and 8 May (**Figure 1**). Tenors declined an average of 15 basis points (bps), with the 1-year maturity declining the most at 20 bps, followed by the 15-year bond, which declined 19 bps. The 2-year and 3-year tenors followed with an 18-bps decline each. The yield spread between 2-year and 10-year government bonds widened from 38 bps on 1 March to 44 bps on 8 May.

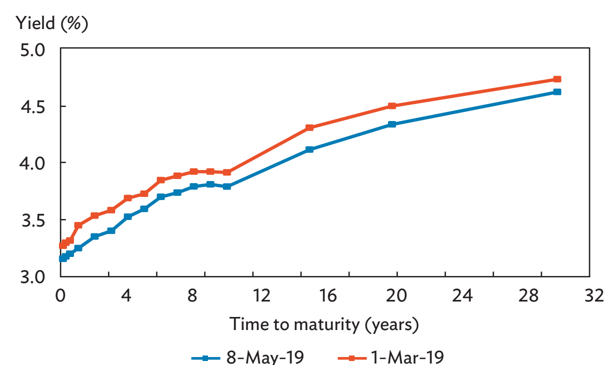
The cut in interest rate by the Bank Negara Malaysia drove the yields downward. The dovish sentiment of Bank Negara Malaysia had already been priced in as investors reacted to the central bank's statement in March.

During its monetary policy committee meeting on 7 May, Bank Negara Malaysia cut its key policy rates 25 bps to maintain accommodative monetary conditions that support economic growth and price stability. The overnight policy rate stood at 3.00%. Likewise, the ceiling rate of its interest rate corridor was reduced to 3.25% and the floor rate to 2.75%. The central bank took into consideration the resilient domestic financial market amid tightening financial conditions. Despite the slowing Malaysian economy in the first quarter (Q1) of 2019, the monetary policy committee expects stable labor market conditions and capacity expansion to drive spending. Inflation is expected to remain low due to policy measures such as the price ceiling for fuels and the change in consumption tax.

Prices for basic goods and services in Malaysia increased 0.2% year-on-year (y-o-y) in April, unchanged from March. The price increase was largely driven by upward price adjustments in the food and nonalcoholic beverages group, while transport costs declined. In January, Malaysia recorded consumer price deflation—for the first time since November 2009—of 0.7% y-o-y on the back of declining transport prices. Consumer price growth was again negative in February, dipping 0.4% y-o-y.

Malaysia's economy grew 4.5% y-o-y in Q1 2019, which was slower than the growth of 4.7% y-o-y recorded in Q4 2018. Weaker growth was registered in Q1 2019 in all sectors except agriculture and mining and quarrying. The slower domestic product growth can be attributed to the slowdown in the services, manufacturing, and construction sectors.

Figure 1: Malaysia's Benchmark Yield Curve—Local Currency Government Bonds



Source: Based on data from Bloomberg LP.

The Malaysian ringgit depreciated against the United States (US) dollar between 1 March and 8 May, losing 1.8%. Due to concerns about liquidity, FTSE Russell announced in April that it was mulling excluding Malaysian government debt from its World Government Bond Index. This placed pressure on the ringgit. The interest rate cut by Bank Negara Malaysia also put pressure on the currency as the gap between Malaysian and US interest rates narrowed. This led to foreign capital outflows in April.

Size and Composition

Malaysia's LCY bond market expanded 2.9% quarter-on-quarter (q-o-q) and 7.6% y-o-y, reaching a size of MYR1,441 billion (USD353 billion) at the end of Q1 2019 (**Table 1**). Compared with Q4 2018, the q-o-q growth rate was faster while the y-o-y growth rate was slower. The government and corporate segments both supported the expansion of the bond market, with shares of 53.1% and 46.9%, respectively. The share of *sukuk* (Islamic bonds) in Malaysia's bond market was 61.0% at the end of Q1 2019, amounting to MYR879 billion, up slightly from 60.2% at the end of the previous quarter.

Table 1: Size and Composition of the Local Currency Bond Market in Malaysia

	Outstanding Amount (billion)						Growth Rate (%)			
	Q1 2018		Q4 2018		Q1 2019		Q1 2018		Q1 2019	
	MYR	USD	MYR	USD	MYR	USD	q-o-q	y-o-y	q-o-q	y-o-y
Total	**1,339**	**347**	**1,401**	**339**	**1,441**	**353**	**4.1**	**11.1**	**2.9**	**7.6**
Government	705	182	739	179	766	188	4.7	8.3	3.6	8.7
Central Government Bonds	656	170	691	167	720	176	3.0	7.1	4.2	9.8
of which: *Sukuk*	287	74	306	74	327	80	6.3	13.9	6.7	14.1
Central Bank Bills	20	5	19	5	17	4	173.5	109.4	(9.9)	(13.9)
of which: *Sukuk*	1	0.3	4	0.9	5	1	–	–	40.5	420.0
Sukuk Perumahan Kerajaan	28	7	28	7	28	7	0.0	0.0	(1.8)	(1.8)
Corporate	635	164	662	160	675	165	3.5	14.3	2.0	6.4
of which: *Sukuk*	480	124	504	122	520	127	4.4	17.4	3.0	8.3

( ) = negative, – = not applicable, MYR = Malaysian ringgit, q-o-q = quarter-on-quarter, Q1 = first quarter, Q4 = fourth quarter, USD = United States dollar, y-o-y = year-on-year.
Notes:
1. Calculated using data from national sources.
2. Bloomberg LP end-of-period LCY–USD rates are used.
3. Growth rates are calculated from local currency base and do not include currency effects.
4. Sukuk Perumahan Kerajaan are Islamic bonds issued by the Government of Malaysia to refinance funding for housing loans to government employees and to extend new housing loans.

Sources: Bank Negara Malaysia Fully Automated System for Issuing/Tendering (FAST) and Bloomberg LP.

Malaysia's LCY bond issuance in Q1 2019 totaled MYR103 billion, reflecting a marginal increase of 0.7% q-o-q due to a minimal pick-up in government issuance, which was partly offset by the drop in corporate issuance. On an annual basis, issuance grew 2.9% y-o-y with government and corporate bonds showing an increase, but with only marginal growth in the latter. The logged q-o-q and y-o-y growth rates in Q1 2019 were considerably slower than in the previous quarter.

Government bonds. The amount of LCY government bonds outstanding climbed to MYR766 billon at the end of Q1 2019 on growth of 3.6% q-o-q, mainly driven by the expansion of central government bonds. On the other hand, outstanding central bank bonds declined to MYR17 billion at the end of Q1 2019 from MYR19 billion in Q4 2018 due to a high volume of maturities and lower bond sales. However, the stock of central bank *sukuk* continued to increase, climbing to MYR5 billion in Q1 2019 from MYR4 billion in the preceding quarter.

Total bond issuance from the government was vibrant in Q1 2019 at MYR60 billion, up from MYR59.0 billion in Q4 2018. Government Investment Issues dominated with sales of MYR21 billion during the quarter, while issuance of Malaysian Government Securities amounted to MYR16 billion. Buying interest in government bonds was high as evidenced by a strong bid-to-cover ratio, which can be traced to benign inflation.

Corporate bonds. LCY bonds outstanding in the corporate sector grew faster in Q1 2019 at 2.0% q-o-q versus 1.3% q-o-q in Q4 2018. The corporate bond stock amounted to MYR675 billion, with *sukuk* comprising a dominant share of MYR520 billion at the end of Q1 2019. On an annual basis, the growth of the corporate bond market decelerated to 6.4% y-o-y from 8.0% y-o-y in the previous quarter.

The aggregate LCY bonds outstanding of the top 30 corporate issuers amounted to MYR388 billion at the end of March, equivalent to 57.5% of total LCY corporate bonds (**Table 2**). The top 30 list was dominated by finance companies, with 12 such issuers who together had bonds outstanding of MYR191 billion. Danainfra Nasional remained the largest issuer with MYR56 billion in bonds outstanding at the end of March, climbing from MYR53 billion at the end of December. Cagamas and Project Lebuhraya Usahasama were second and third on the list, respectively, with MYR34 billion and MYR30 billion, although both of these amounts were down from the previous quarter due to maturities.

Issuance from the corporate sector was meek in Q1 2019, falling by 1.3% q-o-q to MYR43 billion, reversing the growth of 11.1% q-o-q in Q4 2018. The issuances were primarily medium-term notes and commercial paper. The lower debt sales during the quarter can be attributed to local factors such as the government's project rationalization policy, which has reduced

Table 2: Top 30 Issuers of Local Currency Corporate Bonds in Malaysia

Issuers		Outstanding Amount		State-Owned	Listed Company	Type of Industry
		LCY Bonds (MYR billion)	LCY Bonds (USD billion)			
1.	Danainfra Nasional	55.7	13.7	Yes	No	Finance
2.	Cagamas	33.7	8.2	Yes	No	Finance
3.	Project Lebuhraya Usahasama	29.9	7.3	No	No	Transport, Storage, and Communications
4.	Prasarana	29.5	7.2	Yes	No	Transport, Storage, and Communications
5.	Perbadanan Tabung Pendidikan Tinggi Nasional	21.6	5.3	Yes	No	Finance
6.	Lembaga Pembiayaan Perumahan Sektor Awam	17.8	4.3	Yes	No	Property and Real Estate
7.	Pengurusan Air	17.1	4.2	Yes	No	Energy, Gas, and Water
8.	Khazanah	14.0	3.4	Yes	No	Finance
9.	Maybank	13.8	3.4	No	Yes	Banking
10.	CIMB Bank	13.3	3.3	Yes	No	Finance
11.	Sarawak Energy	11.3	2.8	Yes	No	Energy, Gas, and Water
12.	CIMB Group Holdings	10.1	2.5	Yes	No	Finance
13.	Danga Capital	10.0	2.4	Yes	No	Finance
14.	Jimah East Power	9.0	2.2	Yes	No	Energy, Gas, and Water
15.	Maybank Islamic	8.5	2.1	No	Yes	Banking
16.	GENM Capital	7.6	1.9	No	No	Finance
17.	GOVCO Holdings	7.3	1.8	Yes	No	Finance
18.	Bank Pembangunan Malaysia	7.3	1.8	Yes	No	Banking
19.	Rantau Abang Capital	7.0	1.7	Yes	No	Finance
20.	Tenaga Nasional	7.0	1.7	No	Yes	Energy, Gas, and Water
21.	Public Bank	6.9	1.7	No	No	Banking
22.	Bakun Hydro Power Generation	6.5	1.6	No	No	Energy, Gas, and Water
23.	YTL Power International	6.1	1.5	No	Yes	Energy, Gas, and Water
24.	ValueCap	6.0	1.5	Yes	No	Finance
25.	Telekom Malaysia	5.8	1.4	No	Yes	Telecommunications
26.	Turus Pesawat	5.3	1.3	Yes	No	Transport, Storage, and Communications
27.	EDRA Energy	5.1	1.2	No	Yes	Energy, Gas, and Water
28.	1Malaysia Development	5.0	1.2	Yes	No	Finance
29.	Celcom Networks	5.0	1.2	No	No	Transport, Storage, and Communications
30.	Aman Sukuk	5.0	1.2	Yes	No	Construction
Total Top 30 LCY Corporate Issuers		**388.0**	**95.1**			
Total LCY Corporate Bonds		**675.2**	**165.4**			
Top 30 as % of Total LCY Corporate Bonds		**57.5%**	**57.5%**			

LCY = local currency, MYR = Malaysian ringgit, USD = United States dollar.
Notes:
1. Data as of 31 March 2019.
2. State-owned firms are defined as those in which the government has more than a 50% ownership stake.
Source: *AsianBondsOnline* calculations based on Bank Negara Malaysia Fully Automated System for Issuing/Tendering (FAST) data.

issuance activities from corporates, especially those in the infrastructure and construction sectors, as well as to external factors such as the protracted trade spat between the People's Republic of China and the US, and the global economic growth slowdown.

Notable debt sales from Malaysia's top issuers are listed in **Table 3**. Sunway issued two tranches of perpetual *sukuk* amounting to MYR300 million each, while the rest of its issuances in Q1 2019 comprised short-term commercial paper. Maybank issued a total of MYR3,759 million during the quarter. This included two short-term commercial paper issuances and two *sukuk* with 10-year and 12-year maturities amounting to MYR2,000 million and MYR1,700 million, respectively.

Table 3: Notable Local Currency Corporate Bond Issuance in the First Quarter of 2019

Corporate Issuers	Coupon Rate (%)	Issued Amount (MYR million)
GENM Capital		
5-year MTN	4.63	2,000
15-year MTN	4.71	1,700
Cagamas		
1-year Islamic MTN	4.19	200
2-year MTN	4.12	500
2-year MTN	4.22	100
2-year MTN	4.30	300
2-year MTN	4.28	750
2-year MTN	4.15	400
2-year MTN	4.38	250
2-year MTN	4.34	600
3-year MTN	4.54	400
Tenaga Nasional		
15-year Islamic MTN	5.80	300
20-year Islamic MTN	5.80	300

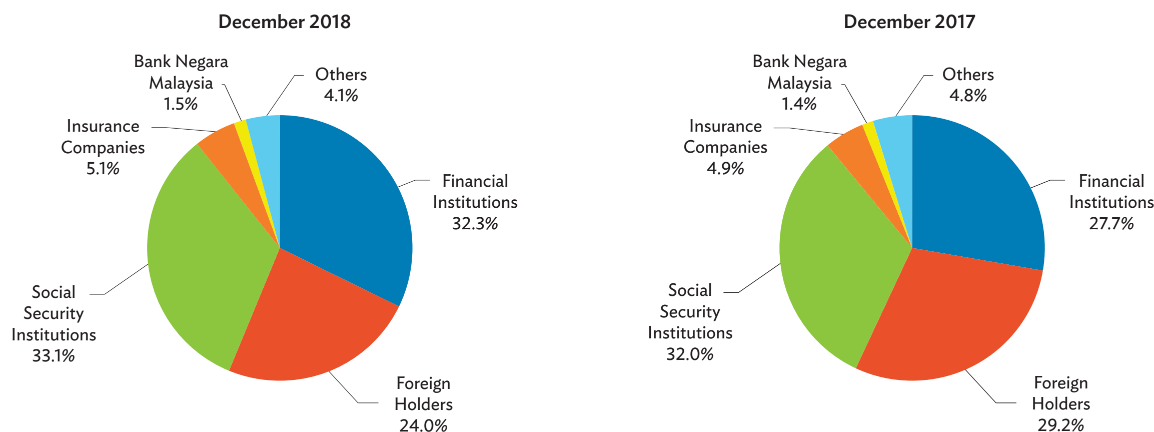
MTN = medium-term note, MYR = Malaysian ringgit.
Source: Bank Negara Malaysia Bond Info Hub.

Investor Profile

At the end of December 2018, social security institutions remained the largest group among LCY government bond investors with a 33.1% share, up from 32.0% at the end of December 2017 (**Figure 2**). Financial institutions at 32.3% overtook foreign investors at 24.0% as the second-largest investor group; these figures compare with shares of 27.7% and 29.2%, respectively, at the end of December 2017. Insurance companies increased their share to 5.1% in December 2018 from 4.9% a year earlier. Bank Negara Malaysia remained the smallest investor share-wise, while slightly increasing its share to 1.5% from 1.4% during the review period.

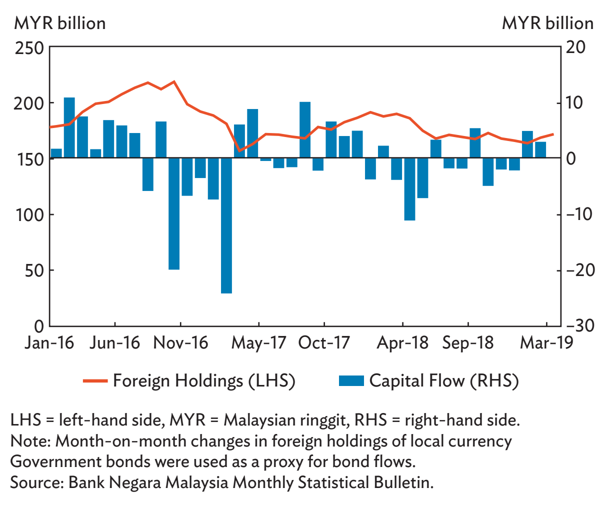
Foreign investor holdings of LCY central government bonds climbed to MYR171 billion at the end of March, driven by net inflows of MYR6 billion in Q1 2019 (**Figure 3**). Despite the increase, the foreign holdings-to-LCY central government bonds outstanding ratio at the end of March slightly decreased to 23.8% from 24.0% at the end of December due to faster growth in the government bond stock. Malaysian Government Securities comprised the largest of share of foreign

Figure 2: Local Currency Government Bonds Investor Profile



Note: "Others" include statutory bodies, nominees and trustee companies, and cooperatives and unclassified items.
Source: Bank Negara Malaysia.

Figure 3: Foreign Holdings and Capital Flows of Local Currency Central Government Bonds in Malaysia



LHS = left-hand side, MYR = Malaysian ringgit, RHS = right-hand side.
Note: Month-on-month changes in foreign holdings of local currency Government bonds were used as a proxy for bond flows.
Source: Bank Negara Malaysia Monthly Statistical Bulletin.

holdings amounting to MYR151 billion, while Government Investment Issues totaled MYR19 billion. In January, net outflows were recorded for the third consecutive month, amounting to MYR2 billion. However, the 3-month losing streak was reversed in February and March with total net inflows of MYR8 billion. The renewed interest of foreign investors in the local bond market can be traced to the dovish stance of the US Federal Reserve, Malaysia's benign inflation rate, and the depreciating ringgit.

Ratings Update

On 15 May, RAM Ratings affirmed Malaysia's sovereign long-term ratings of $_{g}A_{2}$ (global), $_{sea}$AAA (ASEAN), and AAA (domestic scale), and its short-term ratings of $_{g}$P1 (global), $_{sea}$P1 (ASEAN), and P1 (domestic scale), with a stable outlook for all ratings. The affirmation reflects the domestic economy's resiliency, which is underpinned by strong fundamentals and the government's commitment to long-term fiscal consolidation. The rating agency also noted that Malaysia's high level of government debt and heavy reliance on oil- and gas-related earnings remain concerns.

Fitch Ratings (Fitch) affirmed Malaysia's long-term foreign-currency issuer default rating at A− with a stable outlook on 21 February. The affirmation reflects Malaysia's higher growth rates compared with peer economies and a strong external creditor position underpinned by a current account surplus and large external assets, according to the ratings agency. However, a high level of government debt, low per capita income, and weak standards of governance were noted by Fitch as constraining factors. Fitch cited the reduction in government debt ratios, among other factors, as a trigger for the ratings upgrade, while it also noted the deterioration in the government debt-to-gross domestic product trajectory as one of the factors contributing to a possible negative rating action.

Policy, Institutional, and Regulatory Developments

Bank Negara Malaysia Liberalizes Foreign Exchange Policies

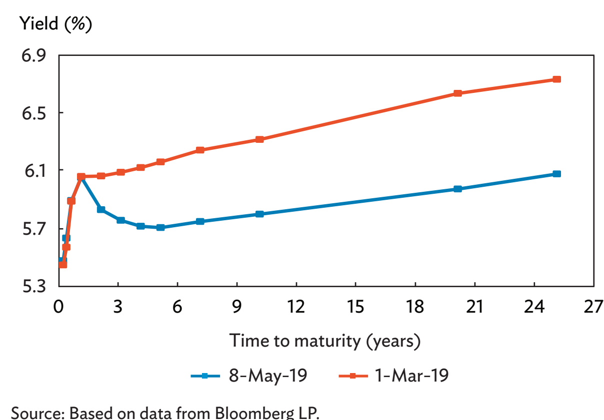
On 27 March, Bank Negara Malaysia liberalized its foreign exchange administration framework to allow investors to hedge their foreign exchange risks more effectively. Residents are now allowed to hedge their foreign exchange obligations for up to 12 months. Approval must be obtained from the central bank for obligations with a tenor of more than 1 year. To help small and medium-sized enterprises hedge their foreign currency risk, net importers are allowed to receive foreign currency payments for their domestic goods and services from resident exporters.

Philippines

Yield Movements

Between 1 March and 8 May, the yields of Philippine local currency (LCY) bonds for all tenors declined an average of 31 basis points (bps) (**Figure 1**). The 20-year maturity decreased the most (66 bps), followed by the 25-year maturity (65 bps). On the other hand, short-term maturities increased, with the 3-month tenor registering an increase of 6 bps. The yield spread between 2-year and 10-year government bonds contracted from 25 bps on 1 March to −3 bps on 8 May. At times over the course of the review period, the yield on the 2-year tenor was greater than that of the 10-year maturity, a situation that first arose in the latter part of March through early April, then again from the end of April into early May.

Figure 1: Philippines' Benchmark Yield Curve—Local Currency Government Bonds



Source: Based on data from Bloomberg LP.

Interest rates fell as market participants expected lower inflation in 2019 due to an expected decline in global oil prices and as monetary and nonmonetary policies designed to rein in inflation took effect. Interest rate cuts from the Bangko Sentral ng Pilipinas (BSP), as well as the new BSP governor's hinting at expediting a cut to large banks' reserve requirement ratio this year, emboldened investors to take more risks. Yields also declined as Standard & Poor's (S&P) announced an upgrade in the credit rating of the Philippines.

In the first few months of 2019, average yields at Treasury bill auctions increased while the average yield of longer-tenor bonds declined. Toward the end of March through May, there were growing global concerns over a possible recession in the United States (US) due to the inversion of its yield curve for the first time since 2007. Investors viewed this as a possible sign of slowing global growth. Given these expectations, investors preferred to buy bonds in the belly of the curve.

After reaching a record high of 6.7% year-on-year (y-o-y) in October 2018, inflation in the Philippines began to decline in November 2018 and into 2019, averaging 3.8% y-o-y during the first quarter (Q1) of 2018. This was well within the full-year 2019 target range of 2.0%–4.0% set by the BSP.

The Philippines' gross domestic product expanded 5.6% y-o-y during Q1 2019, the slowest pace since Q1 2015 when the Philippine economy grew 5.1% y-o-y. Growth in Q1 2019 was down from the 6.5% y-o-y expansion recorded in Q1 2018. Economic managers attributed the slowdown to the budget impasse in Congress and reduced government expenditure. The government slashed its economic growth forecast for full-year 2019 to 6.0%–7.0% from 7.0%–8.0% due to the delay in the approval of the 2019 budget, the effects in the Philippines of a mild El Niño, and the trade tensions between the People's Republic of China and the US.

At a meeting on 21 March, the Monetary Board of the BSP decided to maintain its key policy rates. But on 9 May, the Monetary Board reduced its key policy rates by 25 bps. As a result, the overnight reverse repurchase rate stood at 4.50%. The decision was made amid the government's improved inflation outlook and slower domestic growth. Inflation in 2019 is expected to fall within the BSP's forecast of 2.0%–4.0% on lower food prices and better supply conditions. However, the central bank remains cautious of the risks to the economy brought about by the delay in the approval of the 2019 budget.

Size and Composition

The Philippines' local currency (LCY) bond market expanded 8.0% quarter-on-quarter (q-o-q) in the first quarter (Q1) of 2019, compared with 2.1% q-o-q growth in Q1 2018 (**Table 1**). Total LCY bonds amounted to

Table 1: Size and Composition of the Local Currency Bond Market in the Philippines

	Outstanding Amount (billion)						Growth Rate (%)			
	Q1 2018		Q4 2018		Q1 2019		Q1 2018		Q1 2019	
	PHP	USD	PHP	USD	PHP	USD	q-o-q	y-o-y	q-o-q	y-o-y
Total	**5,593**	**107**	**6,098**	**116**	**6,588**	**125**	**2.1**	**13.1**	**8.0**	**17.8**
Government	4,479	86	4,783	91	5,203	99	0.5	11.7	8.8	16.2
Treasury Bills	332	6	494	9	608	12	5.7	16.2	22.9	82.8
Treasury Bonds	4,106	79	4,255	81	4,562	87	0.1	12.3	7.2	11.1
Others	40	0.8	34	0.6	34	0.6	(0.01)	(42.0)	(0.02)	(16.2)
Corporate	1,114	21	1,315	25	1,385	26	9.2	19.5	5.4	24.4

( ) = negative, LCY = local currency, PHP = Philippine peso, q-o-q = quarter-on-quarter, Q1 = first quarter, Q4 = fourth quarter, USD = United States dollar, y-o-y = year-on-year.
Notes:
1. Calculated using data from national sources.
2. Bloomberg end-of-period LCY–USD rates are used.
3. Growth rates are calculated from an LCY base and do not include currency effects.
4. "Others" comprise bonds issued by government agencies, entities, and corporations for which repayment is guaranteed by the Government of the Philippines. This includes bonds issued by Power Sector Assets and Liabilities Management (PSALM) and the National Food Authority, among others.
5. Peso Global Bonds (PHP-denominated bonds payable in US dollars) are not included.
Sources: Bloomberg LP and Bureau of the Treasury.

PHP6,588 billion (USD125 billion) at the end of March, up from PHP6,098 billion at the end of the fourth quarter (Q4) of 2018. The increase was supported by growth in both the government and corporate bond markets.

Government bonds. The amount of LCY government bonds outstanding stood at PHP5,203 billion at the end of March on growth of 8.8% q-o-q, supported by Treasury bills, which rose 22.9% q-o-q. Treasury bonds expanded as well, growing 7.2% q-o-q as the Bureau of the Treasury (BTr) issued Retail Treasury Bonds (RTBs) in March. Responding to high demand, the BTr utilized its tap facility in January to issue more than the programmed auction amounts for Treasury bills and bonds. Despite the surge in outstanding Treasury bills, they totaled PHP608 billion at the end of March, comprising about 12% of total outstanding government bonds. Treasury bonds amounting to PHP4,562 billion, or 88% of total government securities, continued to form the bulk of outstanding government bonds.

LCY government bonds worth PHP674.7 billion were issued in Q1 2019, up from PHP247.2 billion in Q4 2018. This corresponded to a nearly threefold increase on a q-o-q basis due to the issuance of PHP235.9 billion of 5-year RTBs in March. The RTBs have a coupon of 6.25%. Proceeds from the RTBs will be used to fund the government's health, education, and public infrastructure programs. The RTB issuance was also part of the government's plan to borrow PHP1.2 trillion in 2019 to support increased social services and infrastructure spending.

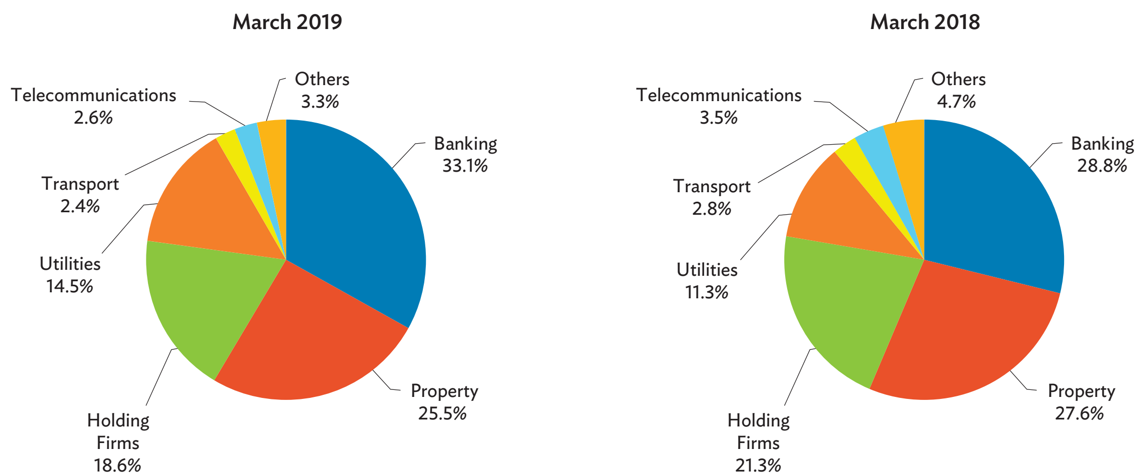
In the second quarter (Q2) of 2019, the BTr plans to continue the weekly auction of 91-day, 182-day, and 364-day Treasury bills totaling PHP195 billion, which is lower than the PHP240 billion in issuance programmed in Q1 2019. Together with Treasury bonds (PHP120 billion), the BTr plans to borrow PHP315 billion during Q2 2019, down from PHP360 billion in Q1 2019. The government is still flush with cash due to strong demand for RTBs in March and after it adjusted its borrowings, confident that it remains on track to meet all 2019 financing needs.

Corporate bonds. LCY corporate bonds grew 5.4% q-o-q during Q1 2019, with total corporate bonds outstanding increasing to PHP1,385 billion from PHP1,315 billion in the previous quarter.

At the end of March 2019, the top three sectors in terms of LCY corporate bonds outstanding were banking (PHP458.3 billion or 33.1% of the total), property (PHP352.8 billion or 25.5%), and holding firms (PHP257.6 billion or 18.6%) (**Figure 2**). These same sectors dominated the amount of LCY corporate bonds outstanding in March 2018 as well. During the review period, the sectoral shares of banking and utilities increased, while the sectoral shares of holding firms, property, telecommunications, and transport decreased.

Property developer Ayala Land continued to lead the top 30 issuers in terms of outstanding LCY corporate bonds at the end of March with PHP109.6 billion (**Table 2**). BDO, the Philippines' largest bank, and SM Prime Holdings, another property developer, followed

Figure 2: Local Currency Corporate Bonds Outstanding by Sector



Source: Based on data from Bloomberg LP.

with PHP94.0 billion and PHP93.7 billion, respectively. Companies in the banking sector continued to dominate the top of the list, comprising 36.2% of the outstanding issues of the largest corporate issuers. This was followed by the property sector with 23.4% and holding firms with 19.3%. Altogether, the top 30 issuers of LCY corporate bonds accounted for PHP1,217.2 billion, or 87.9% of all outstanding corporate issuances at the end of March.

In Q1 2019, PHP59.0 billion worth of LCY corporate bonds were issued, which represented a decline of 54.9% q-o-q from the PHP130.9 billion issued in Q4 2018. Uncertainties in local and international financial markets continued to affect market sentiments, leading to only a few companies issuing LCY corporate bonds during the quarter.

One of the notable corporate issuances in Q1 2019 was BDO's PHP35.0 billion 1-year bond with a 6.42% coupon (**Table 3**). The largest bank in the Philippines issued the bond under a PHP100 billion bond program. Proceeds from the 1-year bond will be used to expand funding sources and support business expansion. Another bank, RCBC, issued a PHP15.0 billion 1-year green bond with a coupon rate of 6.7315%. The proceeds from the issuance will be used to support environmentally friendly projects and other activities that promote resiliency to climate change. Finally, PNB, another bank, issued an PHP8.2 billion 6-year bond with a coupon of 5.75% in order to manage its debts and offer more loans.

Foreign currency bonds. In January, the Philippines raised USD1.5 billion from the sale of 10-year global bonds priced at 110 bps above benchmark US Treasuries. The issuance was strategically announced on the back of positive market sentiments driven by strong US employment data released on 4 January. With the issuance, the Philippines became the first emerging market to offer offshore dollar bonds in 2019. In terms of distribution, 37% of the offering was allocated to investors in Asia, while investors from the US and Europe were allocated 28% and 35%, respectively. By investor type, the global bonds were allocated to asset managers (52%); banks (22%); sovereign wealth funds, pension funds, and insurance firms (14%); and private banks and other investors (12%). Proceeds from the bond issue will be used for general purposes and budgetary support.

Investor Profile

Banks and investment houses dominated the LCY government bond investor base at the end of March, accounting for a 42.4% share of all investors (**Figure 3**). They comprised the largest group of investors in March 2018 as well. Contractual savings and tax-exempt institutions followed with a 23.7% share, down from a 30.8% share in March 2018. Brokers, custodians, and depositories increased their share to 12.7% from 6.8% a year earlier. The share of BTr-managed funds decreased to 9.5% at the end of March from 10.4% in March 2018. Investors from government-owned or -controlled

Table 2: Top 30 Issuers of Local Currency Corporate Bonds in the Philippines

	Issuers	Outstanding Amount		State-Owned	Listed Company	Type of Industry
		LCY Bonds (PHP billion)	LCY Bonds (USD billion)			
1.	Ayala Land	109.6	2.1	No	Yes	Property
2.	BDO Unibank	94.0	1.8	No	Yes	Banking
3.	SM Prime Holdings	93.7	1.8	No	Yes	Property
4.	Metrobank	90.3	1.7	No	Yes	Banking
5.	San Miguel	60.0	1.1	No	Yes	Holding Firms
6.	SM Investments	51.4	1.0	No	Yes	Holding Firms
7.	SMC Global Power	50.0	1.0	No	No	Electricity, Energy, and Power
8.	Philippine National Bank	44.7	0.9	No	Yes	Banking
9.	Petron	42.9	0.8	No	Yes	Electricity, Energy, and Power
10.	Rizal Commercial Banking Corporation	42.2	0.8	No	Yes	Banking
11.	Ayala Corporation	40.0	0.8	No	Yes	Holding Firms
12.	Vista Land	38.0	0.7	No	Yes	Property
13.	Bank of the Philippine Islands	37.2	0.7	No	Yes	Banking
14.	San Miguel Brewery	34.8	0.7	No	No	Brewery
15.	East West Banking	33.8	0.6	No	Yes	Banking
16.	Maynilad	33.3	0.6	No	No	Water
17.	Aboitiz Equity Ventures	32.0	0.6	No	Yes	Holding Firms
18.	JG Summit	30.0	0.6	No	Yes	Holding Firms
19.	Security Bank	29.4	0.6	No	Yes	Banking
20.	Filinvest Land	29.0	0.6	No	Yes	Property
21.	Union Bank	28.0	0.5	No	Yes	Banking
22.	Meralco	27.8	0.5	No	Yes	Electricity, Energy, and Power
23.	China Bank	26.2	0.5	No	Yes	Banking
24.	Aboitiz Power	23.2	0.4	No	Yes	Electricity, Energy, and Power
25.	GT Capital	22.0	0.4	No	Yes	Holding Firms
26.	PLDT	17.8	0.3	No	Yes	Telecommunications
27.	Doubledragon	15.0	0.3	No	Yes	Property
28.	Philippine Savings Bank	14.5	0.3	No	Yes	Banking
29.	NLEX Corporation	13.9	0.3	No	No	Transport
30.	Globe Telecom	12.5	0.2	No	Yes	Telecommunications
Total Top 30 LCY Corporate Issuers		**1,217.2**	**23.2**			
Total LCY Corporate Bonds		**1,385.1**	**26.4**			
Top 30 as % of Total LCY Corporate Bonds		**87.9%**	**87.9%**			

LCY = local currency, PHP = Philippine peso, USD = United States dollar.
Notes:
1. Data as of 31 March 2019.
2. State-owned firms are defined as those in which the government has more than a 50% ownership stake.
Source: *AsianBondsOnline* calculations based on Bloomberg LP data.

Table 3: Notable Local Currency Corporate Bond Issuance in the First Quarter of 2019

Corporate Issuers	Coupon Rate (%)	Issued Amount (PHP billion)
BDO Unibank		
1-year bond	6.42	35.0
Rizal Commercial Banking Corporation		
1-year bond	6.73	15.0
Philippine National Bank		
6-year bond	5.75	8.2
Alsons Consolidated Resources		
1-year bond	0.00	0.098

PHP = Philippine peso.
Source: Bloomberg LP.

corporations and local government units had a smaller share of the total in March, accounting for only 0.3% compared with 0.5% a year earlier.

Ratings Update

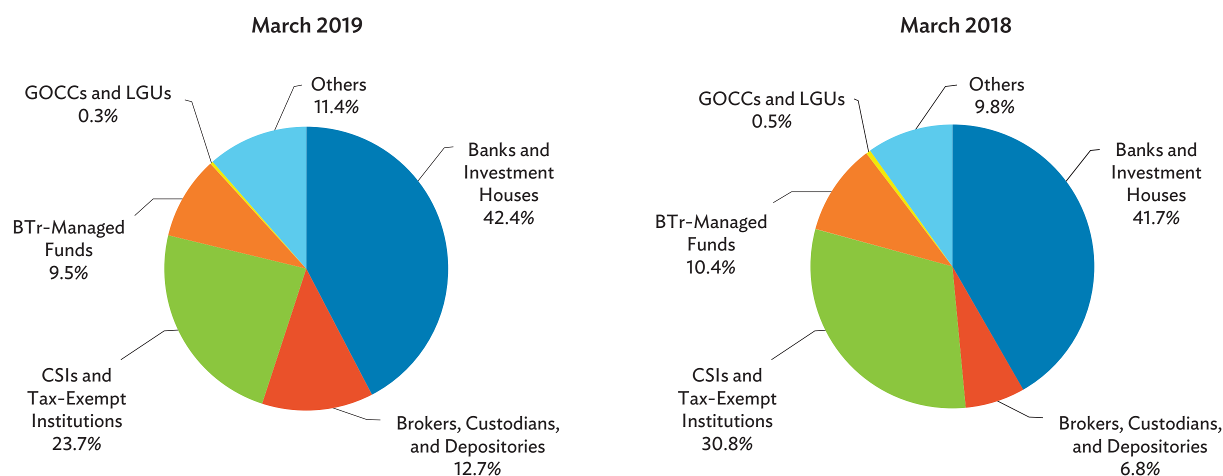
On 30 April 2019, S&P raised the Philippines' credit rating by one notch to BBB+ with a stable outlook. The outlook implies that the credit rating agency expects the economy to sustain its strong economic growth and external and fiscal positions over the next 6 months to 2 years. The growth is supported by the government's strong fiscal position, low public financial obligations, and strong remittances and services exports. Furthermore, S&P noted the economy's supporting policies fostering a healthy investment environment. Also, it views the government's tax reform program to be supportive of infrastructure spending.

Policy, Institutional, and Regulatory Developments

BSP Loosens Restrictions on Foreign Exchange Transactions

On 10 January, the BSP liberalized its rules governing the foreign exchange regulatory framework in order to encourage development and innovation in the country's capital market. Concerning investments in foreign currencies, the BSP allowed banks to register beyond the prescribed period. It also streamlined its requirements and expanded the number of banks eligible to register for investing in foreign currencies. If a bank desires to purchase foreign currencies beyond its threshold amount, it does not need prior approval from the central bank. It just needs to notify the BSP about its activities. Lastly, the liberalized framework allows banks to submit supporting documents electronically.

Figure 3: Local Currency Government Bonds Investor Profile



BTr = Bureau of the Treasury, CSIs = contractual savings institutions, GOCCs = government-owned or -controlled corporations, LGUs = local government units.
Source: Bureau of the Treasury.

BSP Champions Green Finance with British Embassy Manila

On 17–18 January, the BSP hosted a Green Finance Forum and Roundtable at its head office. The event, organized in partnership with various government agencies and the British Embassy Manila, was attended by representatives from the government, financial institutions, civic organizations, and academe. The BSP aims to promote the use of green financing by explaining its objectives, requirements, and uses. Working in partnership with the British Embassy, the central bank envisions sustainable green financing in the Philippines.

BSP Eases Financial Services Licensing Requirements

On 22 February, the BSP relaxed its rules governing BSP-supervised financial institutions wanting to offer electronic payment and financial services. A financial institution simply needs to notify the BSP within 30 days of its launch of financial activities. However, services allowing clients to transfer funds and initiate other financial transactions require prior BSP approval. Furthermore, institutions with services with fund transfer capability must participate in automated clearing houses. The streamlined process for acquiring electronic payment and a financial services license is as follows: the financial institution conducts a self-assessment of its capabilities to offer such services; the BSP evaluates the institutions and provides a certificate of compliance; finally, the central bank issues the license to the financial institution. The licensed financial institution is required to provide periodic reports to the BSP. The new rules aim to promote digital innovation and efficiency in payments and remittances, paving the way for the smoother flow of funds in the Philippine financial system. They also promote interoperability between financial institutions.

BSP Reduces Reserve Requirement Ratio of Big Banks

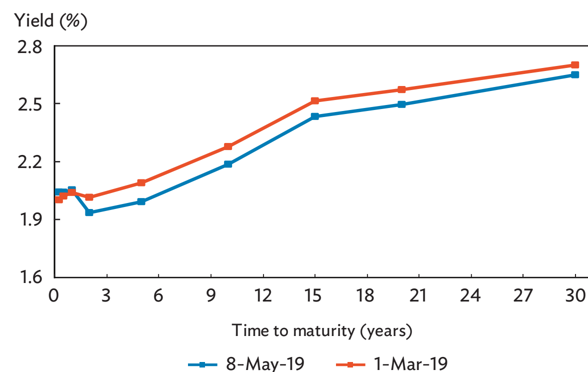
On 16 May, the BSP announced that it will cut the reserve requirement ratio of universal and commercial banks from 18% to 16%. The decrease will come in three phases: 100 bps will be cut on 31 May, 50 bps on 28 June, and 50 bps on 26 July. The decision was made amid the Philippines' low inflation environment and lower-than-expected economic growth. Every 1 percentage point decrease in the reserve requirement ratio is expected to release about PHP90 billion–PHP100 billion into the economy. The announced cut was timely as the Philippine economy is experiencing tightening liquidity conditions, as evidenced by single-digit money supply growth, and high time-deposit rates. A decision on the reserve requirement ratio of smaller banks is subject to discussion during the next monetary board meeting. The BSP plans to gradually decrease the reserve requirement ratio for big banks to the single-digit level by 2023.

Singapore

Yield Movements

Between 1 March and 8 May, Singapore's local currency (LCY) bond yields decreased an average of 4 basis points (bps) (**Figure 1**). The 5-year tenor decreased the most, shedding 10 bps. This was followed by the 10-year tenor (9 bps) and the 15-year tenor (8 bps). On the other hand, short-term maturities registered an increase, with the 3-month tenor registering the largest increase of 4 bps. The trade war between the People's Republic of China (PRC) and the United States (US) has weakened the Singapore dollar, resulting in declining liquidity and increased borrowing costs. The yield spread between 2-year and 10-year government bonds contracted 1 bp during the review period from 26 bps on 1 March to 25 bps on 8 May.

Figure 1: Singapore's Benchmark Yield Curve—Local Currency Government Bonds



Source: Based on data from Bloomberg LP.

The decline in Singapore's yields may be attibuted to the prospect of slower growth in the economy. Singapore's yields tracked interest rate movements in the US, where most tenors decreased during the review period. The US Federal Reserve is expected to keep interest rates unchanged in 2019. The narrowing gap between 2-year and 10-year US government bonds, aggravated by the escalation of the trade tensions between the PRC and the US, has caused speculation that a recession in the US may be imminent.

Based on advance estimates, Singapore's economic growth eased in Q1 2019 to 1.3% y-o-y from an annual rate of 3.2% for full-year 2018. The easing growth was spurred by the decline in manufacturing output. On a quarter-on-quarter (q-o-q) seasonally adjusted basis, gross domestic product grew 2.0% in Q1 2019, which was lower than the 2018 average of 3.2% q-o-q.

Singapore's inflation rate continued its upward trend during the first quarter (Q1) of 2019, rising to 0.6% year-on-year (y-o-y) in March from 0.4% y-o-y in January and 0.5% y-o-y in February. The Monetary Authority of Singapore (MAS) expects global oil prices to decline in 2019. Together with lower electricity prices, the MAS expects inflation to moderate, prompting it to revise downward its inflation forecast for full-year 2019 to 0.5%–1.5% from 1.0%–2.0% as earlier projected in January.

The low-inflation environment, despite easing economic growth, prompted the MAS on 12 April to maintain the current slope of the Singapore dollar nominal effective exchange rate policy band, leaving its width and center unchanged as well. The move aimed to ensure price stability in the medium-term.

The ongoing trade war between the PRC and the US has affected the currency of the trade-dependent economy. In 2019, the Singapore dollar reached its lowest point in May, hitting SGD1.3705–USD1.0 from a high of SGD1.3456–USD 1.0 in January. The effects of the tit-for-tat tariffs imposed by the PRC and the US on each other's goods are expected to continue to lead to the depreciation of the Singapore dollar.

Size and Composition

The Singapore LCY bond market grew 4.2% q-o-q in Q1 2019 to reach SGD420 billion (USD310 billion) at the end of March, up from SGD403 billion at the end of Q4 2018 (**Table 1**). The expansion was supported by growth in both the government and corporate bond sectors.

Government bonds. Total outstanding LCY government bonds increased 4.5% q-o-q in Q1 2019 to reach SGD256 billion at the end of March, up from SGD244 billion at the end of the previous quarter.

Table 1: Size and Composition of the Local Currency Bond Market in Singapore

	Outstanding Amount (billion)						Growth Rate (%)			
	Q1 2018		Q4 2018		Q1 2019		Q1 2018		Q1 2019	
	SGD	USD	SGD	USD	SGD	USD	q-o-q	y-o-y	q-o-q	y-o-y
Total	**384**	**292**	**403**	**295**	**420**	**310**	**5.7**	**10.3**	**4.2**	**9.4**
Government	230	175	244	179	256	188	3.7	12.2	4.5	11.1
SGS Bills and Bonds	121	92	125	92	130	96	4.2	3.5	3.8	7.2
MAS Bills	109	83	120	88	126	93	3.1	23.8	5.4	15.4
Corporate	154	117	158	116	164	121	8.9	7.5	3.7	6.9

( ) = negative, LCY = local currency, MAS = Monetary Authority of Singapore, q-o-q = quarter-on-quarter, Q1 = first quarter, Q4 = fourth quarter, SGD = Singapore dollar, SGS = Singapore Government Securities, USD = United States dollar, y-o-y = year-on-year.
Notes:
1. Government bonds are calculated using data from national sources. Corporate bonds are based on *AsianBondsOnline* estimates.
2. SGS bills and bonds do not include the special issue of Singapore Government Securities held by the Singapore Central Provident Fund.
3. Bloomberg LP end-of-period LCY–USD rates are used.
4. Growth rates are calculated from an LCY base and do not include currency effects.
Sources: Bloomberg LP, Monetary Authority of Singapore, and Singapore Government Securities.

Contributing to the growth was the expansion of outstanding MAS bills, which increased 5.4% q-o-q to SGD126 billion from SGD120 billion in Q4 2018. Outstanding Singapore Government Securities (SGS) bills and bonds increased 3.8% q-o-q, climbing to SGD130 billion at the end of March from SGD125 billion at the end of the previous quarter.

A total of SGD146.4 billion worth of government bills and bonds were issued during Q1 2019. Of these, SGD139.2 billion, or 95.1%, were MAS bills; the remaining SGD7.2 billion, or 4.9%, were SGS bills and bonds. MAS bills increased 9.1% q-o-q, while SGS bills and bonds grew 41.2% q-o-q due to larger offerings and more issuances of SGS bonds.

Corporate bonds. LCY corporate bonds expanded 3.7% q-o-q in Q1 2019. On a y-o-y basis, corporate bonds grew 6.9% to SGD164 billion from SGD58 billion in Q4 2017.

The top 30 LCY corporate issuers accounted for SGD75.9 billion, or 46.3% of all LCY corporate bonds outstanding, at the end of March (**Table 2**). The state-owned real estate company Housing & Development Board continued to top the list, accounting for 14.0% of the total LCY corporate bond market with SGD23.0 billion of corporate bonds outstanding. Fellow state-owned company Land Transport Authority was a distant second with SGD9.0 billion of bonds outstanding, comprising 5.5% of the total LCY corporate bond market.

Just like the previous quarter, the real estate sector dominated the top 30 corporate issuers, accounting for 45.4% of the top 30's total corporate bonds outstanding at the end of March. This was followed by the transport and finance sectors with market shares of 18.6% and 14.6%, respectively.

In Q1 2019, LCY corporate bond issuances grew 17.5% to SGD5.0 billion from SGD4.2 billion issued during the previous quarter. The jump in issuance of LCY corporate bonds was due to large issuances, led by government-owned institutions.

One of the notable issuances was Land Transport Authority's SGD1,500 million 40-year bond with a coupon rate of 3.38%, which was issued under its SGD12 billion multicurrency medium-term note program (**Table 3**). Singapore Airlines' SGD750 million 5-year bond with a coupon of 3.03%, which targeted both retail and institutional investors, was met with strong demand. Proceeds from the issuance will be used to diversify the company's funding sources and for aircraft-related activities. The Housing & Development Board issued two bonds: a SGD600 million 10-year bond with a coupon of 2.675% and a SGD500 million 7-year bond with a 2.495% coupon. Both issuances are part of its SGD32 billion multicurrency medium-term note program, which aims to finance the company's development programs and refinance its existing debts. Singapore Technologies Telemedia issued a SGD350 million perpetual bond with a 5.0% coupon as part of its SGD2 billion multicurrency program. Proceeds from the issuance will be used to finance various activities by the company.

Table 2: Top 30 Issuers of Local Currency Corporate Bonds in Singapore

	Issuers	Outstanding Amount		State-Owned	Listed Company	Type of Industry
		LCY Bonds (SGD billion)	LCY Bonds (USD billion)			
1.	Housing & Development Board	23.0	17.0	Yes	No	Real Estate
2.	Land Transport Authority	9.0	6.6	Yes	No	Transportation
3.	Singapore Airlines	4.4	3.2	Yes	Yes	Transportation
4.	Temasek Financial	3.6	2.7	Yes	No	Finance
5.	Frasers Property	3.4	2.5	No	Yes	Real Estate
6.	DBS Group Holdings	2.5	1.9	No	Yes	Banking
7.	United Overseas Bank	2.5	1.8	No	Yes	Banking
8.	Mapletree Treasury Services	2.4	1.8	No	No	Finance
9.	Capitaland	2.1	1.5	Yes	Yes	Real Estate
10.	Keppel Corporation	1.7	1.3	No	Yes	Diversified
11.	Capitaland Treasury	1.6	1.2	No	No	Finance
12.	Oversea-Chinese Banking Corporation	1.5	1.1	No	Yes	Banking
13.	CMT MTN	1.4	1.0	No	No	Finance
14.	SP Powerassets	1.4	1.0	No	No	Utilities
15.	Public Utilities Board	1.3	1.0	Yes	No	Utilities
16.	GLL IHT	1.3	0.9	No	No	Real Estate
17.	City Developments Limited	1.2	0.9	No	Yes	Real Estate
18.	Olam International	1.2	0.9	No	Yes	Consumer Goods
19.	Singtel Group Treasury	1.2	0.8	No	No	Finance
20.	Ascendas	1.0	0.7	No	Yes	Finance
21.	Suntec REIT	0.9	0.7	No	Yes	Real Estate
22.	Hyflux	0.9	0.7	No	Yes	Utilities
23.	Mapletree Commercial Trust	0.9	0.6	No	Yes	Real Estate
24.	Sembcorp Financial Services	0.9	0.6	No	No	Finance
25.	Shangri-La Hotel	0.8	0.6	No	Yes	Real Estate
26.	DBS Bank	0.8	0.6	No	Yes	Banking
27.	Overseas Union Enterprise	0.8	0.6	No	Yes	Real Estate
28.	Sembcorp Industries	0.8	0.6	No	Yes	Shipbuilding
29.	Singapore Technologies Telemedia	0.8	0.6	Yes	No	Utilities
30.	SMRT Capital	0.8	0.6	No	No	Transportation
Total Top 30 LCY Corporate Issuers		**75.9**	**56.0**			
Total LCY Corporate Bonds		**164.2**	**121.1**			
Top 30 as % of Total LCY Corporate Bonds		**46.3%**	**46.3%**			

LCY = local currency, SGD = Singapore dollar, USD = United States dollar.
Notes:
1. Data as of 31 March 2019.
2. State-owned firms are defined as those in which the government has more than a 50% ownership stake.
Source: *AsianBondsOnline* calculations based on Bloomberg LP data.

Table 3: Notable Local Currency Corporate Bond Issuance in the First Quarter of 2019

Corporate Issuers	Coupon Rate (%)	Issued Amount (SGD million)
Land Transport Authority		
40-year bond	3.38	1,500
Housing & Development Board		
7-year bond	2.495	500
10-year bond	2.675	600
Singapore Airlines		
5-year bond	3.03	750
Singapore Technologies Telemedia		
Perpetual bond	5.00	350

SGD = Singapore dollar.
Source: Bloomberg LP.

Policy, Institutional, and Regulatory Developments

MAS and the European Commission Agree on Common Approach to Trading Derivatives

On 20 February, the MAS and the European Commission agreed to support reforms allowing derivatives to be traded between Singapore and the European Union through each other's trading platforms. The agreement specifies that participants must comply with both European Union and Singaporean regulations when they trade derivatives in each other's markets. The common approach aims to strengthen inter-regional connections and provides investors from Singapore and the European Union with options to hedge financial risks.

MAS Established Corporate Governance Advisory Committee

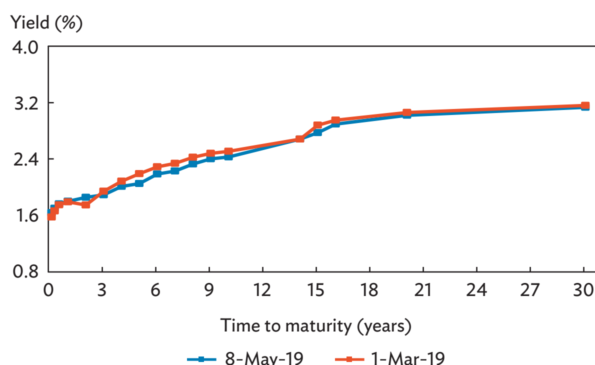
On 12 February, the MAS established a Corporate Governance Advisory Committee to promote best practices in corporate governance for companies in Singapore. The committee aims to build investor confidence in Singapore's financial market and strengthen Singapore's reputation as a financial hub. The committee is in charge of identifying risks to corporate governance and monitoring international trends and best practices, with the goal of ultimately updating the Corporate Governance Code.

Thailand

Yield Movements

Between 1 March and 8 May, the local currency (LCY) government bond yield curve in Thailand shifted slightly upward at the short-end and slightly downward at the long-end (**Figure 1**). Yields rose an average of 3 basis points (bps) for tenors with maturities of up to 1 year. The 2-year tenor had the largest gain at 11 bps. Excluding the 14-year tenor, yields fell an average of 8 bps for tenors with maturities of at least 3 years. The spread between the 2-year and 10-year tenors narrowed to 58 bps on 8 May from 77 bps on 1 March.

Figure 1: Thailand's Benchmark Yield Curve—Local Currency Government Bonds



Sources: Based on data from Bloomberg LP and Thai Bond Market Association.

The marginal downward shift of the yield curve for most tenors resulted from expectations that the policy rate would be kept at its current level of 1.75%. In its monetary policy meeting on 20 March, the Bank of Thailand (BOT) decided to keep its policy rate unchanged as the economy expanded at a slower pace in first quarter (Q1) of 2019 amid weakening external demand. The BOT's gross domestic product (GDP) growth forecast for 2019 was lowered to 3.8% from 4.0% amid sluggish export demand. Inflation was expected to remain within the lower bound of its 0.7%–1.7% target. The BOT deemed that existing accommodative monetary policy was conducive to ensure economic growth and account for the impact of heightened global and domestic uncertainties. It thus decided to keep the policy rate unchanged at 1.75% in March and for a second time at its subsequent monetary policy meeting on 8 May.

Consumer price inflation was broadly unchanged in April, slightly declining 1.23% year-on-year (y-o-y) from 1.24% y-o-y in March, after having accelerated from 0.7% y-o-y in February, buoyed by higher food and oil prices. Core inflation, which excludes volatile food and energy prices, was also broadly unchanged in April at 0.61% y-o-y against 0.58% y-o-y in March. The government expects domestic food prices to rise in the coming months as drought and dry weather may cause a shortage in the supply of fresh vegetables. Consumer prices have been on an upward trend since the beginning of year, but the government is keeping its full-year 2019 inflation forecast at 1.0% y-o-y, which is within its target range. The Thai baht appreciated 0.1% against the United States (US) dollar between 1 March and 8 May, once again outperforming its regional peers as the only currency that strengthened during the review period. Thailand's robust external finances are reflected in its high current account surplus, which was equivalent to 10.9% of GDP at the end of Q1 2019, up from 5.5% at the end of fourth quarter (Q4) of 2018. Thailand's current account surplus has shielded the baht from global economic shocks despite a series of net outflows since the beginning of the year. The widening trade surplus suggested that Thailand's economy may be less susceptible than its regional peers to trade tensions between the US and the People's Republic of China (PRC).

Nevertheless, the Thai economy slowed amid the US–PRC trade war, with GDP growth in Q1 2019 posting its slowest pace since Q1 2014, easing to 2.8% y-o-y from revised growth of 3.6% y-o-y in Q4 2018. The Q1 2019 growth was lower than expected, weighed down by the decline in external demand. Exports fell 3.6% y-o-y in Q1 2019, after growing 2.3% y-o-y in Q4 2018, as a result of a weakened demand from Thailand's major trading partners. Domestic demand slowed as well, with private consumption growing 4.6% q-o-q in Q1 2019, easing from growth of 5.4% q-o-q in Q4 2018. Private investment growth slowed to 4.4% q-o-q in Q1 2019 from 5.5% q-o-q in Q4 2018, restrained by weakening investment in construction. Following the weak economic performance in Q1 2019, the National Economic and Social Development Council reduced its full-year GDP

growth forecast in May to 3.3%–3.8% from 3.5%–4.5% and its exports growth forecast to 2.2% from 4.0%.

Size and Composition

Thailand's LCY bond market expanded to a size of THB12,649 billion (USD399 billion) at the end of March on growth of 1.6% q-o-q and 10.9% y-o-y (**Table 1**) . The quarterly growth rate in Q1 2019 was down from 2.5% q-o-q in Q4 2018, but annual growth in Q1 2019 was slightly faster than the 10.3% y-o-y posted in the previous quarter. Growth was buoyed by expansions in both the government and corporate sectors, which was attributable to the double-digit q-o-q issuance growth during the quarter. The Thai bond market largely comprises government bonds, which accounted for 72% of total bonds outstanding at the end of March.

Government bonds. The size of the LCY government bond market reached THB9,111 billion at the end of March, with growth easing to 1.4% q-o-q in Q1 2019 from 3.3% q-o-q in Q4 2018. Expansions were seen across all government bond segments, except for state-owned enterprise bonds. Central government bonds outstanding marginally increased 0.8% q-o-q during the quarter, which was a slower growth rate than in Q4 2018. While recording only a minimal increase, central government bonds comprised more than half of the aggregate government bond stock during the review period. Central bank bonds outstanding also expanded more slowly in Q1 2019 versus Q4 2018 at 3.0% q-o-q. The amount of state-owned enterprise bonds outstanding declined 1.7% q-o-q, reversing growth of 1.2% q-o-q in Q4 2018, as issuance volume declined. On a y-o-y basis, total government bonds outstanding grew 11.1% in Q1 2019.

Total issuance from the government surged 16.5% q-o-q in Q1 2019, up from growth of 1.9% q-o-q in the previous quarter, mainly lifted by an increase in central bank bonds that was partly countered by declines in central government bills and state-owned enterprise bonds. On a y-o-y basis, issuance of government bonds went up 24.4%, supported by higher central bank issuance. Government debt sales in Q1 2019 amounted to THB2,228 billion; about 93% of which comprised central bank securities.

Corporate bonds. Outstanding corporate bonds totaled THB3,538 billion at the end of March, reflecting a faster expansion of 2.3% q-o-q in Q1 2019 versus 0.5% q-o-q in Q4 2018, but falling to 10.3% y-o-y from 12.2% y-o-y during the same period. Growth was supported by higher corporate debt sales during the quarter.

The size of bonds outstanding of the top 30 corporate issuers totaled THB1,954 billion at the end of March, accounting for 55.2% of the total corporate bond market (**Table 2**). The list was dominated by the food and beverage industry with six issuers and aggregate bonds outstanding of THB528 billion. Siam Cement remained the top issuer with outstanding debt of THB182 billion at the end of March, unchanged from the end of December. Thai Beverage ranked second on the list, surpassing CP All, with its outstanding bonds jumping to THB180 billion from THB127 billion during the review period on increased issuance in Q1 2019.

Table 1: Size and Composition of the Local Currency Bond Market in Thailand

	Outstanding Amount (billion)						Growth Rate (%)			
	Q1 2018		Q4 2018		Q1 2019		Q1 2018		Q1 2019	
	THB	USD	THB	USD	THB	USD	q-o-q	y-o-y	q-o-q	y-o-y
Total	**11,410**	**366**	**12,445**	**382**	**12,649**	**399**	**1.2**	**2.2**	**1.6**	**10.9**
Government	8,203	263	8,986	276	9,111	287	0.1	(0.6)	1.4	11.1
Government Bonds and Treasury Bills	4,425	142	4,738	146	4,774	150	2.1	5.3	0.8	7.9
Central Bank Bonds	2,969	95	3,477	107	3,579	113	(2.4)	(9.4)	3.0	20.5
State-Owned Enterprise and Other Bonds	808	26	771	24	758	24	(1.4)	5.5	(1.7)	(6.2)
Corporate	3,208	103	3,459	106	3,538	111	4.0	10.1	2.3	10.3

( ) = negative, LCY = local currency, q-o-q = quarter-on-quarter, Q1 = first quarter, Q4 = fourth quarter, THB = Thai baht, USD = United States dollar, y-o-y = year-on-year.
Notes:
1. Calculated using data from national sources.
2. Bloomberg LP end-of-period LCY–USD rates are used.
3. Growth rates are calculated from an LCY base and do not include currency effects.
Source: Bank of Thailand.

Table 2: Top 30 Issuers of Local Currency Corporate Bonds in Thailand

	Issuers	Outstanding Amount		State-Owned	Listed Company	Type of Industry
		LCY Bonds (THB billion)	LCY Bonds (USD billion)			
1.	Siam Cement	181.5	5.7	Yes	Yes	Construction Materials
2.	Thai Beverage	180.0	5.7	No	No	Food and Beverage
3.	CP All	164.8	5.2	No	Yes	Commerce
4.	Berli Jucker	121.8	3.8	No	Yes	Food and Beverage
5.	PTT	110.7	3.5	Yes	Yes	Energy and Utilities
6.	Charoen Pokphand Foods	109.5	3.4	No	Yes	Food and Beverage
7.	Bank of Ayudhya	104.0	3.3	No	Yes	Banking
8.	True Move H Universal Communication	82.0	2.6	No	No	Communications
9.	Toyota Leasing Thailand	79.2	2.5	No	No	Finance and Securities
10.	Minor International	66.0	2.1	No	Yes	Hospitality and Leisure
11.	Indorama Ventures	65.4	2.1	No	Yes	Petrochemicals and Chemicals
12.	Thai Airways International	59.1	1.9	Yes	Yes	Transportation and Logistics
13.	Krungthai Card	47.4	1.5	Yes	Yes	Banking
14.	CPF Thailand	44.0	1.4	No	Yes	Food and Beverage
15.	Mitr Phol Sugar	42.2	1.3	No	No	Food and Beverage
16.	Banpu	41.8	1.3	No	Yes	Energy and Utilities
17.	Land & Houses	40.5	1.3	No	Yes	Property and Construction
18.	Advanced Wireless	40.2	1.3	No	Yes	Communications
19.	Tisco Bank	39.7	1.3	No	No	Banking
20.	Bangkok Expressway and Metro	38.2	1.2	No	Yes	Transportation and Logistics
21.	TPI Polene	36.6	1.2	No	Yes	Property and Construction
22.	Thai Union Group	30.6	1.0	No	Yes	Food and Beverage
23.	PTT Exploration and Production Company	29.6	0.9	Yes	Yes	Energy and Utilities
24.	DTAC Trinet	29.5	0.9	No	Yes	Communications
25.	Sansiri	29.4	0.9	No	Yes	Property and Construction
26.	True Corp	29.1	0.9	No	Yes	Communications
27.	Bangkok Commercial Asset Management	28.2	0.9	No	No	Finance and Securities
28.	CH. Karnchang	28.1	0.9	No	Yes	Property and Construction
29.	Kasikorn Bank	28.0	0.9	No	Yes	Banking
30.	Muangthai Capital	27.3	0.9	No	Yes	Finance and Securities
Total Top 30 LCY Corporate Issuers		**1,954.3**	**61.6**			
Total LCY Corporate Bonds		**3,537.6**	**111.5**			
Top 30 as % of Total LCY Corporate Bonds		**55.2%**	**55.2%**			

LCY = local currency, THB = Thai baht, USD = United States dollar.
Notes:
1. Data as of 31 March 2019.
2. State-owned firms are defined as those in which the government has more than a 50% ownership stake.
Source: *AsianBondsOnline* calculations based on Bloomberg LP data.

Corporate bond issuance in Q1 2019 increased 31.2% q-o-q to THB467 billion, reversing the 22.2% q-o-q decline in Q4 2018. According to the Thai Bond Market Association, the issuance of nonrated and noninvestment-grade, long-term corporate bonds rose substantially in Q1 2019. Similarly, the highest-rated, investment-grade bonds registered an increase, but at a much slower pace. Firms took advantage of the relatively low interest rate environment as the BOT held off further rate hikes after raising the benchmark policy rate by 25 bps in December.

Thai Beverage recorded the largest corporate debt sales in Q1 2019, totaling THB53 billion from three issuances, following THB77 billion of issuance in the third quarter of 2018, which marked the biggest quarterly corporate debt issuance total yet in Thailand (**Table 3**).

Table 3: Notable Local Currency Corporate Bond Issuance in the First Quarter of 2019

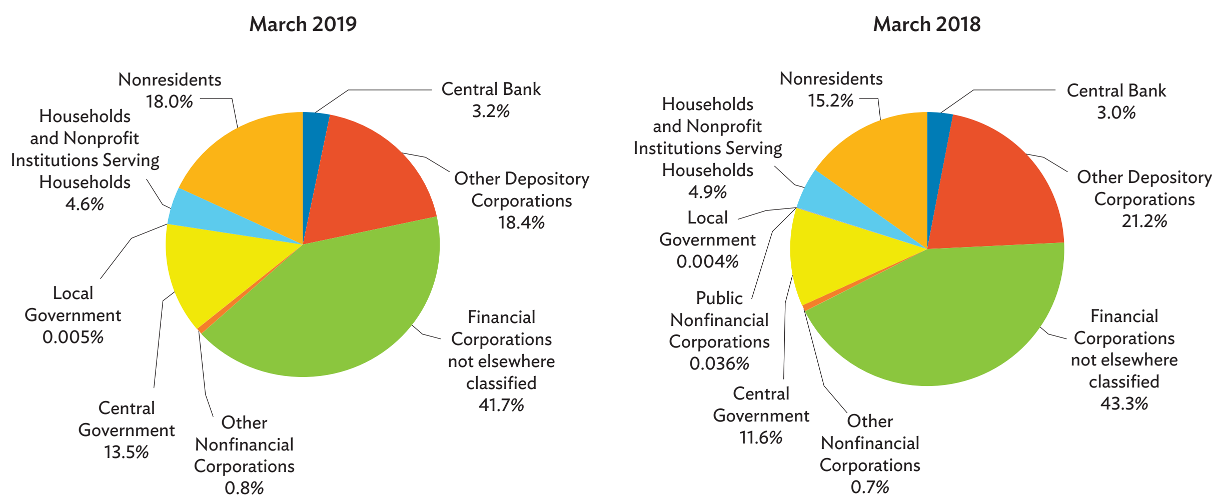
Corporate Issuers	Coupon Rate (%)	Issued Amount (THB million)
Thai Beverage		
2-year bond	3.00	31,600
5-year bond	3.50	11,300
10-year bond	4.00	10,100
Minor International		
5-year bond	3.60	4,635
5-year bond	3.60	2,165
10-year bond	4.17	5,685
10-year bond	4.17	1,815
12-year bond	4.43	2,430
12-year bond	4.43	1,570
15-year bond	4.62	2,430
15-year bond	4.62	3,070
True Move H Universal Communication		
2-year bond	3.80	2,810
5-year bond	5.10	11,190
5-year bond	5.00	200

THB = Thai baht.
Source: Bloomberg LP.

Investor Profile

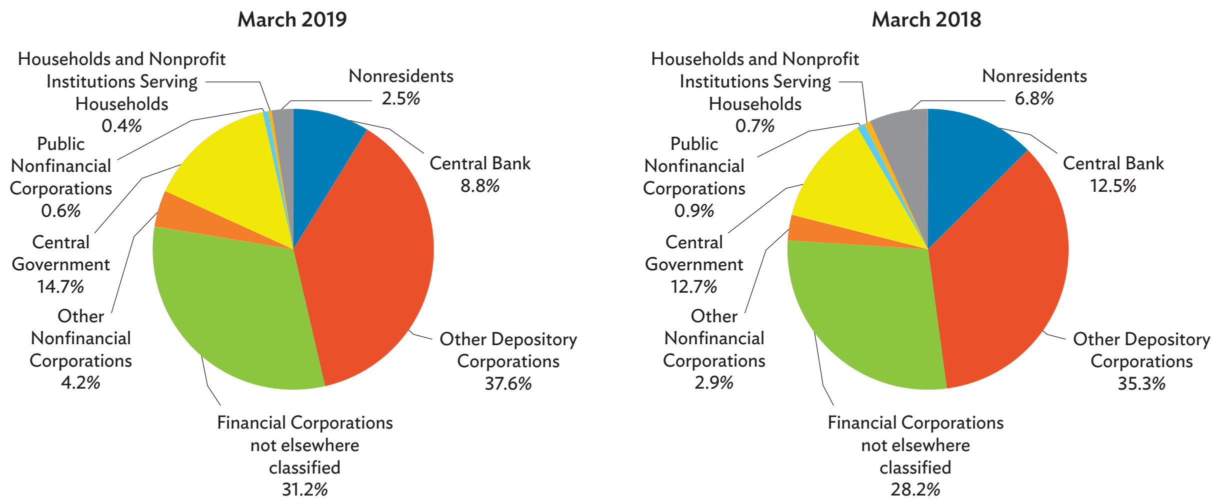
Central government bonds. The profile of LCY central government bond investors at the end of March was little changed from a year earlier (**Figure 2**). Financial corporations again had the largest share of holdings at 41.7% of total LCY central government bonds outstanding, although this was a decrease from 43.3% in March 2018. Similarly, other depository corporations saw their government bonds dip from 21.2% to 18.4% during the review period. On the other hand, the central government and foreign investors groups registered increases in their shares, with the former holding 13.5% at the end of March, up from 11.6%, and the latter holding 18.0%, up from 15.2%. These four investor groups together held over 90% of total central government bonds outstanding at the end of March.

Figure 2: Local Currency Government Bonds Investor Profile



Note: Government bonds include Treasury bills and bonds.
Sources: *AsianBondsOnline* and Bank of Thailand.

Figure 3: Local Currency Central Bank Securities Investor Profile

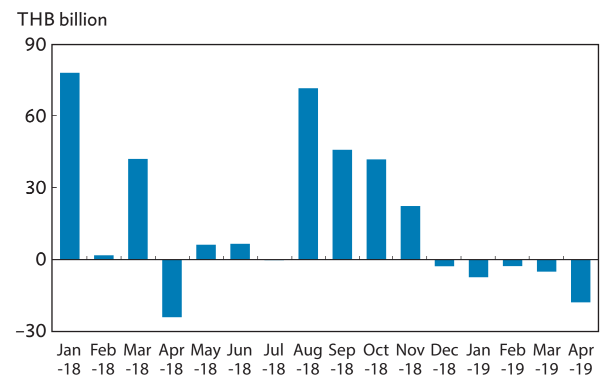


Source: Bank of Thailand.

Central bank bonds. The three largest investor groups in the central bank bond segment registered increased holding shares in March compared with a year earlier (**Figure 3**). Other depository corporations' share increased 2.2 percentage points to 37.6%, financial corporations' share rose 3.1 percentage points to 31.2%, and the BOT's share was up 2.0 percentage points to 14.7%. The foreign investors share in central bank bonds decreased to 2.5% in March from 6.8% in March 2018, the largest percentage decrease among all investor groups.

Between January and April, Thailand's LCY bond market recorded net outflows of THB33 billion, reversing net inflows of THB97 billion recorded in January–April 2018 (**Figure 4**). Unsettled by external factors such as the global economic slowdown, the US–PRC trade war, and the unclear terms of Brexit, investors have been selling short-term bonds since the beginning of the year to lock in profits on expectations of higher interest rates and the Thai baht's depreciation. Uncertainties on the domestic political front stemming from the general elections in March also made investors more risk averse, leading net outflows to surge to THB18 billion in April.

Figure 4: Foreign Investor Net Trading of Local Currency Bonds in Thailand



THB = Thai baht.
Source: Thai Bond Market Association.

Ratings Update

Rating and Investment Information (R&I) affirmed Thailand's foreign currency issuer rating at BBB+, with a stable outlook, on 31 January. The rationale behind the rate affirmation is Thailand's strong economic fundamentals underpinned by a consistent current account surplus and inflows of foreign direct investment. The economy is projected to stay on a solid growth path. R&I also said that while the government's fiscal deficit is on an upward trend, the introduction of the Fiscal Responsibility Act will keep the economy's fiscal position sound. Furthermore, R&I expects the post-election government transition to be smooth and deemed the resurgence of political and social turmoil to be unlikely.

Policy, Institutional, and Regulatory Developments

BOT and Bank Indonesia Sign Memorandum of Understanding on Payment Systems and Financial Innovation

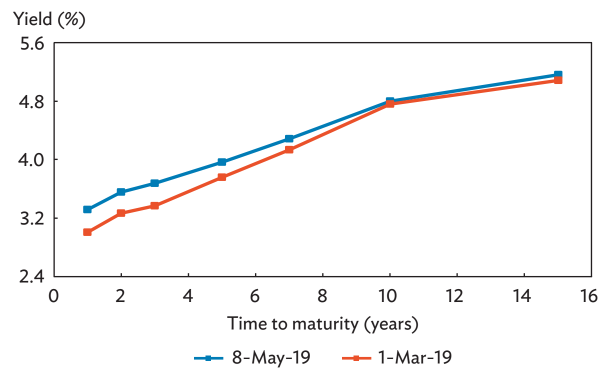
The BOT and Bank Indonesia signed a memorandum of understanding on 4 April to strengthen payment systems and financial innovation cooperation between Thailand and Indonesia. The agreement also aims to strengthen the implementation of central bank policies and address the increasingly complex challenges in payments between the two economies. It will also reinforce the implementation of policies against money laundering and terrorism financing.

Viet Nam

Yield Movements

Between 1 March and 8 May, local currency (LCY) government bond yields in Viet Nam climbed for all tenors (**Figure 1**). Bond yields rose faster at the short-end than the long-end, resulting in a flattening of the yield curve. Yields gained an average of 30 basis points (bps) for the 1-year through 3-year maturities, but only rose an average of 6 bps for the 10-year through 15-year tenors. As a result, the spread between the 2-year and 10-year yields narrowed to 125 bps on 8 May from 150 bps on 1 March.

Figure 1: Viet Nam's Benchmark Yield Curve—Local Currency Government Bonds



Source: Based on data from Bloomberg LP.

The overall upward trend in bond yields was influenced by the uptick in deposit rates. Some banks raised deposit interest rates at the beginning of the year, to enable them to attract funds for mobilization. A regulation by the State Bank of Vietnam (SBV), which came into effect in 2019, reduced the ratio of short-term capital that can be used for long-term lending. Only 40% of a bank's short-term capital can now be used for long-term lending, down from the previous allowable amount of 45%. As a result, borrowing costs edged higher.

The uptick in bond yields at the short-end of the curve can also be attributed to rising inflation expectations. Upward adjustments in the prices of electricity and gasoline in March and April were expected to have a domino effect on the cost of goods and services. While inflation in the first 4 months of the year was the lowest for this period in 3 years, core inflation crept up to 1.8% year-on-year (y-o-y) in January–April, hitting the upper-end of the target range of 1.6%–1.8% set by the National Assembly for full-year 2019.

On the external front, uncertainties in global financial markets, particularly those arising from the unresolved trade issues between the United States (US) and the People's Republic of China, also impacted on bond yields. These two markets are among Viet Nam's largest trading partners.

The SBV has kept its refinancing rate steady since July 2017 at 6.25% and continues to utilize other monetary tools in guiding interest rates. The SBV has engaged in open market operations and intervened in the foreign exchange market to stabilize the VND–USD exchange rate. Between 1 March and 8 May, the Vietnamese dong weakened by 0.7% versus the US dollar.

Real gross domestic product (GDP) growth in Viet Nam eased to 6.8% y-o-y in the first quarter (Q1) of 2019 from 7.5% y-o-y in Q1 2018 as growth moderated in all major industry types. The largest contributor to overall GDP growth was the industry and construction sector, which grew 8.6% y-o-y in Q1 2019. The services sector expanded 6.5% y-o-y, and the agriculture sector grew 2.7% y-o-y in Q1 2019.

Size and Composition

Viet Nam's LCY bond market reached a size of VND1,193.0 trillion (USD51 billion) at the end of March (**Table 1**). Growth rose a marginal 0.7% quarter-on-quarter (q-o-q) in Q1 2019, a reversal from the 5.0% q-o-q contraction in Q4 2018. On a y-o-y basis, however, a 0.2% contraction was recorded.

Government bonds. Total LCY government bonds outstanding stood at VND1,092.2 trillion at the end of March, with growth rebounding to 0.9% q-o-q in Q1 2019 after contracting 6.1% q-o-q in the preceding quarter. On a y-o-y basis, the government bond market contracted 2.4% after expanding 7.9% in Q4 2018. The stock of Treasury instruments was the sole driver of

Table 1: Size and Composition of the Local Currency Bond Market in Viet Nam

	Outstanding Amount (billion)						Growth Rate (%)			
	Q1 2018		Q4 2018		Q1 2019		Q1 2018		Q1 2019	
	VND	USD	VND	USD	VND	USD	q-o-q	y-o-y	q-o-q	y-o-y
Total	1,195,934	52	1,184,204	51	1,192,959	51	10.8	16.5	0.7	(0.2)
Government	1,119,575	49	1,082,140	47	1,092,228	47	11.6	16.1	0.9	(2.4)
Treasury Bonds	843,522	37	898,393	39	919,151	40	5.9	9.1	2.3	9.0
Central Bank Bills	91,270	4	0	0	4,900	0	456.5	–	–	(94.6)
Government-Guaranteed and Municipal Bonds	184,783	8	183,748	8	168,177	7	(2.8)	(3.2)	(8.5)	(9.0)
Corporate	76,359	3	102,063	4	100,731	4	(0.5)	23.2	(1.3)	31.9

– = not applicable, ( ) = negative, LCY = local currency, q-o-q = quarter-on-quarter, Q1 = first quarter, Q4 = fourth quarter, USD = United States dollar, VND = Vietnamese dong, y-o-y = year-on-year.
Notes:
1. Bloomberg LP end-of-period LCY–USD rates are used.
2. Growth rates are calculated from an LCY base and do not include currency effects.
Sources: Bloomberg LP and Vietnam Bond Market Association.

growth as the stocks of central bank bills and government-guaranteed and municipal bonds contracted during the review period.

At the end of March, the outstanding amount of Treasury bonds reached VND919.2 trillion, accounting for an 84.2% share of the government bond stock. Growth of Treasury instruments rebounded to 2.3% q-o-q and 9.0% y-o-y. In Q1 2019, newly issued Treasury instruments totaled VND78.0 trillion on issuance growth of 123.4% q-o-q and 20.5% y-o-y.

The outstanding stock of central bank bills stood at VND4.9 trillion, as the SBV resumed issuance in March after a 5-month break. The stock of government-guaranteed and municipal bonds stood at VND168.2 trillion, down 8.5% q-o-q and 9.0 y-o-y.

Corporate bonds. At the end of March, the outstanding stock of LCY corporate bonds reached VND100.7 trillion, with growth declining 1.3% q-o-q but rising 31.9% y-o-y. Data culled from Bloomberg showed that the LCY corporate bond market of Viet Nam comprised issuances from 46 institutions. A majority of corporate bonds are issued via private placement for which information is not publicly disclosed.[9]

The 30 largest corporate bond issuers in Viet Nam accounted for an aggregate bond total amounting to VND96.2 trillion (**Table 2**). This was equivalent to 95.5% of the corporate bond total at the end of the review period. The composition of the top five issuers was unchanged from the list at the end of December. Taking the top spot was Vinhomes with outstanding bonds amounting to VND12.5 trillion, followed by Masan Consumer Holdings with outstanding bonds of VND11.1 trillion. Together, these two firms accounted for 23.4% of the total corporate bond stock at the end of March. In the third spot was Vingroup with outstanding bonds valued at VND9.6 trillion, followed by Vietnam Joint Stock Commercial Bank for Industry and Trade (VND8.2 trillion) and Asia Commercial Joint Stock Bank (VND6.8 trillion).

In Q1 2019, two firms tapped the debt market for funding: Refrigeration Electrical Engineering and Ho Chi Minh City Infrastructure. Details for their respective bond issues are presented in **Table 3**. Both issuances carried a long-term maturity of 10 years.

Ratings Update

In April, S&P Global Ratings raised Viet Nam's long-term sovereign credit rating to BB from BB–. The rating was given a stable outlook by S&P Global Ratings, which cited Viet Nam's strong economic growth and improved government institutional environment as the reason for the upgrade.

In May, Fitch Ratings affirmed Viet Nam's long-term foreign currency issuer default rating and long-term LCY issuer default rating at BB and revised the outlook

[9] As most bonds in Viet Nam are issued via private placement, our data on corporate bonds may be understated.

Table 2: Top 30 Issuers of Local Currency Corporate Bonds in Viet Nam

	Issuers	Outstanding Amount		State-Owned	Listed Company	Type of Industry
		LCY Bonds (VND billion)	LCY Bonds (USD billion)			
1.	Vinhomes	12,500	0.54	No	Yes	Real Estate
2.	Masan Consumer Holdings	11,100	0.48	No	No	Diversified Operations
3.	Vingroup	9,600	0.41	No	Yes	Real Estate
4.	Vietnam Joint Stock Commercial Bank for Industry and Trade	8,200	0.35	Yes	Yes	Banking
5.	Asia Commercial Joint Stock Bank	6,800	0.29	No	No	Banking
6.	Ho Chi Minh City Infrastructure Investment	3,560	0.15	No	Yes	Infrastructure
7.	Bank for Investment and Development of Vietnam	3,050	0.13	Yes	Yes	Banking
8.	Hoang Anh Gia Lai	3,000	0.13	No	Yes	Real Estate
9.	Masan Group	3,000	0.13	No	Yes	Finance
10.	Vietnam Prosperity Joint Stock Commercial Bank	3,000	0.13	No	Yes	Banking
11.	Vietnam Technological and Commercial Joint Stock Bank	3,000	0.13	No	No	Banking
12.	Sai Dong Urban Investment and Development	2,600	0.11	No	No	Real Estate
13.	Hoan My Medical	2,330	0.10	No	No	Healthcare Services
14.	Refrigeration Electrical	2,318	0.10	No	Yes	Manufacturing
15.	Hoang Anh Gia Lai International Agriculture	2,217	0.10	No	Yes	Agriculture
16.	Vietnam International Commercial Bank	2,203	0.09	No	Yes	Agriculture
17.	Agro Nutrition International	2,000	0.09	No	No	Agriculture
18.	Joint Stock Commercial Bank for Foreign Trade of Vietnam	2,000	0.09	Yes	Yes	Banking
19.	Vietnam Electrical Equipment	1,800	0.08	No	Yes	Manufacturing
20.	Masan Resources	1,500	0.06	No	Yes	Mining
21.	Nui Phao Mining	1,500	0.06	No	No	Mining
22	Saigon-Hanoi Securities	1,150	0.05	No	Yes	Finance
23.	SSI Securities	1,150	0.05	No	Yes	Finance
24.	Mobile World Investment	1,135	0.05	No	Yes	Manufacturing
25.	Pan Group	1,135	0.05	No	Yes	Consumer Services
26.	DIC Corporation	1,000	0.04	Yes	No	Chemicals
27.	No Va Land Investment Group	1,000	0.04	No	Yes	Real Estate
28.	TTC Education Joint Stock Company	951	0.04	No	No	Education Services
29.	Vietnam Bank for Agriculture and Rural Development	760	0.03	Yes	No	Banking
30.	Nam Long Investment	660	0.03	No	Yes	Real Estate
Total Top 30 LCY Corporate Issuers		**96,219**	**4.15**			
Total LCY Corporate Bonds		**100,731**	**4.34**			
Top 30 as % of Total LCY Corporate Bonds		**95.5%**	**95.5%**			

LCY = local currency, USD = United States dollar, VND = Vietnamese dong.
Notes:
1. Data as of 31 March 2019.
2. State-owned firms are defined as those in which the government has more than a 50% ownership stake.
Sources: *AsianBondsOnline* calculations based on Bloomberg LP and Vietnam Bond Market Association data.

Table 3: Notable Local Currency Corporate Bond Issuance in the First Quarter of 2019

Corporate Issuers	Coupon Rate (%)	Issued Amount (VND billion)
Refrigeration Electrical Engoineering		
10-year bond	7.00	2,318
Ho Chi Minh City Infrastructure		
10-year bond	7.20	1,150

VND = Vietnamese dong.
Source: Bloomberg LP.

for both ratings to positive from stable. In making its decision, Fitch Ratings cited Viet Nam's improving economic management, falling government debt levels, strong economic growth performance, and stable inflation.

Policy, Institutional, and Regulatory Developments

State Treasury to Sell VND80 Trillion Worth of Bonds in the Second Quarter of 2019

In April, the State Treasury announced that it plans to issue VND80 trillion bonds in the second quarter of 2019. The issuance plan is as follows: (i) 5-year Treasury bonds worth VND10 trillion, (ii) 7-year Treasury bonds worth VND5 trillion, (iii) 10-year Treasury bonds worth VND26 trillion, (iv) 15-year Treasury bonds worth VND30 trillion, (v) 20-year Treasury bonds worth VND5 trillion, and (vi) 30-year Treasury bonds worth VND4 trillion. For 2019 as a whole, the government is targeting to issue VND200 trillion.

Asia Bond Monitor

June 2019

This publication reviews recent developments in East Asian local currency bond markets along with the outlook, risks, and policy options. It covers the 10 members of the Association of Southeast Asian Nations and the People's Republic of China; Hong Kong, China; and the Republic of Korea.

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ADB is committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining its efforts to eradicate extreme poverty. Established in 1966, it is owned by 68 members—49 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.

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