Bond Market Developments in the Second Quarter of 2013

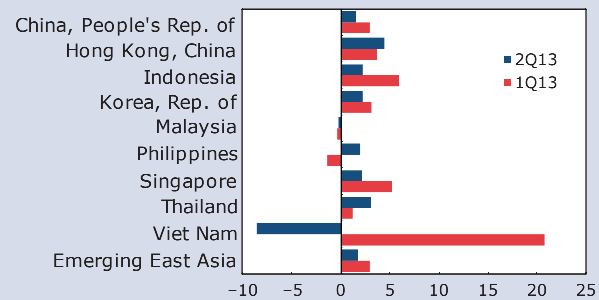
Size and Composition

Total bonds outstanding in emerging East Asian bond markets grew 1.7% q-o-q and 11.9% y-o-y to reach US$6.8 trillion at the end of 2Q13, driven mainly by growth in the region's corporate sector.[3]

The quarter-on-quarter (q-o-q) growth rate for emerging East Asian local currency (LCY) bond markets in 2Q13 was 1.7%, down significantly from 2.9% growth in 1Q13 (**Figure 1a**). The region's most rapidly growing markets on a q-o-q basis in 2Q13 were Hong Kong, China (4.4%); Thailand (3.0%); Indonesia and the Republic of Korea (2.2% each); and Singapore (2.1%) (**Table 1**). The growth of the bond market in Hong Kong, China was driven by Exchange Fund Bills (EFBs)—one of the principal monetary policy tools of the Hong Kong Monetary Authority (HKMA)—and, to a lesser extent, by growth of HKSAR bonds.[4] In the Thai bond market, growth was driven primarily by a 4.3% q-o-q expansion in treasury bonds, which is in line with expectations that the budget deficit for the current fiscal year (ending November 2013) will rise from the official target of 2.5% of gross domestic product (GDP) to 3.0% or higher.

The Indonesian bond market's growth in 2Q13 was driven mainly by 4.5% q-o-q growth in its corporate bond market. The 1.7% q-o-q rate of growth in Indonesian government bonds in 2Q13 will likely be sustained, or even increase, in 2H13 if the government is to meet its IDR231.8 trillion (net) issuance target for the year, which is necessary to fund a target budget deficit equivalent to 2.4% of GDP. Meanwhile, the growth of the bond market in the Republic of Korea in 2Q13 was well supported by expansion in both the government and corporate sectors.

Figure 1a: Growth of LCY Bond Markets in 1Q13 and 2Q13 (q-o-q, %)



LCY = local currency, q-o-q = quarter-on-quarter.
Notes:
1. Calculated using data from national sources.
2. Growth rates are calculated from an LCY base and do not include currency effects.
3. Emerging East Asia growth figures are based on end-June 2013 currency exchange rates and do not include currency effects.
4. For the Philippines, 2Q13 government bonds outstanding data carried over from May 2013. For Singapore, corporate bonds outstanding data based on *AsianBondsOnline* estimates.

Sources: People's Republic of China (*ChinaBond*); Hong Kong, China (Hong Kong Monetary Authority); Indonesia (Bank Indonesia 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).

Bucking the regional trend, Malaysia experienced a modest 0.2% q-o-q decline in its domestic bond market in 2Q13, reflecting a dip in bill issuance by Bank Negara Malaysia (BNM) as it has reduced the magnitude of its sterilization activities this year. Furthermore, Malaysian corporate bonds outstanding, many of which come from government-owned companies, fell slightly by 0.3% q-o-q. On the other hand, the stock of Malaysian treasury bonds grew 2.8% q-o-q and 10.1% year-on-year (y-o-y), reflecting expectations that the budget deficit will reach 4.0% of GDP this year after having reached 4.5% in 2012. The other market to experience a decline in its q-o-q growth rate in 2Q13 was Viet Nam, where the size of government bonds outstanding fell 8.1% in 2Q13. Viet Nam had been the most rapidly growing government bond market in most recent quarters; in fact, it was still the most rapidly growing bond market on a y-o-y basis in 2Q13. Viet Nam's government bonds outstanding grew 34.3% y-o-y in 2Q13, while

[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.

[4] HKSAR bonds refer to bonds issued by the Government of the Hong Kong Special Administrative Region.

Table 1: Size and Composition of LCY Bond Markets

	2Q12		1Q13		2Q13		Growth Rate (LCY-base %)				Growth Rate (US$-base %)			
	Amount (US$ billion)	% share	Amount (US$ billion)	% share	Amount (US$ billion)	% share	2Q12		2Q13		2Q12		2Q13	
							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 (PRC)														
Total	3,469	100.0	3,937	100.0	4,045	100.0	1.5	6.9	1.5	12.6	0.6	8.7	2.7	16.6
Government	2,580	74.4	2,827	71.8	2,875	71.1	1.1	3.9	0.5	7.6	0.2	5.7	1.7	11.4
Corporate	889	25.6	1,110	28.2	1,170	28.9	2.6	16.5	4.2	27.2	1.7	18.5	5.4	31.7
Hong Kong, China														
Total	173	100.0	184	100.0	192	100.0	1.1	3.5	4.4	10.7	1.2	3.8	4.5	10.7
Government	93	53.6	100	54.7	107	56.0	2.1	5.3	7.0	15.7	2.2	5.6	7.1	15.7
Corporate	80	46.4	83	45.3	84	44.0	(0.1)	1.5	1.3	4.9	0.1	1.9	1.4	4.9
Indonesia														
Total	111	100.0	119	100.0	118	100.0	3.6	3.8	2.2	12.4	0.5	(5.6)	(0.5)	6.0
Government	94	84.2	98	83.0	97	82.6	3.0	0.5	1.7	10.3	(0.2)	(8.6)	(1.0)	4.0
Corporate	18	15.8	20	17.0	21	17.4	7.4	25.9	4.5	23.6	4.1	14.5	1.7	16.5
Korea, Rep. of														
Total	1,302	100.0	1,453	100.0	1,445	100.0	2.1	9.7	2.2	10.6	1.0	2.2	(0.5)	11.0
Government	525	40.3	560	38.6	558	38.6	(0.05)	3.0	2.3	6.0	(1.1)	(4.0)	(0.4)	6.3
Corporate	777	59.7	893	61.4	887	61.4	3.6	14.7	2.1	13.8	2.4	6.9	(0.6)	14.1
Malaysia														
Total	294	100.0	322	100.0	314	100.0	2.3	15.0	(0.2)	6.4	(1.3)	9.3	(2.3)	6.9
Government	176	59.8	190	59.1	186	59.1	1.6	15.3	(0.2)	5.1	(2.0)	9.6	(2.3)	5.7
Corporate	118	40.2	132	40.9	128	40.9	3.2	14.6	(0.3)	8.2	(0.4)	9.0	(2.4)	8.8
Philippines														
Total	87	100.0	98	100.0	95	100.0	2.3	11.8	1.9	12.1	4.2	15.1	(3.5)	9.5
Government	75	86.4	85	86.7	82	86.8	1.0	10.8	2.0	12.5	2.9	14.0	(3.5)	9.9
Corporate	12	13.6	13	13.3	13	13.2	11.5	18.7	1.7	9.3	13.5	22.2	(3.8)	6.7
Singapore														
Total	209	100.0	239	100.0	239	100.0	2.0	11.6	2.1	14.7	1.4	8.3	(0.1)	14.5
Government	129	61.7	148	62.0	148	61.8	0.8	13.3	1.9	14.9	0.2	10.1	(0.3)	14.6
Corporate	80	38.3	91	38.0	91	38.2	3.9	8.8	2.5	14.5	3.3	5.6	0.3	14.2
Thailand														
Total	254	100.0	295	100.0	286	100.0	4.1	17.7	3.0	10.6	1.7	14.6	(2.9)	12.5
Government	204	80.3	232	78.6	226	78.9	4.8	17.9	3.4	8.7	2.3	14.8	(2.6)	10.5
Corporate	50	19.7	63	21.4	60	21.1	1.6	16.9	1.8	18.5	(0.8)	13.9	(4.1)	20.4
Viet Nam														
Total	22	100.0	30	100.0	27	100.0	10.5	28.5	(8.6)	26.8	10.2	26.6	(9.8)	25.0
Government	20	91.6	29	96.5	26	97.0	12.6	33.5	(8.1)	34.3	12.3	31.5	(9.3)	32.4
Corporate	2	8.4	1	3.5	0.8	3.0	(7.9)	(8.7)	(22.5)	(55.5)	(8.2)	(10.1)	(23.5)	(56.2)
Emerging East Asia (EEA)														
Total	5,921	100.0	6,676	100.0	6,761	100.0	1.8	8.4	1.7	11.9	0.8	7.2	1.3	14.2
Government	3,896	65.8	4,270	64.0	4,306	63.7	1.3	5.4	1.1	8.1	0.2	4.9	0.8	10.5
Corporate	2,026	34.2	2,406	36.0	2,455	36.3	3.0	14.8	2.9	19.2	1.9	11.8	2.1	21.2
EEA excl. PRC														
Total	2,452	100.0	2,739	100.0	2,716	100.0	2.4	10.7	2.0	10.7	1.0	5.0	(0.8)	10.8
Government	1,315	53.6	1,444	52.7	1,431	52.7	1.6	8.5	2.2	8.9	0.1	3.3	(0.9)	8.8
Corporate	1,137	46.4	1,296	47.3	1,285	47.3	3.3	13.4	1.8	12.8	2.0	7.1	(0.8)	13.0
Japan														
Total	12,460	100.0	10,819	100.0	10,408	100.0	0.8	3.0	1.2	3.8	4.7	4.0	(3.8)	(16.5)
Government	11,369	91.2	9,927	91.8	9,567	91.9	1.1	3.5	1.4	4.6	5.0	4.5	(3.6)	(15.8)
Corporate	1,092	8.8	891	8.2	840	8.1	(1.9)	(1.9)	(0.8)	(4.4)	1.8	(1.0)	(5.7)	(23.0)
Memo Item: CNH														
Total	49	100.0	52	100.0	57	100.0	16.9	120.4	7.6	13.1	15.9	124.2	8.9	17.1
Government	12	23.9	12	23.2	14	25.2	59.1	146.7	17.2	19.6	57.7	150.9	18.6	23.8
Corporate	37	76.1	40	76.8	43	74.8	8.0	113.3	4.8	11.0	7.0	117.0	6.0	14.9

( ) = negative, LCY = local currency, q-o-q = quarter-on-quarter, y-o-y = year-on-year.

Notes:

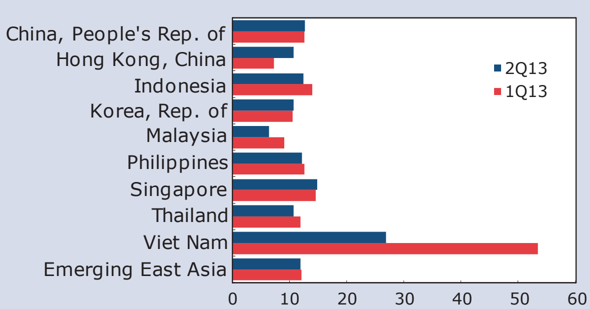
1. For the Philippines, 2Q13 government bonds outstanding data carried over from May 2013. For Singapore, corporate bonds outstanding data based on *AsianBondsOnline* estimates.
2. Corporate bonds include issues by financial institutions.
3. CNH bonds are renminbi-denominated bonds issued in Hong Kong, China. Data includes certificates of deposits and bonds issued by foreign companies.
4. Bloomberg LP end-of-period LCY—US$ rates are used.
5. For LCY base, emerging East Asia growth figures based on end-June 2013 currency exchange rates and do not include currency effects.

Sources: People's Republic of China (*ChinaBond*); Hong Kong, China (Hong Kong Monetary Authority); Indonesia (Bank Indonesia 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 Japan (Japan Securities Dealers Association).

its overall market expanded 26.8%. Meanwhile, Viet Nam's tiny corporate bond market, which is only US$0.8 billion in size, shrank 22.5% q-o-q and 55.5% y-o-y in 2Q13.

After Viet Nam, the next four most rapidly growing bond markets on a y-o-y basis in 2Q13 were Singapore, the People's Republic of China (PRC), Indonesia, and the Philippines (**Figure 1b**). Singapore's government and corporate sector bond markets experienced almost identical y-o-y rates of growth over the last year at 14.9% and 14.5%, respectively. The y-o-y growth in Singapore's government bond market was driven mainly by issuance of Monetary Authority of Singapore (MAS) bills, rather than issuance by the government itself. The PRC bond market's 12.6% y-o-y growth rate was driven primarily by its corporate sector. This was also the case in Indonesia where rapid y-o-y growth in the corporate sector nearly matched that of the PRC (27.2% vs. 23.6%), although the Indonesian LCY corporate bond sector is far smaller than that of the PRC. Meanwhile, Philippine bond market growth of 12.1% y-o-y was driven by both its government (12.5%) and corporate (9.3%) sectors.

Figure 1b: Growth of LCY Bond Markets in 1Q13 and 2Q13 (y-o-y, %)



LCY = local currency, y-o-y = year-on-year.
Notes:
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2. Growth rates are calculated from LCY base and do not include currency effects.
3. Emerging East Asia growth figures are based on end-June 2013 currency exchange rates and do not include currency effects.
4. For the Philippines, 2Q13 government bonds outstanding data carried over from May 2013. For Singapore, corporate bonds outstanding data based on *AsianBondsOnline* estimates.

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Total government bonds outstanding in emerging East Asia grew 1.1% q-o-q in 2Q13, reflecting slow or even negative growth in most government bond markets.

The two most rapidly growing government sector bond markets on a q-o-q basis in 2Q13 were those of Hong Kong, China and Thailand. Government sector bonds in Hong Kong, China grew 7.0% q-o-q due to a 6.5% rise in EFBs issued by HKMA and an 18.4% increase in HKSAR bonds. EFBs constitute the largest share of securities in Hong Kong, China's government bond sector, accounting for 81.8% of total government securities at the end of 2Q13. The longer-dated Exchange Fund Notes (EFNs) are a smaller market segment by comparison, accounting for only 8.2% of the total at the end of 2Q13. The still substantial volumes of EFBs and EFNs reflect their important role in the operation of HKMA's Exchange Fund, which maintains the Hong Kong dollars exchange rate within its target trading band of HK$7.75–HK$7.85 against the US dollar.

Thai government sector bonds outstanding rose 3.4% q-o-q in 2Q13, driven by 4.3% growth in treasury bonds and 4.9% growth in central bank bonds. Central bank bills, which account for 24.2% of government sector bonds outstanding, were broadly unchanged. The q-o-q growth rate for treasury bonds outstanding is likely to maintain its pace, or even, accelerate in coming quarters given the government's recent announcements of increased spending for infrastructure and rural development. These proposals, which will require a significant increase in government spending and greater private sector participation, seek to raise Thailand's economic growth in 2013 from 4.0% to 5.0%.

The next most rapidly growing government bond sectors were in the Republic of Korea, the Philippines, and Singapore. Government bonds in the Republic of Korea expanded 2.3% q-o-q, mainly due to a 3.4% increase in treasury bonds outstanding. Treasury bonds amounted to US$362 billion and accounted for 64.9% of total government sector bonds at the end of 2Q13.

Preliminary GDP estimates from The Bank of Korea indicate economic growth of 1.1% q-o-q in April–June following a 0.8% expansion in January–March. The slight pick-up in GDP growth reflects increased spending by the government, with the likelihood that parliament will soon approve plans to accelerate spending further in the remaining months of the year.

Philippine government bonds rose 2.0% q-o-q in 2Q13, reflecting rapid growth in both Philippine treasury bonds and bills. The government has set a target budget deficit of 2.6% of GDP in 2013, with hopes to reduce this to 2.0% in 2014, although plans for increased infrastructure investment may lead to a continuation of the current pattern of modest growth in the LCY government bond market.

Finally, Singapore's 1.9% q-o-q increase in government bonds outstanding in 2Q13 reflects a 14.0% decline in government bills outstanding that was more than offset by a 33.3% increase in the stock of MAS bills outstanding, which have grown so rapidly since they were first introduced in 2011 that at US$39 billion they are almost equal to the US$41 billion stock of government bills. MAS's issuance of bills is based on internal estimates of sterilization requirements, which can be driven by factors such as capital flows in and out of the region.

The LCY corporate bond market in emerging East Asia grew 2.9% q-o-q in 2Q13, down significantly from 4.7% growth in 1Q13.

The two most rapidly growing corporate bond markets in emerging East Asia in 2Q13 on a q-o-q basis were those of Indonesia and the PRC, which grew 4.5% and 4.2%, respectively. These two countries provide an interesting combination of emerging East Asia's largest LCY corporate bond market, the PRC (US$1.2 trillion), and one of its smallest, Indonesia (US$21 billion), competing for the title of the region's most rapidly growing. Both corporate bond markets are part of rapidly expanding economies whose banks may be constrained by the imposition of more stringent BASEL III capital adequacy requirements in coming years. Meanwhile, the corporate sectors in both economies have become active issuers in the foreign currency (FCY) bond market as well. At the end of 2Q13, the PRC's FCY corporate bonds outstanding, issued by both financial and non-financial institutions, stood at US$144.2 billion. Meanwhile, Indonesia's FCY corporate bonds outstanding reached US$28.5 billion, exceeding Malaysian (US$26.6 billion) and Thai (US$14.8 billion) FCY corporate bonds.

The growth drivers in the PRC corporate bond market in 2Q13 were local corporate bonds and medium-term notes (MTNs), which grew 6.4% and 3.3% q-o-q, respectively. Commercial bank bonds, which grew 1.9% q-o-q, are predominantly issued in the form of subordinated notes and are being used by banks to bolster their capital bases as Basel III capital adequacy requirements are being implemented in the PRC.

In Indonesia, a total of 30 bond series were issued by 16 corporate entities in 2Q13. Most of the bonds issued in 2Q13 carried maturities of between 3 years and 5 years. The new corporate bond issues in 2Q13 were all conventional bonds except for one of each of the following types of issues: subordinated bond, *sukuk* (Islamic bond), and *sukuk mudharabah* (Islamic profit-sharing bond). Corporate bonds issued in recent months carried coupons ranging from 6.75% to 9.25%. The largest corporate issuer in Indonesia in 2Q13 remained PLN, the state-owned power company, while most of the other larger corporate bond issuers were financial institutions such as Indonesia Eximbank, Astra Sedaya Finance, and Bank Tabungan Negara.

Emerging East Asia's third and fourth most rapidly growing corporate bond markets on a q-o-q basis in 2Q13 were those of Singapore (2.5%) and the Republic of Korea (2.1%). Singapore's top LCY corporate bond issuers at the end of 2Q13 remained real estate and banking firms. Capital Land was the largest issuer in Singapore in 2Q13, issuing a 7-year bond for SGD1.3 billion at a coupon of 1.85%. Singapore's bond market was once again a regional leader in 2Q13 in terms of product diversity with two perpetual bonds issuances: (i) GLL IHT, a financial and risk management services company, issuing a SGD200 million bond carrying a 4.7% coupon; and (ii) Tiger Airways issuing a SGD220 million carrying a 2.0% coupon. Singapore's market also saw some relatively high-yield issues, including a SGD300 million 10-year bond from ABJA Investment at a coupon of 4.95% and a SGD160 million 4-year bond at a coupon of 7.13%.

The largest corporate issuers in the Republic of Korea remain government-owned companies such as Korea Land & Housing, Korea Deposit Insurance, and Industrial Bank of Korea. Some of the largest corporate bond issues in 2Q13 included Posco's KRW800 billion 30-year bond offering a coupon of 4.3%, Woori Bank's KRW500 billion 30-year bond at 4.4%, Korea Land & Housing's KRW400 billion 3-year bond at 2.83%, and SK Telecom's KRW400 billion 60-year bond at 4.21%.

Malaysia's LCY corporate bonds outstanding edged slightly lower by 0.3% q-o-q in 2Q13. About 67% of total LCY corporate bonds outstanding were *sukuk*, while conventional bonds accounted for about 33%. Among Islamic financial instruments, Islamic MTNs accounted for 74.0% of *sukuk* and 49.5% of total corporate bonds outstanding. Meanwhile, total LCY corporate bond issuance in 2Q13 fell 29.1% y-o-y and 29.3% q-o-q, due to a decline in *sukuk* issuance, particularly Islamic commercial paper and Islamic MTNs. Of the total issuance in 2Q13, conventional bonds accounted for 58.3%, while *sukuk* accounted for 41.7% of the total. Bond issuance from corporates was heavily concentrated in a handful of entities in 2Q13, as the top 30 issuers accounted for 93.0% of total issuance.

CNH Market Trends[5]

Market appetite for CNH bonds improved in 1H13 after it had fallen in 2H12 amid lowered expectations for renminbi appreciation. Total CNH issuance in 1H13 amounted to CNH114 billion, up from CNH77 billion in 2H12 but still lower than 1H12's CNH142 billion. The largest component of CNH issuance in 1H13 remained certificates of deposit, with only CNH43 billion issued as bonds. Improving demand in 1H13 was also evident in the level of renminbi deposits in Hong Kong, China, which rose to CNH698 billion in June from CNH602 billion in December 2012.

As a result of the increase in issuance in 2013, CNH bonds outstanding rose to CNH288 billion at end-June from CNH216 billion at end-December 2012. Issuance was boosted in part by a CNH13 billion multi-tranche issue by the PRC government on 26 June. This issuance was particularly remarkable because of the inclusion of a 30-year tranche, the longest CNH tenor to date.

Market sentiment changed in the latter half of 2Q13, due to concern over the possible tapering of the US Federal Reserve's quantitative easing program. Liquidity was also hampered by the Shanghai Interbank Offered Rate (SHIBOR)[6] shock event in June. Both events contributed to rising yields that prompted a reduction in bond issuance. In addition, the PRC's expansion of the QFII program provided an alternative to renminbi-denominated investments other than CNH bonds. Meanwhile, turnover for CNH bonds fell to CNH36 billion in July from CNH48 billion in June and CNH56 billion in May. CNH deposits also fell slightly to CNH698 billion in June from CNH698.5 billion in May.

Ratio of Bonds Outstanding

The ratio of LCY bonds outstanding to GDP in emerging East Asia fell slightly to 54.3% in 2Q13 from 54.7% in 1Q13.

The ratio of LCY bonds outstanding to GDP in emerging East Asia fell slightly to 54.3% in 2Q13 from 54.7% in 1Q13. Nevertheless, at 54.3%, this ratio was still higher than it was at the end of 2Q12 (52.7%) **(Table 2)**.

[5] CNH bonds are renminbi-denominated bonds issued in Hong Kong, China.

[6] The SHIBOR shock event was triggered when banks' liquidity requirements rose in response to withdrawals in preparation for the Dragon Boat holiday as well as the maturation of wealth products. While market expectations were for the PBOC to intervene by provide additional liquidity, it instead issued central bank bills on 18 June.

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

	2Q12	1Q13	2Q13
China, People's Rep. of			
Total	44.6	46.2	46.0
Government	33.1	33.1	32.7
Corporate	11.4	13.0	13.3
Hong Kong, China			
Total	68.1	69.2	71.5
Government	36.5	37.8	40.0
Corporate	31.6	31.4	31.5
Indonesia			
Total	13.3	13.7	13.8
Government	11.2	11.4	11.4
Corporate	2.1	2.3	2.4
Korea, Rep. of			
Total	118.4	126.2	125.5
Government	47.7	48.7	48.5
Corporate	70.7	77.5	77.0
Malaysia			
Total	102.5	105.5	105.3
Government	61.3	62.4	62.2
Corporate	41.2	43.1	43.0
Philippines			
Total	36.1	37.1	37.1
Government	31.2	32.2	32.2
Corporate	4.9	4.9	4.9
Singapore			
Total	77.6	85.6	85.5
Government	47.9	53.1	52.9
Corporate	29.7	32.6	32.7
Thailand			
Total	74.7	74.5	75.8
Government	59.9	58.6	59.8
Corporate	14.7	15.9	16.0
Viet Nam			
Total	16.8	20.5	14.8
Government	15.4	19.8	14.4
Corporate	1.4	0.7	0.4
Emerging East Asia			
Total	52.7	54.7	54.3
Government	34.7	35.0	34.6
Corporate	18.0	19.7	19.7
Japan			
Total	208.6	214.8	217.1
Government	190.3	197.1	199.5
Corporate	18.3	17.7	17.5

GDP = gross domestic product, LCY = local currency.
Notes:
1. Data for GDP is from CEIC. 2Q13 GDP figures carried over from 1Q13 for the Republic of Korea and Singapore.
2. For the Philippines, 2Q13 government bonds outstanding data carried over from May 2013. For Singapore, corporate bonds outstanding data based on *AsianBondsOnline* estimates.

Sources: People's Republic of China (*ChinaBond*); Hong Kong, China (Hong Kong Monetary Authority); Indonesia (Bank Indonesia 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 Japan (Japan Securities Dealers Association).

The decline in the ratio of bonds to GDP between 1Q13 and 2Q13 resulted from a drop in the ratio of government bonds to GDP from 35.0% to 34.6%. The ratio of corporate sector bonds to GDP in 2Q13 remained at the same level (19.7%) where it stood at the end of 1Q13 and rose markedly from 18.0% at the end of 2Q12.

The ratio of government bonds to GDP fell in all of the region's markets in 2Q13 except for Hong Kong, China and Thailand. The ratio of government bonds to GDP rose in Hong Kong, China by over 2 percentage points between 1Q13 and 2Q13 from 37.8 to 40.0, while rising from 58.6 to 59.8 in Thailand. In Indonesia and the Philippines, the ratio of government bonds to GDP remained unchanged at 11.4 and 32.2, respectively in 2Q13.

The ratio of corporate bonds to GDP rose in 2Q13 in five of the region's markets (the PRC; Hong Kong, China; Indonesia; Singapore; and Thailand) and fell in the remaining four (the Republic of Korea, Malaysia, the Philippines, and Viet Nam). However, the collective size of the markets that saw an increase in the ratio of corporate bonds to GDP, especially the PRC market, was enough to offset declining ratios elsewhere in the region.

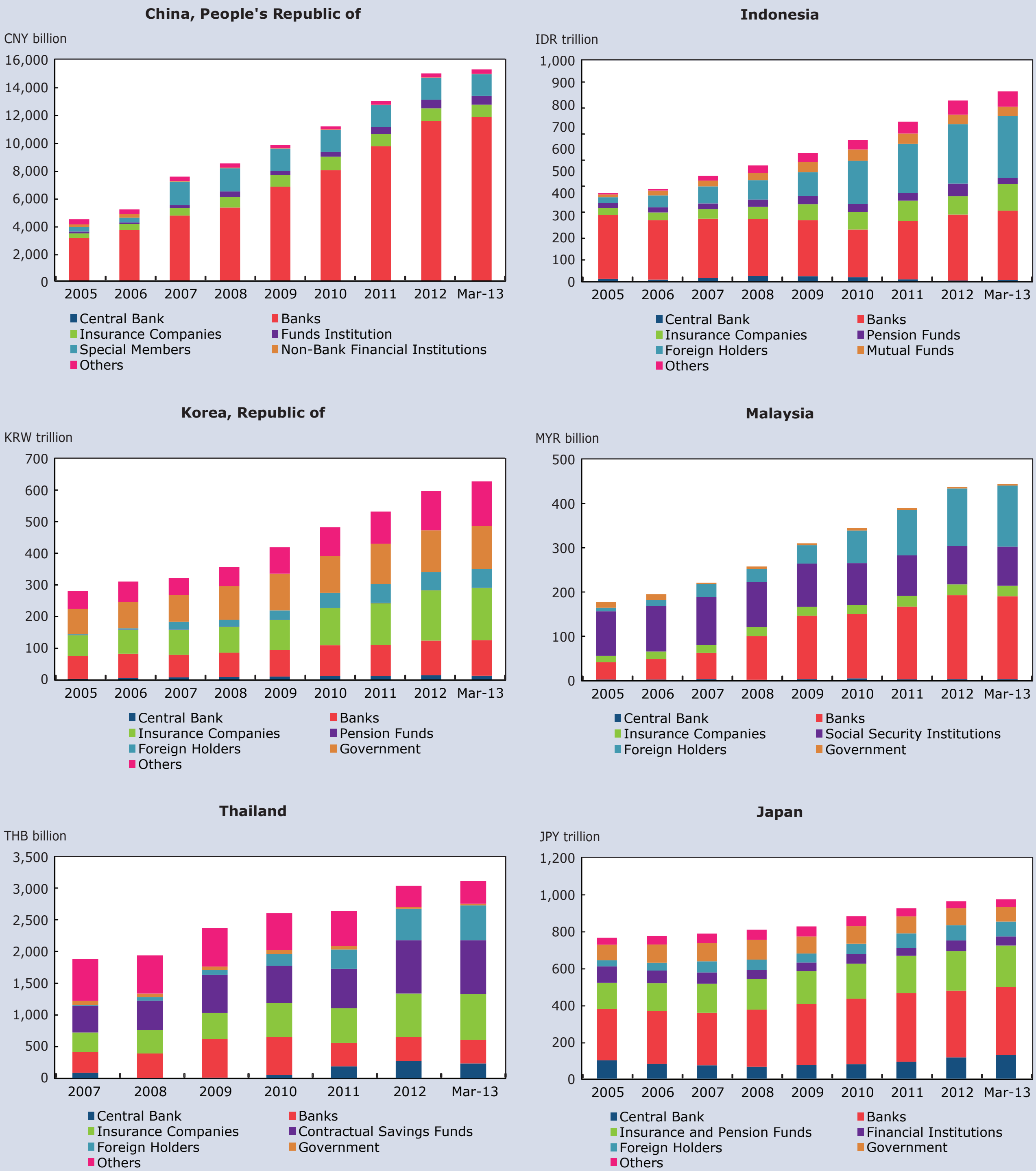
Investor Profiles

One of the most interesting developments in emerging East Asian LCY bond markets in recent years has been the role of institutional investors such as insurance companies and pension funds, though their role differs considerably from market to market.

Figure 2 illustrates changes in investor holdings (expressed in the currencies of individual markets) in recent years through end-March. Some of the leading themes in each market are discussed below.

In the PRC, commercial banks held 77% of government bonds at end-March, while insurance companies and other institutional investors remained a minimal presence in this market.

Figure 2: Investor Holdings



Note: For the People's Republic of China, data include treasury bonds and policy bank bonds. For Indonesia, data include treasury bills and treasury bonds. For the Republic of Korea, data include government and public bonds. For Malaysia, data include Malaysian Government Securities (MGSs) and Government Investment Issues (GIIs). For Thailand, data include treasury bills and government bonds. For Japan, data include treasury discount bills, central government securities, and Fiscal Investment and Loan Program (FILP) bonds.
Source: *AsianBondsOnline*.

Insurance company holdings of government bonds amounted to only 5.8% of the total at end-March, while the holdings of funds institutions were slightly less at 4.1%. These small shares are the result of the PRC's insurance and funds management industries still being in the early stages of development. For example, the insurance industry's assets totaled around CNY7.7 trillion at end-March, compared with CNY141.3 trillion of assets in the banking system. Furthermore, yields on government bonds are relatively low; although government sector bonds provide the highly desirable feature of safety, institutional investors must also seek yield. One such place where they look for yield in the PRC is the corporate bond market. At end-March, insurance companies held 20.9% of total corporate bonds and funds institutions held 24.3%, thereby resulting in institutional investors collectively accounting for 45.2% of the PRC's corporate bonds.

Banks in the PRC are the largest holders of government bonds and in recent years they have steadily increased their share of the total to reach 77.6% at end-March. Furthermore, the share of "special members" has declined steadily since 2006 to 10.3% at end-March. Special members, an important class of government bond holders in the PRC, include the People's Bank of China (PBOC), Ministry of Finance, policy banks, China Government Securities Depository Trust and Clearing Company, and China Securities Depository and Clearing Corporation.

While banks and foreign investors were the two largest holders of Indonesian government bonds at end-March, insurance companies nearly doubled their share of the total from 8.1% in 2005 to 14.0% at end-March.

Since 2005, insurance companies in Indonesia have nearly quadrupled their holdings of government bonds in nominal rupiah terms, while increasing their share of the total to 14.0% from 8.1%. Mutual funds have reduced their holdings in nominal rupiah terms since 2010, while their share of the total fell to 4.9% by end-March. The volume of government bonds held by Indonesian pension funds rose steadily in recent years through the end of 2012, but appears to have fallen by almost one-half since then.

The two largest classes of investors in Indonesian government bonds are banks and foreign investors. Banks have modestly increased their holdings from IDR290 trillion in 2005 to around IDR315 trillion at end-March, accounting for 36.7% of the total, while over the same period foreign investors have increased their holdings by nearly a factor of 10 to reach a share of 32.6%.

The insurance industry's share of government bonds in the Republic of Korea has grown faster than that of any other investor class, resulting in the insurance industry's emergence as the largest holder of Korean government bonds with 26.1% of the total at end-March.

The insurance industry in the Republic of Korea has rapidly increased its holdings of government bonds since 2005, resulting in its share of the total rising from 23.2% in 2005 to 26.1% at end-March. (Insurance companies in the Republic of Korea also invest in corporate bonds and their holdings accounted for 33.0% of total corporate bonds at end-March.) Meanwhile, funds for the government's social security program are included in the category labeled as "Government" in Figure 2, which accounted for 21.5% of total government bondholdings.

Korean banks have increased their nominal won holdings of government bonds every year since 2005, but their share of the total only amounted to 17.9% at end-March. With the exception of 2008, foreign investors have continued to increase their holdings every year since 2005, but their share of the total market has fallen slightly from a high of 11.2% in 2011 to 9.5% at end-March.

Social security institutions' holdings of Malaysian government bonds have fallen dramatically since 2005 both in nominal terms and as a percentage of the total, with the latter declining to 19.9% at end-March.

The most dramatic feature of Malaysian government bond holdings in recent years has been the falloff in holdings of social security institutions. Their holdings have fallen in nominal terms from MYR100 billion in 2005 to MYR88 billion at end-March, while declining as a share of the total from 57.0% to 19.9% over the same period. Insurance companies have increased their holdings by roughly 60% since 2005, but their share of the total nevertheless has fallen from 8.4% to 5.3%.

On the other hand, insurance companies and the Employees Provident Fund are prominent investors in corporate bonds. Taken together, these two investor groups held around 40% of corporate bonds at the end of 2012.

The two major gainers in terms of Malaysian government bond holdings have been banks and foreign investors. Banks have increased their holdings by a factor of approximately four and one-half since 2005, and increased their share of the total from 22.0% in 2005 to 42.3% at end-March. Meanwhile, foreign investors increased their share of the total from only 4.5% to 31.2% over the same period.

Thailand stands out as the LCY government bond market where insurance companies and contractual savings funds are the two most rapidly growing investor classes in their market.

Insurance companies and contractual savings institutions in Thailand have doubled their holdings of government bonds in nominal terms, increasing their shares of the total from 16.3% to 23.1% and from 22.4% to 27.4%, respectively, between end-2007 and end-March.

Institutional investors, however, are relatively small investors in the Thai corporate bond market. Mutual funds, insurance companies, and contractual savings institutions accounted for only about 9%, 8%, and 6%, respectively, of Thai corporate bonds at the end of 2012. Individuals, on the other hand, held 51% of Thai corporate bonds at the end of 2012.

Foreign investors have become eager participants in the Thai government bond market, raising their share of total holdings from negligible levels in 2007 to 17.6% at end-March. Holdings of Thai government bonds by banks doubled between 2007 and 2009, before nearly returning to its 2007 level in 2012, which resulted in a reduction of their share of total holdings from 25.7% in 2009 to 11.9% in 2012.

The growth sectors for Japanese government bonds in terms of holdings have been the insurance industry and, to a lesser extent, foreign investors.

Holdings of Japanese government bonds by insurance companies have risen by almost 60% since 2005, resulting in their share increasing from 18.5% in 2005 to 23.1% at end-March. The share held by foreigners rose modestly from 4.4% in 2008 to 8.4% at end-March. Holdings by the Bank of Japan (BOJ) fell from 13.0% of the total in 2005 to a low of 8.0% in 2008, before rising dramatically over the last 2 years and resulting in BOJ's share of total holdings at 13.2% at end-March. Japanese banks are the largest holders of Japanese government bonds, with nominal holdings that rose steadily between 2005 and 2011 before leveling off in a range of JPY360 trillion–JPY370 trillion in recent years, resulting in a 37.9% share of total holdings at end-March.

Issuance

LCY bond issuance in 2Q13 totaled US$827 billion, a 4.0% q-o-q increase over 1Q13 that was driven by a 26.8% increase in issuance by central governments and agencies.

LCY bond issuance in 2Q13 totaled US$827 billion, a 4.0% q-o-q increase over 1Q13. This was driven by a 26.8% q-o-q increase in issuance by central governments and agencies, while issuance by central banks rose a more modest 5.1%. Corporate sector issuance experienced a sharp 20.1% q-o-q decline, but still amounted to US$168 billion **(Table 3)**.

Table 3: LCY-Denominated Bond Issuance (gross)

	2Q12		1Q13		2Q13		Growth Rate (LCY-base %)		Growth Rate (US$-base %)	
							2Q13		2Q13	
	Amount (US$ billion)	% share	Amount (US$ billion)	% share	Amount (US$ billion)	% share	q-o-q	y-o-y	q-o-q	y-o-y
China, People's Rep. of (PRC)										
Total	248	100.0	205	100.0	240	100.0	15.8	(6.2)	17.2	(2.9)
Government	173	70.0	117	56.8	194	80.9	65.0	8.4	66.9	12.2
Central Bank	0	0.0	0	0.0	19	7.7	–	–	–	–
Treasury and Other Govt.	173	70.0	117	56.8	176	73.1	49.2	(1.9)	51.0	1.5
Corporate	74	30.0	89	43.2	46	19.1	(48.8)	(40.3)	(48.2)	(38.2)
Hong Kong, China										
Total	228	100.0	231	100.0	220	100.0	(4.8)	(3.5)	(4.7)	(3.5)
Government	219	96.0	223	96.6	212	96.1	(5.3)	(3.4)	(5.2)	(3.4)
Central Bank	217	95.2	222	96.2	210	95.3	(5.7)	(3.3)	(5.6)	(3.3)
Treasury and Other Govt.	2	0.8	1	0.4	2	0.8	85.7	(13.3)	85.9	(13.3)
Corporate	9	4.0	8	3.4	9	3.9	10.6	(5.3)	10.7	(5.3)
Indonesia										
Total	8	100.0	12	100.0	9	100.0	(23.7)	7.6	(25.8)	1.4
Government	6	68.8	10	86.8	7	77.2	(32.1)	20.8	(34.0)	13.9
Central Bank	2	18.2	3	25.8	2	22.2	(34.2)	31.1	(36.0)	23.7
Treasury and Other Govt.	4	50.5	7	61.0	5	55.0	(31.3)	17.1	(33.1)	10.4
Corporate	3	31.2	2	13.2	2	22.8	31.5	(21.6)	28.0	(26.1)
Korea, Rep. of										
Total	144	100.0	148	100.0	146	100.0	2.0	1.4	(0.7)	1.7
Government	58	40.5	60	40.4	67	45.6	15.1	14.2	12.0	14.6
Central Bank	37	25.8	39	26.3	39	26.7	3.8	5.3	1.0	5.6
Treasury and Other Govt.	21	14.7	21	14.1	28	18.8	36.1	29.9	32.4	30.3
Corporate	86	59.5	88	59.6	80	54.4	(6.9)	(7.4)	(9.4)	(7.1)
Malaysia										
Total	41	100.0	43	100.0	39	100.0	(8.8)	(6.7)	(10.8)	(6.2)
Government	32	77.7	34	78.1	32	83.0	(3.1)	(0.2)	(5.1)	0.3
Central Bank	23	55.8	25	57.9	24	61.7	(2.9)	3.1	(5.0)	3.6
Treasury and Other Govt.	9	21.9	9	20.2	8	21.4	(3.6)	(8.8)	(5.7)	(8.3)
Corporate	9	22.3	9	21.9	7	17.0	(29.3)	(29.1)	(30.8)	(28.7)
Philippines										
Total	5	100.0	5	100.0	3	100.0	(37.4)	(34.8)	(40.7)	(36.3)
Government	3	64.2	5	90.9	3	89.6	(38.3)	(9.1)	(41.6)	(11.2)
Central Bank	0	0.0	0	0.0	0	0.0	–	–	–	–
Treasury and Other Govt.	3	64.2	5	90.9	3	89.6	(38.3)	(9.1)	(41.6)	(11.2)
Corporate	2	35.8	0.5	9.1	0.3	10.4	(28.2)	(81.1)	(32.1)	(81.5)
Singapore										
Total	84	100.0	75	100.0	88	100.0	19.8	5.7	17.2	5.5
Government	79	94.7	72	95.6	85	96.6	21.1	7.9	18.5	7.7
Central Bank	32	38.2	38	50.4	56	64.1	52.3	77.2	49.0	76.8
Treasury and Other Govt.	47	56.4	34	45.2	29	32.5	(13.8)	(39.1)	(15.7)	(39.2)
Corporate	4	5.3	3	4.4	3	3.4	(8.3)	(32.9)	(10.3)	(33.1)
Thailand										
Total	83	100.0	76	100.0	79	100.0	10.4	(6.9)	4.0	(5.3)
Government	74	89.3	63	82.9	57	72.7	(3.2)	(24.2)	(8.8)	(23.0)
Central Bank	66	79.4	54	71.8	51	64.5	(0.6)	(24.3)	(6.4)	(23.0)
Treasury and Other Govt.	8	9.9	8	11.1	6	8.2	(19.7)	(23.7)	(24.3)	(22.4)
Corporate	9	10.7	13	17.1	22	27.3	76.3	137.5	66.1	141.4

continued on next page

Table 3 *continued*

	2Q12		1Q13		2Q13		Growth Rate (LCY-base %)		Growth Rate (US$-base %)	
							2Q13		2Q13	
	Amount (US$ billion)	% share	Amount (US$ billion)	% share	Amount (US$ billion)	% share	q-o-q	y-o-y	q-o-q	y-o-y
Viet Nam										
Total	4	100.0	9	100.0	3	100.0	(71.8)	(40.7)	(72.2)	(41.6)
Government	4	100.0	9	100.0	3	100.0	(71.8)	(40.7)	(72.2)	(41.6)
Central Bank	2	54.3	5	58.9	0	0.0	(100.0)	(100.0)	(100.0)	(100.0)
Treasury and Other Govt.	2	45.7	4	41.1	3	100.0	(31.5)	29.6	(32.3)	27.7
Corporate	0	0.0	0	0.0	0	0.0	–	–	–	–
Emerging East Asia (EEA)										
Total	846	100.0	804	100.0	827	100.0	4.0	(3.3)	2.9	(2.2)
Government	650	76.8	592	73.6	659	79.7	12.6	0.4	11.4	1.5
Central Bank	379	44.9	387	48.1	401	48.5	5.1	5.4	3.6	5.7
Treasury and Other Govt.	270	31.9	205	25.5	259	31.3	26.8	(6.3)	26.1	(4.3)
Corporate	196	23.2	212	26.4	168	20.3	(20.1)	(15.8)	(21.0)	(14.5)
EEA excl. PRC										
Total	598	100.0	599	100.0	587	100.0	(0.1)	(2.1)	(2.1)	(1.9)
Government	476	79.6	475	79.4	465	79.3	(0.5)	(2.5)	(2.2)	(2.4)
Central Bank	379	63.4	387	64.6	382	65.2	0.2	0.5	(1.2)	0.8
Treasury and Other Govt.	97	16.2	88	14.8	83	14.1	(3.9)	(14.5)	(6.6)	(14.7)
Corporate	122	20.4	124	20.6	122	20.7	1.4	(0.3)	(1.5)	(0.1)
Japan										
Total	635	100.0	540	100.0	546	100.0	6.4	6.9	1.1	(14.0)
Government	595	93.8	511	94.6	503	92.1	3.5	5.0	(1.7)	(15.5)
Central Bank	0	0.0	0	0.0	0	0.0	–	–	–	–
Treasury and Other Govt.	595	93.8	511	94.6	503	92.1	3.5	5.0	(1.7)	(15.5)
Corporate	40	6.2	29	5.4	43	7.9	57.8	36.1	(50.0)	(9.6)

( ) = negative, – = not applicable, LCY = local currency, q-o-q = quarter-on-quarter, y-o-y = year-on-year.

Notes:
1. Corporate bonds include issues by financial institutions.
2. Bloomberg LP end-of-period LCY–US$ rates are used.
3. For LCY-base, emerging East Asia growth figures are based on end-June 2013 currency exchange rates and do not include currency effects.

Sources: People's Republic of China (*ChinaBond*); Hong Kong, China (Hong Kong Monetary Authority); Indonesia (Bank Indonesia, Indonesia Debt Management Office, 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); Viet Nam (Bloomberg LP); and Japan (Japan Securities Dealers Association).

In nominal terms, the largest component of bond market issuance in 2Q13 was that of central banks and monetary authorities. Although such issuance grew by a relatively modest 5.1% q-o-q, it amounted to US$401 billion, or 48.5% of total issuance for the region. The largest amount of issuance from central banks and monetary authorities came in the form of HKMA's EFBs and EFNs at US$210 billion, and MAS bills at US$56 billion. As mentioned earlier, these two institutions remained active issuers in 2Q13 for monetary policy purposes. One of the more striking developments in 2Q13 among central banks was the issuance of US$19 billion in bills by the PBOC. The PBOC had not issued anything since early 2011 before issuing bills in June to reduce liquidity in the market at a time when expectations had been for the PBOC to add liquidity to the market.

By individual market, the largest amount of central government issuance in 2Q13 came from the PRC at US$176 billion, representing a 49.2% q-o-q increase. The next largest amount of central government issuance came from Singapore at US$29 billion, representing a 13.8% decline from 1Q13. The third largest issuance amount came from the Republic of Korea at US$28 billion, representing a 36.1% increase over 1Q13.

These three amounts comprised 90% of total issuance from the region's treasuries and other government agencies in 2Q13. The next largest central government issuances in 2Q13 were much smaller amounts: US$8 billion from Malaysia and US$6 billion from Thailand, representing modest declines from 1Q13 levels in nominal terms.

Corporate bond issuance in emerging East Asia fell 20.1% q-o-q to US$168 billion in 2Q13, primarily driven by a surprising 48.8% decline in corporate issuance in the PRC to US$46 billion. The sudden decline in the PRC's corporate issuance from the very high volumes of past years was due, in large part, to negligible issuance in 2Q13 from the large state-owned companies that were key instruments of the government's efforts to stimulate growth and investment after the 2008/09 global financial crisis. Issuance of commercial bank bonds and local corporate bonds also declined somewhat, reflecting the domestic financial volatility surrounding the SHIBOR shock event in June. In a reversal of sorts, the government's current emphasis is on rationalization of the economy and the creation of a firmer basis for sustained growth. Thus, while PRC corporate bond issuance is expected to remain substantial, it is expected to be lower in the post-crisis period and is more in line with other major economies in the region. Meanwhile, corporate issuance in the Republic of Korea also fell in 2Q13, but by a smaller percentage of only 6.9% q-o-q, resulting in corporate issuance of US$80 billion, which exceeded issuance levels in the PRC.

The two highest q-o-q corporate issuance growth rates in 2Q13 were in Thailand (76.3%) and Indonesia (31.5%). Thailand's issuance amounted to US$22 billion and Indonesia's totaled US$2 billion. In terms of corporate bonds outstanding, Indonesia's growth rate of 4.5% q-o-q in 2Q13 exceeded that of Thailand at 1.8%. The main reason for this seeming inconsistency is the fact that about 79% of Thailand's corporate bonds have tenors of 1 year or less.

These trends are summarized in **Figures 3a, 3b, 3c**, which detail issuance in recent years in the

Figure 3a: Government (including SOE) **and Central Bank Bond Issuance**

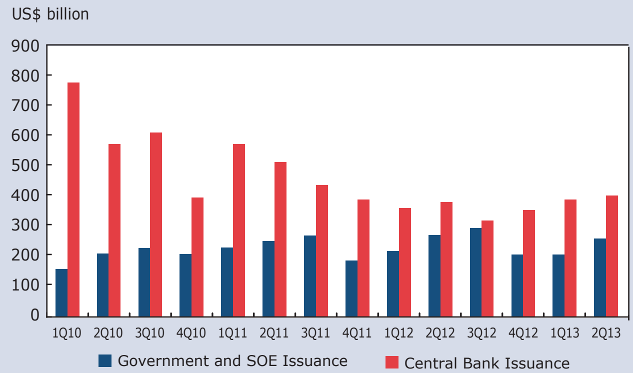


Figure 3b: Government (including SOE) **and Corporate Bond Issuance**

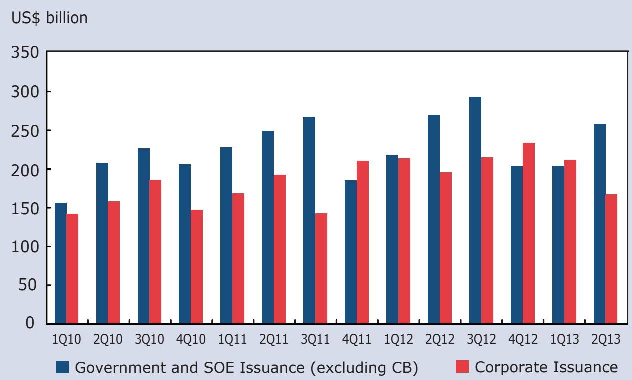
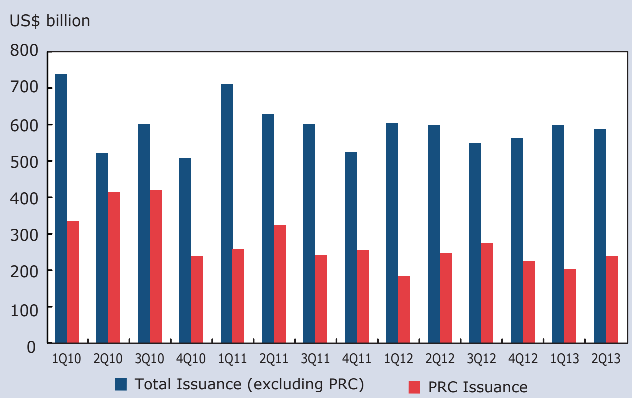


Figure 3c: Total LCY Bond Issuance



CB = central bank, LCY = local currency, PRC = People's Republic of China, SOE = state-owned enterprise.

Notes:

1. Includes data for the People's Republic of China; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; Thailand; and Viet Nam.
2. Bonds issued by state-owned entities are categorized as government bonds for the Philippines, Thailand, and Viet Nam.
3. For the PRC, government issuance includes policy bank bonds, local government bonds, and savings bonds.
4. For the Republic of Korea, government issuance include bonds issued by Korea Development Bank, Korea National Housing Corp., and Seoul Metro (formerly Seoul Metropolitan Subway Corp).

Source: *AsianBondsOnline*.

Box 1: Impact of Financial Volatility on Bond Holdings

The region's government and corporate bond markets have grown rapidly in recent years, occupying an important place in emerging East Asian economies. However, in an environment of increasing interest rate volatility, bonds can also be an important source of risk. To better understand the potential for such problems in emerging East Asia, this section assesses data on corporate bonds outstanding and total bond holdings of the corporate sector in five markets: the PRC, Indonesia, the Republic of Korea, Malaysia, and Thailand (**Figure B1**).

At the end of 2Q13, corporate bonds outstanding in the PRC reached CNY15.6 trillion, compared with total corporate holdings of both government and corporate bonds of CNY19.6 trillion. Thus, the liabilities of the corporate sector (total corporate bonds outstanding) in the PRC versus the assets of the corporate sector (total holdings of both government and corporate bonds) resulted in a ratio of 0.79. In the Republic of Korea, there were KRW992 trillion of corporate bonds outstanding versus KRW1,435.2 trillion of bonds held by corporates at the end of 2Q13, resulting in a ratio of 0.69. Meanwhile, Malaysia had a ratio of 0.62 of corporate bonds outstanding to the corporate sector's total bond holdings. Thus, the liabilities and assets of the corporate sectors of the PRC, the Republic of Korea, and Malaysia are relatively evenly matched. In Thailand and Indonesia, however, the ratios of corporate bonds outstanding to total bond holdings of corporate entities at the end of 4Q12 (the most recently available data) were much smaller: 0.36 in Thailand and 0.24 in Indonesia.

Another feature of the five markets under review is that the mixture of government and corporate bonds held by banks and other corporate entities can differ a great deal. In Malaysia, corporate holdings of corporate bonds amounted to MYR339 billion at the end of 2Q13, compared with government bond holdings of MYR314 billion. This resulted in a 1.29 ratio of corporate bonds outstanding to corporate holdings of government bonds, while the ratio of corporate bonds outstanding to corporate holdings of both government and corporate bonds stood at a much lower 0.62. The Republic of Korea has a somewhat similar profile. Its ratio of corporate bonds outstanding to holdings of government bonds at the end of 1Q13 was 1.25, while its ratio of corporate bonds outstanding to total holdings of government and corporate bonds was 0.69. Meanwhile, the ratios of corporate bonds outstanding to the total bond holdings of the corporate sector in Indonesia and Thailand were much smaller.

The major concern, however, is not the proportions of corporate and government bonds in a given market, but rather the gap between total holdings of both government and corporate bonds and total corporate bonds outstanding. The larger this gap is, the greater the impact of a reduction to the mark-to-market value of total bond holdings during a financial crisis. This could make defaults more likely, with the resulting restructuring exercise imposing losses on bond holders. Thus, the ratio of corporate bonds outstanding to total holdings of both government and corporate bonds is a useful measure of this gap.

The movements of these ratios of corporate bonds outstanding to total bond holdings over the past few years are presented for each market in **Figure B2**. These ratios can be viewed as indicators of potential losses: the larger the ratio, the smaller the probability of losses; the smaller the ratio, the greater the probability of losses. Hence, a rising ratio—even from a low level—is a positive trend and a declining ratio is a negative trend. These ratios have been rising sharply for the PRC and Indonesia in recent quarters. They are also increasing, albeit at a much slower pace, for the Republic of Korea, Malaysia, and Thailand. The rising ratios for the PRC and Indonesia reflect the fact that the PRC and Indonesia have been the most rapidly growing corporate bond markets in emerging East Asia in recent quarters. But in spite of recent gains in the ratios for Indonesia and Thailand, their ratios are nevertheless still much lower than those for the PRC, the Republic of Korea, and Malaysia.

When formulating monetary policy, in addition to assessing the impact on funding costs, policymakers must also take into account the impact of interest rate changes on corporate balance sheets. In an economy where corporate bond holdings are high, raising interest rates will result in large mark-to-market losses for the corporate sector, reducing the sector's market value and potentially pushing some firms toward default. The impact of this is partly offset by a decline in the market value of the corporate sector's outstanding bonds. Thus, the effect of higher interest rates on corporate balance sheets will be more keenly felt in economies where the corporate sector's holdings of bonds are much larger than the amount of corporate bonds outstanding.

Figure B1: LCY Corporate Bonds Outstanding and Corporate Holdings of LCY Bonds

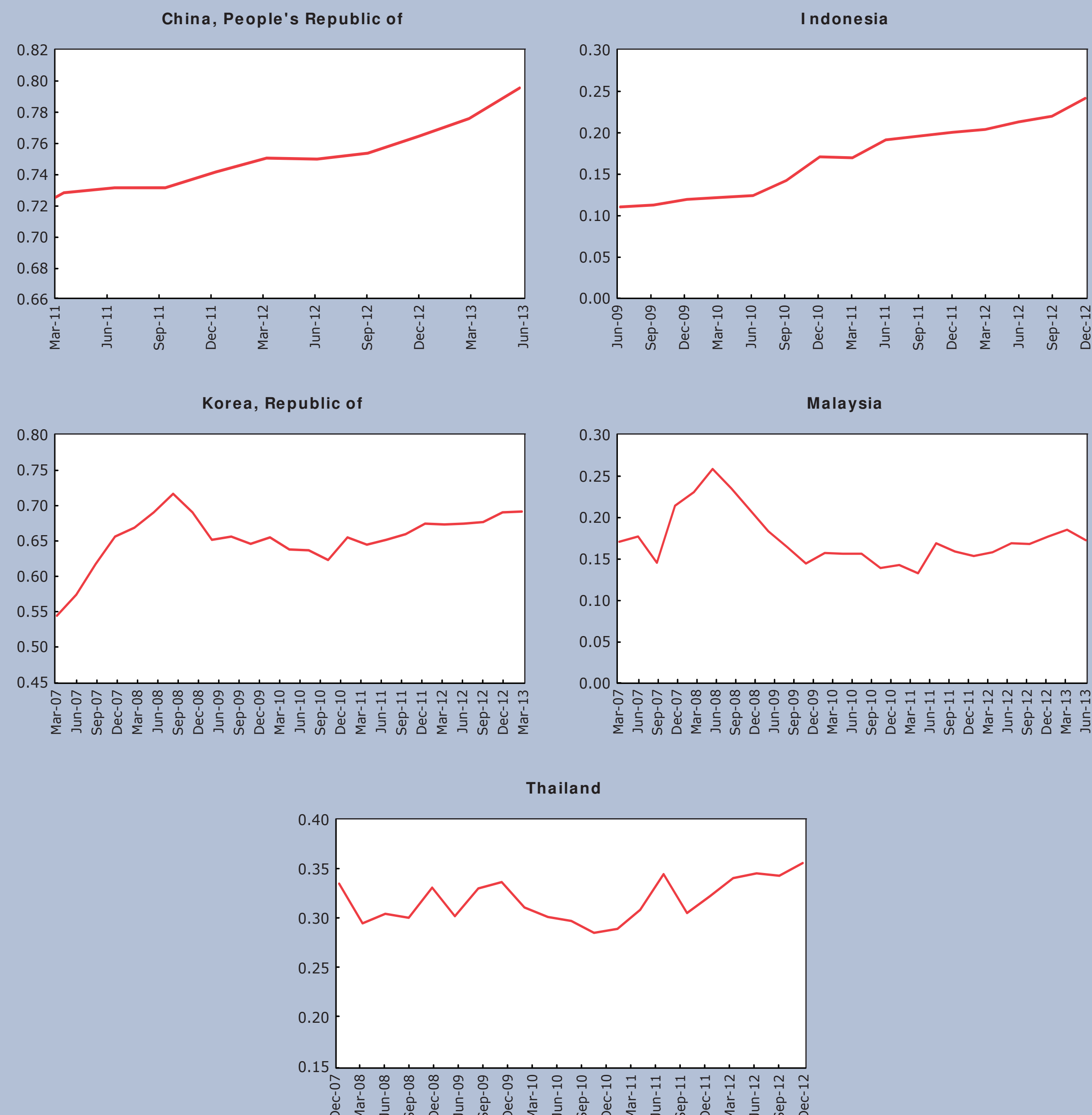
LCY = local currency.

Notes:

1. "Corporate" includes banks, non-bank financial institutions, and other corporate entities. It excludes government institutions, foreigners, and individuals.
2. "Corporate Holdings of Bonds" include holdings of both government and corporate bonds.

Source: *AsianBondsOnline*.

Figure B2: Ratios of LCY Corporate Bonds Outstanding to Corporate Holdings of LCY Bonds



LCY = local currency.
Notes:
1. "Corporate" includes banks, non-bank financial institutions, and other corporate entities. It excludes government institutions, foreigners, and individuals.
2. "Corporate Holdings of Bonds" include holdings of both government and corporate bonds.
Source: *AsianBondsOnline*.

region's government, corporate, and overall bond markets, as well as total LCY bond issuance in the PRC.

Bills-to-Bonds Ratios

The ratio of bills to bonds fell in six out of the nine markets of emerging East Asia in 2Q13.

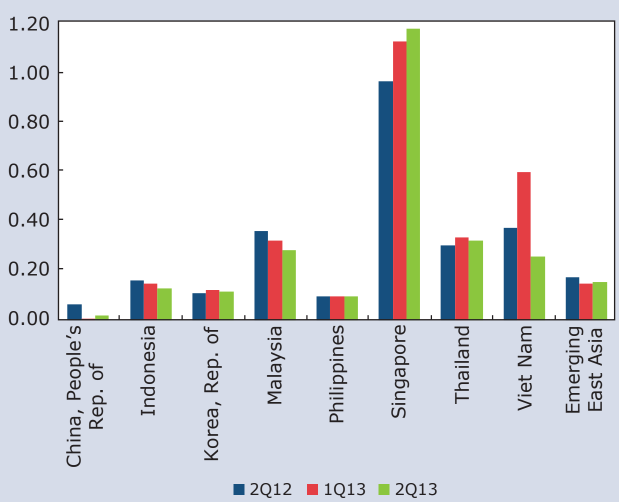
The ratio of bills to bonds issued by governments, central banks, and monetary authorities rose slightly in the PRC, increased by a more significant amount in Singapore, remained unchanged in the Philippines, and fell in all other markets in 2Q13 **(Figure 4a)**. The rise in this ratio for the PRC is explained by the PBOC issuing bills in 2Q13 for the first time since late 2011 **(Figure 4b)**.

HKMA has continued to increase its stock of EFBs, resulting in a rise in the ratio of central bank bills to bonds in Hong Kong, China, but not the ratio of total bills to bonds since the rise in HKSAR bonds issued by the government has increased the denominator for the total bills-to-bonds ratio. The rise in the Singapore bills-to-bonds ratio is explained by the steady rise of bills issued by MAS.

Sertifikat Bank Indonesia (SBI) fell slightly in 2Q13, resulting in a slight decline in the total bills-to-bonds ratio for Indonesia. The decline in the total bills-to-bonds ratio for the Republic of Korea, as well as the ratio of central bank bills to bonds, is explained by a US$5 billion decline in the stock of central bank bills outstanding **(Table 4)**. The decline in the bills-to-bonds ratio for Malaysia is explained by a US$5 billion decline in BNM bills outstanding in 2Q13. Meanwhile, the stock of central bank bills also fell in Thailand in 2Q13, while Viet Nam experienced a sharp decline in its relatively small stock of both treasury and central bank bills outstanding.

The largest category of government sector securities in emerging East Asia remained treasury bonds, which amounted to US$2.1 trillion at the end of 2Q13, representing a modest 4.4% increase from 1Q13. The PRC's stock of treasury bonds rose 5.2% to US$1.2 trillion. The next largest holdings of treasury bonds at the end of the quarter were in the Republic of Korea (US$362 billion) and Malaysia

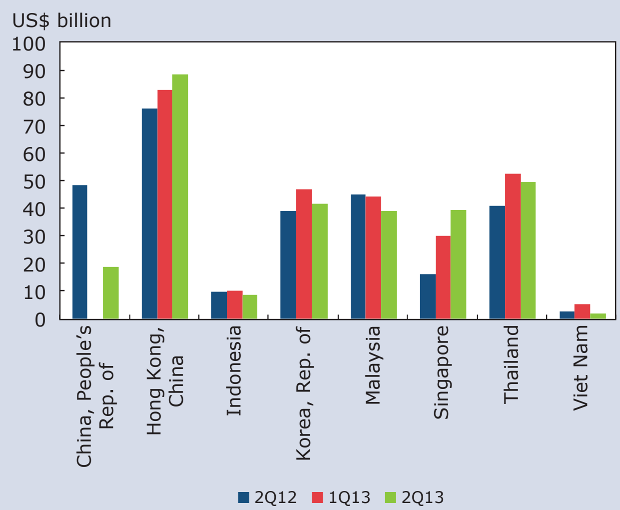
Figure 4a: Total Bills-to-Bonds Ratios



Notes:
1. Total bills comprise central bank bills plus treasury bills. Bonds comprise long-term bonds (more than 1 year in maturity) issued by central governments and central banks.
2. Hong Kong, China is not included in the chart due to its much higher bills-to-bonds ratio.
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.

Source: *AsianBondsOnline*.

Figure 4b: Central Bank Bills Outstanding



Notes:
1. The People's Republic of China ceased issuance of central bank bills in 2012.
2. The Philippines has no central bank bills outstanding.

Source: *AsianBondsOnline*.

Table 4: Government Bills-to-Bonds Ratios in LCY Bond Markets

	2Q12		1Q13		2Q13		Government Bills-to-Bonds Ratio			Growth Rate (LCY-base %) 2Q13		Growth Rate (US$-base %) 2Q13	
	Amount (US$ billion)	% share	Amount (US$ billion)	% share	Amount (US$ billion)	% share	2Q12	1Q13	2Q13	q-o-q	y-o-y	q-o-q	y-o-y
China, People's Rep. of (PRC)													
Total	1,309	100.0	1,353	100.0	1,338	100.0				(2.3)	(1.3)	(1.1)	2.2
Total Bills	80	6.1	9	0.6	23	1.7	0.07	0.01	0.02	164.4	(72.5)	167.6	(71.5)
Treasury Bills	32	2.4	9	0.6	4	0.3	0.03	0.01	0.004	(50.9)	(87.2)	(50.3)	(86.8)
Central Bank Bills	48	3.7	0	0.0	19	1.4	0.23	0.00	0.16	–	(62.7)	–	(61.4)
Total Bonds	1,229	93.9	1,345	99.4	1,315	98.3				(3.3)	3.4	(2.2)	7.0
Treasury Bonds	1,018	77.8	1,129	83.4	1,202	89.8				5.2	14.0	6.5	18.1
Central Bank Bonds	211	16.1	215	15.9	113	8.5				(48.1)	(48.1)	(47.4)	(46.2)
Hong Kong, China													
Total	93	100.0	100	100.0	107	100.0				7.0	15.7	7.1	15.7
Total Bills	76	81.5	82	82.1	88	81.8	4.42	4.60	4.49	6.5	16.0	6.6	16.1
Treasury Bills	0	0.0	0	0.0	0	0.0	–	–	–	–	–	–	–
Central Bank Bills	76	81.5	82	82.1	88	81.8	8.51	9.32	9.97	6.5	16.0	6.6	16.1
Total Bonds	17	18.5	18	17.9	20	18.2				9.1	14.2	9.2	14.2
Treasury Bonds	8	8.9	9	9.0	11	10.0				18.4	30.5	18.5	30.5
Central Bank Bonds	9	9.6	9	8.8	9	8.2				(0.4)	(0.9)	(0.3)	(0.9)
Indonesia													
Total	94	100.0	98	100.0	97	100.0				1.7	10.3	(1.0)	4.0
Total Bills	13	13.8	12	12.5	11	11.3	0.16	0.14	0.13	(8.2)	(9.7)	(10.7)	(14.9)
Treasury Bills	3	3.3	2	2.4	2	2.4	0.04	0.03	0.03	2.0	(18.9)	(0.7)	(23.5)
Central Bank Bills	10	10.5	10	10.1	9	8.9	–	–	–	(10.6)	(6.8)	(13.0)	(12.1)
Total Bonds	81	86.2	86	87.5	86	88.7				3.2	13.5	0.4	7.0
Treasury Bonds	81	86.2	86	87.5	86	88.7				3.2	13.5	0.4	7.0
Central Bank Bonds	0	0.0	0	0.0	0	0.0				–	–	–	–
Korea, Rep. of													
Total	471	100.0	519	100.0	516	100.0				2.3	9.2	(0.5)	9.5
Total Bills	46	9.8	55	10.5	52	10.0	0.11	0.12	0.11	(2.4)	12.2	(5.1)	12.5
Treasury Bills	7	1.5	8	1.6	11	2.0	0.02	0.02	0.03	33.3	45.8	29.7	46.2
Central Bank Bills	39	8.2	46	8.9	41	8.0	0.38	0.44	0.40	(8.7)	6.0	(11.1)	6.3
Total Bonds	425	90.2	464	89.5	464	90.0				2.8	8.9	0.1	9.2
Treasury Bonds	324	68.7	359	69.3	362	70.1				3.4	11.4	0.6	11.8
Central Bank Bonds	102	21.6	105	20.2	103	19.9				0.8	0.8	(1.9)	1.1
Malaysia													
Total	176	100.0	188	100.0	184	100.0				(0.2)	4.0	(2.3)	4.6
Total Bills	46	26.2	45	24.1	40	21.8	0.35	0.32	0.28	(9.8)	(13.3)	(11.7)	(12.8)
Treasury Bills	1	0.8	1	0.7	1	0.7	0.01	0.01	0.01	0.0	0.0	(2.1)	0.5
Central Bank Bills	45	25.4	44	23.4	39	21.1	–	–	–	(10.1)	(13.7)	(12.0)	(13.2)
Total Bonds	130	73.8	143	75.9	144	78.2				2.8	10.1	0.7	10.7
Treasury Bonds	130	73.8	143	75.9	144	78.2				2.8	10.1	0.7	10.7
Central Bank Bonds	0	0.0	0	0.0	0	0.0				–	–	–	–
Philippines													
Total	72	100.0	82	100.0	80	100.0				2.1	13.4	(3.4)	10.8
Total Bills	6	8.4	7	8.6	7	8.6	0.09	0.09	0.09	1.9	15.7	(3.6)	13.1
Treasury Bills	6	8.4	7	8.6	7	8.6	0.09	0.09	0.09	1.9	15.7	(3.6)	13.1
Central Bank Bills	0	0.0	0	0.0	0	0.0	–	–	–	–	–	–	–
Total Bonds	66	91.6	75	91.4	73	91.4				2.1	13.2	(3.4)	10.6
Treasury Bonds	66	91.6	75	91.4	73	91.4				2.1	13.2	(3.4)	10.6
Central Bank Bonds	0	0.0	0	0.0	0	0.0				–	–	–	–

continued on next page

Table 4 *continued*

	2Q12 Amount (US$ billion)	2Q12 % share	1Q13 Amount (US$ billion)	1Q13 % share	2Q13 Amount (US$ billion)	2Q13 % share	Government Bills-to-Bonds Ratio 2Q12	Government Bills-to-Bonds Ratio 1Q13	Government Bills-to-Bonds Ratio 2Q13	Growth Rate (LCY-base %) 2Q13 q-o-q	Growth Rate (LCY-base %) 2Q13 y-o-y	Growth Rate (US$-base %) 2Q13 q-o-q	Growth Rate (US$-base %) 2Q13 y-o-y
Singapore													
Total	129	100.0	148	100.0	148	100.0				1.9	15.2	(0.3)	14.9
Total Bills	63	48.9	78	52.9	80	54.0	0.96	1.12	1.17	4.1	27.1	1.8	26.9
Treasury Bills	47	36.4	48	32.6	41	27.5	0.71	0.69	0.60	(14.0)	(12.8)	(15.9)	(13.0)
Central Bank Bills	16	12.5	30	20.2	39	26.5	–	–	–	33.3	143.1	30.4	142.6
Total Bonds	66	51.1	70	47.1	68	46.0				(0.6)	3.7	(2.7)	3.5
Treasury Bonds	66	51.1	70	47.1	68	46.0				(0.6)	3.7	(2.7)	3.5
Central Bank Bonds	0	0.0	0	0.0	0	0.0				–	–	–	–
Thailand													
Total	189	100.0	209	100.0	204	100.0				3.4	6.2	(2.6)	7.9
Total Bills	44	23.2	52	25.0	49	24.2	0.30	0.33	0.32	(0.1)	10.6	(5.8)	12.4
Treasury Bills	3	1.7	0	0.0	0	0.0	0.03	0.00	0.00	–	–	–	–
Central Bank Bills	41	21.5	52	25.0	49	24.2	0.76	1.02	0.97	(0.1)	19.2	(5.8)	21.2
Total Bonds	145	76.8	157	75.0	155	75.8				4.5	4.8	(1.5)	6.5
Treasury Bonds	92	48.6	106	50.6	104	51.0				4.3	11.4	(1.7)	13.2
Central Bank Bonds	53	28.2	51	24.4	51	24.8				4.9	(6.5)	(1.1)	(5.0)
Viet Nam													
Total	12	100.0	20	100.0	17	100.0				(13.2)	51.0	(14.3)	48.9
Total Bills	3	27.2	8	37.2	4	20.2	0.37	0.59	0.25	(52.9)	12.2	(53.5)	10.6
Treasury Bills	0.4	3.3	2	10.6	1	8.3	0.05	0.17	0.10	(31.4)	279.8	(32.3)	274.4
Central Bank Bills	3	23.9	5	26.7	2	11.9	–	–	–	(61.4)	–	(61.9)	–
Total Bonds	8	72.8	13	62.8	14	79.8				10.4	65.5	9.0	63.1
Treasury Bonds	8	72.8	13	62.8	14	79.8				10.4	65.5	9.0	63.1
Central Bank Bonds	0	0.0	0	0.0	0	0.0				–	–	–	–
Emerging East Asia (EEA)													
Total	2,544	100.0	2,719	100.0	2,692	100.0				(0.1)	4.0	(1.0)	5.8
Total Bills	377	14.8	349	12.8	353	13.1	0.17	0.15	0.15	3.6	(7.0)	1.3	(6.3)
Treasury Bills	100	3.9	78	2.9	67	2.5	0.06	0.04	0.03	(11.6)	(33.1)	(13.5)	(32.6)
Central Bank Bills	277	10.9	271	9.9	286	10.6	0.74	0.71	1.04	8.0	2.4	5.6	3.2
Total Bonds	2,167	85.2	2,371	87.2	2,339	86.9				(0.6)	5.9	(1.3)	7.9
Treasury Bonds	1,793	70.5	1,991	73.2	2,063	76.7				4.4	13.0	3.7	15.1
Central Bank Bonds	374	14.7	380	14.0	275	10.2				(27.0)	(28.1)	(27.6)	(26.4)
EEA excl. PRC													
Total	1,235	100.0	1,366	100.0	1,354	100.0				2.1	9.8	(0.9)	9.6
Total Bills	297	24.0	340	24.9	330	24.4	0.32	0.33	0.32	(0.6)	11.3	(2.9)	11.3
Treasury Bills	68	5.5	69	5.1	63	4.7	0.09	0.08	0.07	(6.6)	(6.6)	(9.0)	(7.1)
Central Bank Bills	229	18.5	271	19.8	267	19.7	1.40	1.64	1.65	1.0	16.6	(1.3)	16.8
Total Bonds	938	76.0	1,026	75.1	1,023	75.6				3.0	9.3	(0.2)	9.1
Treasury Bonds	774	62.7	861	63.0	861	63.6				3.2	11.7	0.01	11.2
Central Bank Bonds	164	13.3	165	12.1	162	12.0				2.0	(1.7)	(1.6)	(1.0)
Japan													
Total	9,888	100.0	8,643	100.0	8,326	100.0				1.4	4.6	(3.7)	(15.8)
Total Bills	376	3.8	318	3.7	303	3.6	0.04	0.04	0.04	0.0005	0.0012	(5.0)	(19.5)
Treasury Bills	376	3.8	318	3.7	303	3.6	0.04	0.04	0.04	0.0005	0.0012	(5.0)	(19.5)
Central Bank Bills	0	0.0	0	0.0	0	0.0	–	–	–	–	–	–	–
Total Bonds	9,512	96.2	8,324	96.3	8,023	96.4				1.4	4.8	(3.6)	(15.7)
Treasury Bonds	9,512	96.2	8,324	96.3	8,023	96.4				1.4	4.8	(3.6)	(15.7)
Central Bank Bonds	0	0.0	0	0.0	0	0.0				–	–	–	–

( ) = negative, – = not applicable, LCY = local currency, q-o-q = quarter-on-quarter, y-o-y = year-on-year.

Notes:

1. Bloomberg LP end-of-period LCY–US$ rates are used.
2. For LCY-base, emerging East Asia growth figures are based on end-June 2013 currency exchange rates and do not include currency effects.
3. Total figures per market refer to bills and bonds issued by the central government and the central bank. It excludes bonds issued by policy banks and state-owned enterprises. Bills are defined as securities with original maturities of 1 year or less.

Sources: People's Republic of China (*ChinaBond*); Hong Kong, China (Hong Kong Monetary Authority); Indonesia (Bank Indonesia and Indonesia Stock Exchange); Republic of Korea (Bloomberg LP); Malaysia (Bank Negara Malaysia); Philippines (Bureau of the Treasury); Singapore (Monetary Authority of Singapore); Thailand (Bank of Thailand and Bloomberg LP); Viet Nam (Bloomberg LP); and Japan (Japan Securities Dealers Association).

(US$144 billion). Treasury bonds outstanding in these two markets rose approximately 3% over their respective 1Q13 levels.

The total stock of treasury bills in emerging East Asia fell sharply in 2Q13 by 33.1% y-o-y and 11.6% q-o-q to only US$67 billion at end-June. The largest stock of treasury bills at the end of 2Q13 resided in Singapore (US$41 billion), with the next largest amounts in the Republic of Korea (US$11 billion) and the Philippines (US$7 billion).

Bills issued by central banks and monetary authorities amounted to US$286 billion at the end of 2Q13, representing an 8.0% increase over 1Q13. These bills are distributed much more widely in the region than treasury bills, with US$88 billion in Hong Kong, China and between US$39 billion and US$49 billion in the Republic of Korea, Malaysia, Singapore, and Thailand.

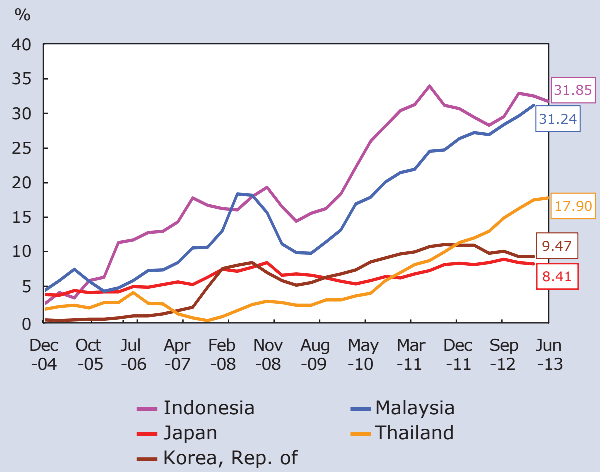
Outstanding central bank bonds in emerging East Asia amounted to US$275 billion in 2Q13, roughly the same as central bank bills, but the region's stock of central bank bonds fell 27.0% q-o-q. The main reason for this downturn was a 48.0% decline in PBOC bonds to US$113 billion. Meanwhile, the next largest amount of central bank bonds from The Bank of Korea remained largely unchanged at US$103 billion.

Foreign Holdings

The share of foreign holdings of Asian LCY government bonds was generally stable in the first half of 2013, after having risen rapidly in 2011 and 2012.

Foreign holdings of government bonds continued to rise in nominal terms in 2012 and the early months of 2013 in most countries, although the share of foreign holdings has begun to stabilize in some markets. In Indonesia, for example, the share of government bonds held by foreigners fell slightly to 31.9% at end-June from 32.6% at end-March and 33.0% at end-December 2012 (**Figure 5**). The nominal value of foreign holdings of Indonesian bonds has continued to rise, but holdings of domestic investors such as banks have also been rising since the end of 2010. Foreign holdings of Malaysian government bonds continued to increase in 2013, rising to 31.2% at end-March from 29.8% at end-December 2012 and 26.5% at end-December 2011. Foreign holders of Thai bonds have also increased their market share in 2013, which rose to 17.9% at end-June from 16.4% at end-December 2012. Foreign holdings of bonds in the Republic of Korea, however, have declined steadily over the last 2 years, from a high of 11.2% at end-September 2011 to 9.5% at end-March.

Figure 5: Foreign Holdings of LCY Government Bonds in Select Asian Economies (% of total)



LCY = local currency.
Note: Data as of end-March 2013 except for Indonesia and Thailand as of end-June 2013.
Source: *AsianBondsOnline*.

Maturity Structure

The maturity structures of emerging East Asian government and corporate bond markets have generally lengthened in 2013, although the region's corporate markets remain much more short-dated than government markets.

The maturity profiles of government bond markets remained concentrated at the shorter-end of the yield curve in Hong Kong, China; Republic of Korea; Thailand; and Viet Nam (**Figure 6a**). These four markets had 40% or more of their bonds outstanding in remaining maturities of between more than 1 year and 3 years. For Hong Kong, China and Viet Nam, the portion of bonds outstanding with maturities between more than 1 year and 3 years was 49% and 63%, respectively. Indonesia and the Philippines, however, have much larger shares of their government bonds outstanding in bonds with remaining maturities of more than 10 years: 44% in the case of the Philippines and 46% in the case of Indonesia. Singapore, the PRC, and Malaysia, on the other hand, had the greatest concentration of government bonds—31%, 35%, and 40%, respectively—in remaining maturities of more than 5 years and up to 10 years.

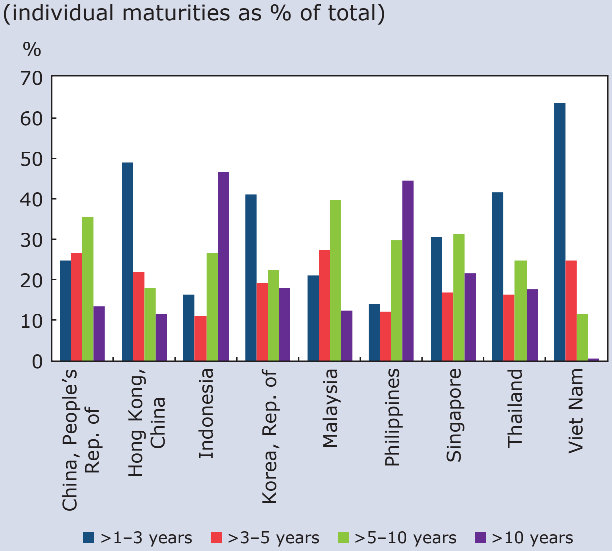
Figure 6b compares the proportion of bonds outstanding in remaining maturities of more than 10 years at the end of 2Q13 and the end of 2Q12 for each economy in the region. The largest increases in the proportion of bonds with maturities of more than 10 years were in Indonesia, the Republic of Korea, and Thailand. The PRC, Singapore, and Viet Nam, on the other hand, experienced a significant reduction in the proportion of bonds with an average maturity of more than 10 years.

Maturity Profiles for Corporate Bonds

The most common maturities for corporate bonds in the region are in the range of more than 5 years and up to 10 years (**Figure 7a**). The markets in which the more-than-5-years-to-10-years range is most pronounced include the PRC; Hong Kong, China; Malaysia; the Philippines; Singapore; Thailand; and Viet Nam. Meanwhile, the more-than-1-year-to-3-years category is the most common range of maturity for the Republic of Korea, while the more-than-3-years-to-5-years range is the most common range of maturity for Indonesian bonds.

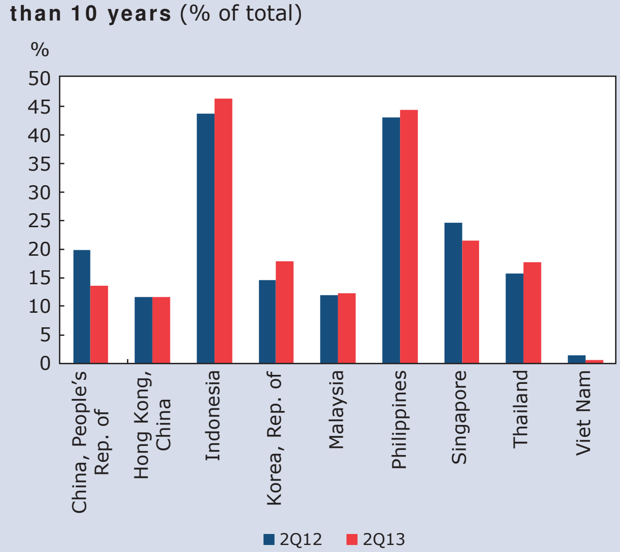
Figure 7b shows that the proportion of corporate bonds with maturities of more than 5 years and up to 10 years increased over the last year in all markets except Indonesia, where the proportion of bonds in this category actually fell.

Figure 6a: Government Bond Maturity Profiles (individual maturities as % of total)



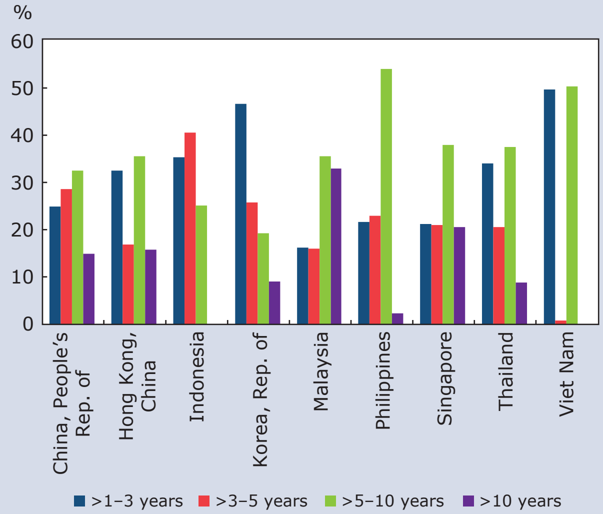
Note: Data as of end-June 2013 except for the Philippines as of end-May 2013.
Source: *AsianBondsOnline*.

Figure 6b: Government Bonds—Maturities of More than 10 years (% of total)



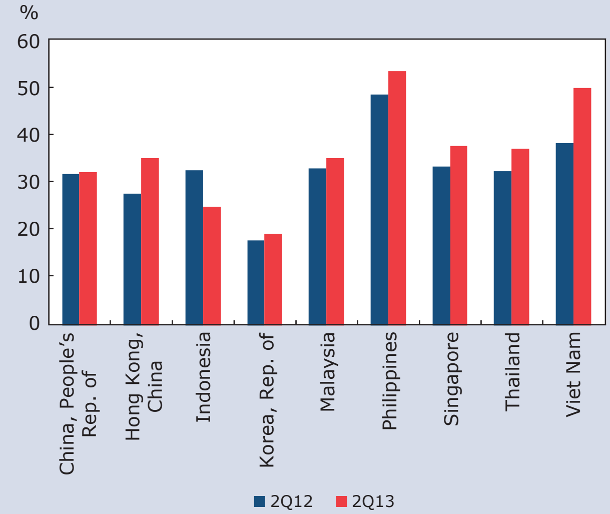
Note: For the Philippines, 2Q13 data as of end-May 2013.
Source: *AsianBondsOnline*.

Figure 7a: Corporate Bond Maturity Profiles (individual maturities as % of total)



Note: Data as of end-June 2013.
Source: *AsianBondsOnline*.

Figure 7b: Corporate Bonds—Maturities of More than 5 Years to 10 Years (as % of total)



Source: *AsianBondsOnline*.

Government Bond Yield Curves

Most government bond yield curves in emerging East Asia have shifted upward since the Federal Reserve suggested on 22 May that the US might exit from its highly accommodative monetary policy sooner than expected.

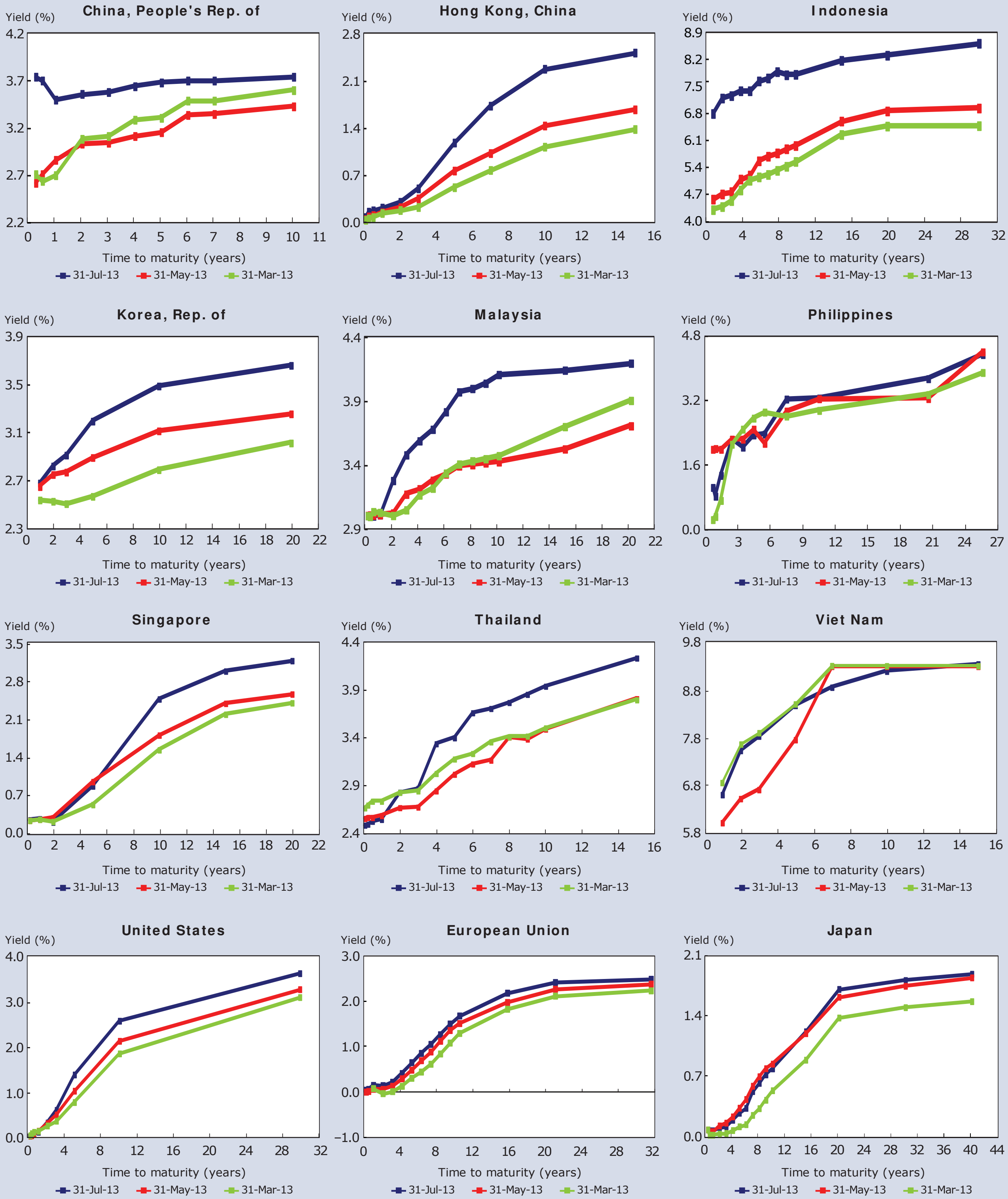
Most government bond yield curves in emerging East Asia shifted upward at the end of May—compared with end-March levels—following Federal Reserve Chairman Ben Bernanke's 22 May statement before the US Congress suggesting that the Federal Reserve might exit from its highly accommodative monetary policy sooner than had generally been expected (**Figure 8**). The initial movements of government bond market yields between end-March and end-May, however, were muted because there was less concern about the Federal Reserve immediately exiting from its accommodative monetary policy stance. Also, there was considerable diversity in market movements: yield curves in some markets at end-May were tighter than they had been at end-March.

Yield curves did steepen modestly between end-March and end-May in Hong Kong, China; Indonesia; the Republic of Korea; and Singapore. The Philippine curve did not steepen overall, but experienced a rise in yields for tenors of 1 year or less, while yields for 10- and 25-year bonds increased 29 basis points (bps) and 51 bps, respectively. The Malaysian curve, however, fell from the belly to the longer-end between end-March and end-May. Yields on bonds with maturities of 2 years or more fell along the PRC curve at end-May relative to their end-March position. The Vietnamese curve fell somewhat from the shorter-end to the belly, but remained essentially unchanged for maturities of 5 years or more.

Yields from the belly to the shorter-end of the Thai curve fell at end-May relative to their position at end-March, while yields for longer-dated maturities were essentially unchanged. In part, this reflected a 25 bps reduction in the Bank of Thailand's policy rate after its 28–29 May meeting to a level of 2.5%. This followed a reduction in The Bank of Korea's policy rate by 25 bps to 2.5% on 9 May.

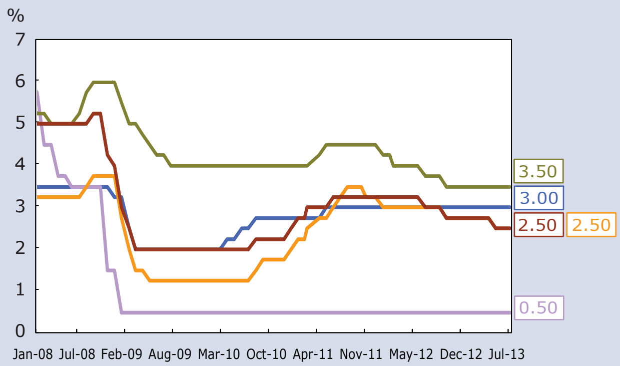
Policy rates have been quite stable across the region thus far in 2013 (**Figures 9a, 9b**), with the only increases in rates being the successive hikes of the Indonesian policy rate in June and July to

Figure 8: Benchmark Yield Curves—LCY Bonds



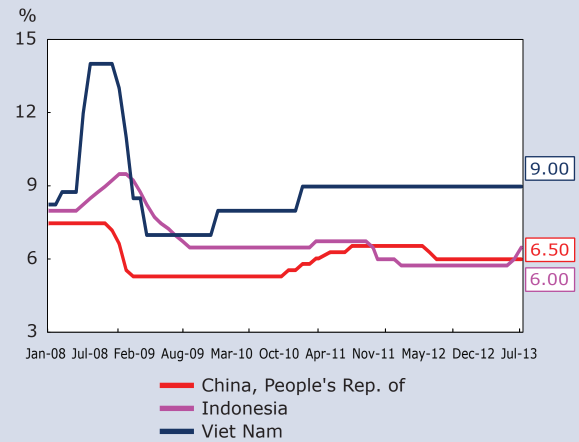
LCY = local currency.
Source: Based on data from Bloomberg LP.

Figure 9a: Policy Rates



Note: Data as of end-July 2013.
Source: Bloomberg LP.

Figure 9b: Policy Rates



Notes:
1. Data as of end-July 2013.
2. For Viet Nam, base interest rate was used.
Source: Bloomberg LP except for Viet Nam (State Bank of Viet Nam).

6.0% and 6.5%, respectively and more recently, to 7.0% on 29 August. The region's overall low policy rates are justified by inflation rates that have remained well below 3.0% in most markets since the beginning of 2012. Only Indonesia and Viet Nam have had inflation rates consistently above 4.0% over the last year (**Figures 10a, 10b**).

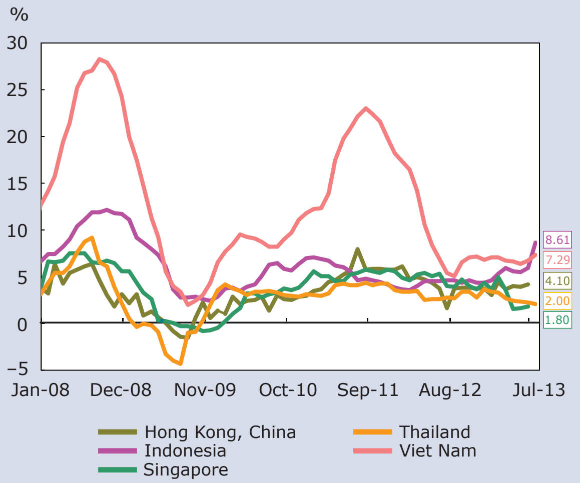
The market, however, became more concerned about the future direction of US monetary policy after the Federal Reserve statement on 19 June announcing that it may begin to taper its bond purchase program toward the latter part of the year. This resulted in a dramatic steepening of yield curves in Hong Kong, China; the Republic of Korea; Malaysia; Singapore; and Thailand between the time of the Federal Reserve statement and end-July. In the case of Indonesia, there was a dramatic shift upward along the entire curve. The yield curve in Viet Nam widened for some shorter-dated maturities, but remained more or less unchanged at the longer-end of the curve. Yields on the Philippine curve tightened for most maturities greater than 2 years between end-May and end-July, reflecting the availability of a cash-rich investor base in the Philippines as well as Bangko Sentral ng Pilipinas' (BSP) decision on 25 April to lower the Special Deposit Account (SDA) rate to 2.0% and limit the access of banks to the facility.

The PRC yield curve, however, shifted dramatically upward between end-May and end-July. But this was mainly due to domestic financial trends and policy developments, given the capital controls still in place in the PRC. The steep rise at the shorter-end of the yield curve reflected the SHIBOR shock event in June. At the start of June, the overnight SHIBOR rate was 4.6% and the 7-day interbank repo rate was 4.8%. By the end of the first week of June, liquidity demands had driven the SHIBOR rate to 7.5% and the 7-day repo rate rose to 7.8%. While the market expected the PBOC to step in and provide additional liquidity, it instead issued central bank bills on 18 June for the first time since 2011.

The PBOC's issuance sent a signal to markets regarding its stance toward liquidity; as a result, the SHIBOR overnight rate rose to a high of 13.4% on 20 June and the 7-day repo rate rose to 11.2%. The PBOC released a statement on 26 June that sought to clarify its actions by announcing that the rise in money market rates was due to temporary seasonal factors and rapid loan growth, while stating that overall liquidity in the system was sufficient. The PBOC also said that banks needed to be more prudent in their liquidity management.

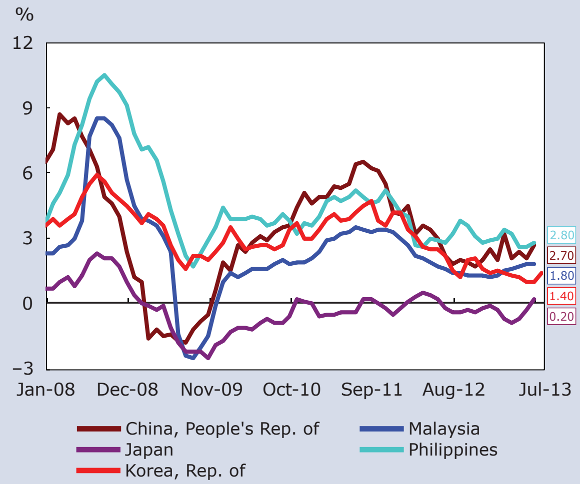
Another important change in monetary policy affecting the region since the beginning of 2013

Figure 10a: Headline Inflation Rates



Note: Data as of end-July 2013 except for Hong Kong, China and Singapore as of end-June 2013.
Source: Bloomberg LP.

Figure 10b: Headline Inflation Rates

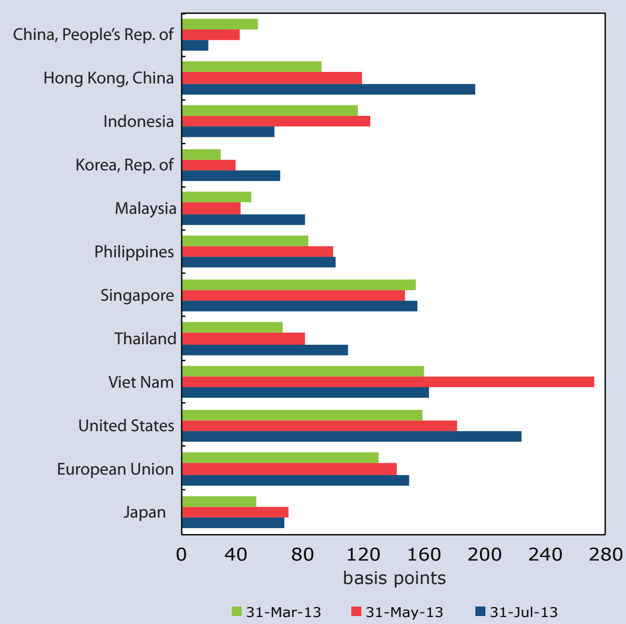


Note: Data as of end-June 2013 except for the Republic of Korea as of end-July 2013.
Source: Bloomberg LP.

has been the BOJ's adoption of a more aggressive stance toward monetary easing, which has resulted in a dramatic downward shift of the Japanese yield curve. The BOJ has stated that it will conduct monetary operations targeting an increase in the monetary base of JPY60 trillion–JPY70 trillion annually. The objective of this effort is to nudge the economy's prospects for sustainable growth upward and generate annual inflation of 2.0%. Figure 10b shows that while Japanese policy is still far from achieving its inflation goals, inflation returned to Japan in June following an extended period of deflation over the last several years.

Finally, the spread between yields for 2- and 10-year maturities widened in most markets between end-March and end-July as yields for 10-year maturities rose significantly and yields for shorter-dated maturities increased by a smaller amount or remained unchanged (**Figure 11**). The spread between 2- and 10-year yields tightened, however, in the government bond markets of the PRC and Indonesia. In the PRC, the shorter-end of the yield curve rose dramatically in response to the SHIBOR shock event, resulting in a tightening yield spread between end-March and end-July. Indonesia also experienced a widening at the shorter-end of its curve between end-March and end-July, even

Figure 11: Yield Spreads Between 2- and 10-Year Government Bonds



Source: Based on data from Bloomberg LP.

as its entire curve shifted upward, resulting in a reduction in the yield spread.

Viet Nam is a more complex story. The yield spread between 2- and 10-year government bonds rose dramatically between end-March and end-May as yields at the shorter-end of the government bond curve suddenly dropped, increasing the spread from 162 bps to 275 bps. But between end-May and end-July, shorter-dated yields rose sharply to nearly return to their end-March positions, reducing Viet Nam's yield spread to 165 bps.

Corporate Bond Credit Spreads

The movement of corporate credit spreads between end-March and end-July differed greatly across markets.

Credit spreads for high-grade corporate bonds demonstrated greater movement between end-March and end-July than was the case for credit spreads of lower-rated corporate bonds, which were largely unchanged. Credit spreads for shorter-dated maturities in the PRC high-grade corporate market shifted downward between end-March and end-July, while widening for the 15-, 20-, and 30-year maturities, particularly between end-May and end-July **(Figure 12a)**.

Movements in the yield curve for high-grade corporate bonds in Malaysia were much simpler. The corporate yield curve first steepened between end-March and end-May, and then shifted downward between end-May and end-July.

The high-grade corporate credit spread curve in the Republic of Korea flattened for shorter-dated maturities between end-March and end-May, and then shifted upward between end-May and end-July at the longer-end of the curve. Meanwhile, the shorter-end of the curve steepened, with credit spreads at the very short-end falling below their end-March levels.

There was little or no movement in credit spreads for lower-rated bonds in Malaysia and the Republic of Korea, reflecting, in large part, almost negligible liquidity for these instruments **(Figure 12b)**. Credit spreads for lower-rated corporate bonds in the PRC rose for almost all maturities between end-March and end-May, but then remained mostly unchanged between end-May and end-July.

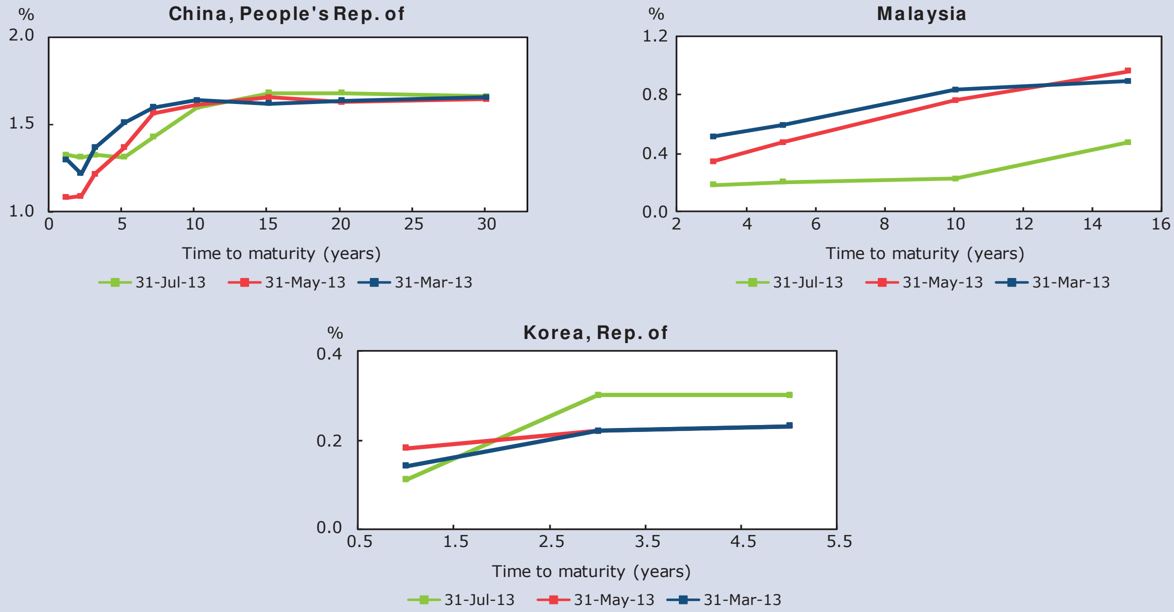
G3 Currency Issuance

Emerging East Asian G3 currency issuance in the first 7 months of 2013 reached US$89 billion, or approximately two-thirds of the record-breaking US$131 billion issued in 2012.

G3 currency issuance in the first 7 months of 2013 reached US$89 billion **(Table 5)**, about two-thirds of the record-breaking US$130.8 billion of G3 currency issuance in 2012, and well above the US$75 billion of G3 currency issuance in 2011. The three largest issuers remained the PRC (US$34.2 billion); Hong Kong, China (US$16.4 billion); and the Republic of Korea (US$14.8 billion). The two largest G3 currency issues out of the PRC in the first 7 months of 2013 were 10-year issues: a US$2 billion bond from CNOOC Finance with a 3.0% coupon, and a US$1.3 billion bond from Sinopec Capital with a 3.125% coupon. The largest deal out of Hong Kong, China was the US$2.3 billion perpetual bond from Hutchison Whampoa with a 3.75% coupon. The largest issue in the Republic of Korea was a euro-denominated bond worth US$1.3 billion from Korea Eximbank with a coupon of 2.0% that matures in 2020.

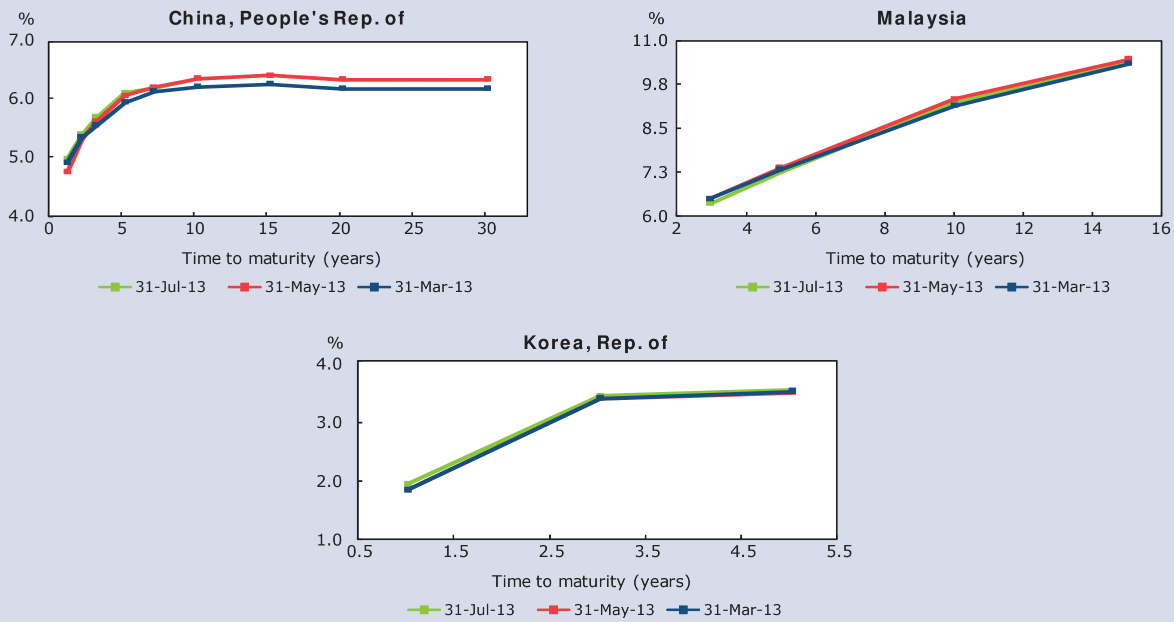
The fourth-largest issuer of G3 currency bonds thus far in 2013 is Indonesia. The Indonesian government and corporations issued US$10.4 billion of bonds in the first 7 months of 2013, slightly less than US$12.1 billion in all of 2012, but already more than US$6.7 billion in 2011. In 2012, the Indonesian government issued two US$-denominated bonds worth US$3.8 billion each and a 10-year samurai bond equivalent to US$692 million, compared with only one sovereign bond of US$2.5 billion in 2011. In the first 7 months of 2013, the Indonesian government issued three sovereign bonds worth US$4.0 billion: 10- and 20-year issues of US$1.5 billion each in April with coupons of 3.375% and 4.625%, respectively, and, in mid-July, another 10-year bond with a coupon of 5.375%. Additionally, the Indonesian state oil company, Pertamina, has been active in

Figure 12a: Credit Spreads—LCY Corporates Rated AAA vs. Government Bonds



LCY = local currency.
Note: Credit spreads are obtained by subtracting government yields from corporate indicative yields.
Sources: People's Republic of China (*ChinaBond*); Republic of Korea (EDAILY *BondWeb*); and Malaysia (Bank Negara Malaysia).

Figure 12b: Credit Spreads—Lower-Rated LCY Corporates vs. LCY Corporates Rated AAA



LCY = local currency.
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.
Sources: People's Republic of China (*ChinaBond*); Republic of Korea (EDAILY *BondWeb*); and Malaysia (Bank Negara Malaysia).

Table 5: G3 Currency Bond Issuance

2012

Issuer	US$ (million)	Issue Date
China, People's Rep. of	**31,115**	
CNOOC Finance 3.875% 2022	1,500	2-May-12
Sinopec 2.75% 2017	1,000	17-May-12
Sinopec 3.9% 2022	1,000	17-May-12
Sinopec 4.875% 2042	1,000	17-May-12
COSL Finance 3.25% 2022	1,000	6-Sep-12
Others	25,615	
Hong Kong, China	**27,942**	
Hutchison Whampoa 2.5% 2017	1,649	6-Jun-12
Hutchison Whampoa 4.625% 2022	1,500	13-Jan-12
Others	24,793	
Indonesia	**12,136**	
Indonesia (Sovereign) 3.75% 2022	2,000	25-Apr-12
Indonesia (Sovereign) 5.25% 2042	1,750	17-Jan-12
Pertamina 6.0% 2042	1,250	3-May-12
Others	7,136	
Korea, Rep. of	**30,911**	
Korea Eximbank 4.0% 2017	1,250	11-Jan-12
Korea Eximbank 5.0% 2022	1,000	11-Jan-12
Korea Eximbank 1.25% 2015	1,000	20-Nov-12
Korea National Oil Corp. 3.125% 2017	1,000	3-Apr-12
Samsung Electronics 1.75% 2017	1,000	10-Apr-12
Others	25,661	
Malaysia	**6,778**	
1MDB Energy 5.99% 2022	1,750	21-May-12
Malayan Banking 3.25% 2022	800	20-Sep-12
SSG Resources 4.25% 2022	800	4-Oct-12
Others	3,428	
Philippines	**3,625**	
Philippines (Sovereign) 5.0% 2037	1,500	13-Jan-12
Philippines (Sovereign) 2.75% 2023	500	4-Dec-12
SM Investments 4.25% 2019	500	17-Oct-12
Others	1,125	
Singapore	**12,755**	
Temasek Financial 2.375% 2023	1,200	23-Jul-12
DBS Bank 2.35% 2017	1,000	28-Feb-12
OCBC Bank 1.625% 2015	1,000	13-Mar-12
OCBC Bank 3.15% 2023	1,000	11-Sep-12
Others	8,555	
Thailand	**5,000**	
PTT Global Chemical 4.25% 2022	1,000	19-Mar-12
Others	4,000	
Viet Nam	**550**	
Emerging East Asia Total	**130,814**	
Memo Items:		
India	**11,217**	
Reliance Holdings 5.4% 2022	1,500	14-Feb-12
State Bank of India 4.125% 2017	1,250	1-Aug-12
Others	8,467	
Sri Lanka	**2,434**	

1 January–31 July 2013

Issuer	US$ (million)	Issue Date
China, People's Rep. of	**34,216**	
CNOOC Finance 3.0% 2023	2,000	9-May-13
Sinopec Capital 3.125% 2023	1,250	24-Apr-13
Citic Pacific 8.625% Perpetual	1,000	22-May-13
State Grid Overseas 3.125% 2023	1,000	22-May-13
MCE Finance 5.0% 2021	1,000	7-Feb-13
Others	27,966	
Hong Kong, China	**16,406**	
Hutchison Whampoa 3.75% Perpetual	2,328	10-May-13
Shimao Property 6.625% 2020	800	14-Jan-13
Others	13,278	
Indonesia	**10,425**	
Pertamina 4.3% 2023	1,625	20-May-13
Pertamina 5.625% 2043	1,625	20-May-13
Indonesia (Sovereign) 3.375% 2023	1,500	15-Apr-13
Indonesia (Sovereign) 4.625% 2043	1,500	15-Apr-13
Indonesia (Sovereign) 5.375% 2023	1,000	17-Jul-13
Others	3,175	
Korea, Rep. of	**14,760**	
Korea Eximbank 2.0% 2020	1,330	30-Apr-13
Korea Development Bank 1.5% 2018	665	30-May-13
Harvest Operations 2.125% 2018	630	14-May-13
Others	12,134	
Malaysia	**4,065**	
1MDB Global Investments 4.4% 2023	3,000	19-Mar-13
Sime Darby 2.053% 2018	400	29-Jan-13
Malayan Bank 1.76% 2018	200	15-May-13
Others	465	
Philippines	**3,250**	
San Miguel Corporation 4.875% 2023	800	26-Apr-13
JG Summit 4.375% 2023	750	23-Jan-13
Petron Corporation 7.5% Perpetual	750	6-Feb-13
Others	950	
Singapore	**3,891**	
Olam International 6.75% 2018	750	29-Jan-13
Global A&T Electronics 10.0% 2019	625	7-Feb-13
Stats Chippac 4.5% 2018	611	20-Mar-13
Flextronics International 5.0% 2023	500	20-Feb-13
Others	1,405	
Thailand	**1,945**	
Krung Thai Bank 2.25% 2018	500	11-Mar-13
Others	1,445	
Viet Nam	**0**	
Emerging East Asia Total	**88,958**	
Memo Items:		
India	**10,270**	
Bharti Airtel International 5.125% 2023	1,500	11-Mar-13
Vedanta Resources 6.0% 2019	1,200	3-Jun-13
Others	7,570	
Sri Lanka	**781**	

Sources: Bloomberg LP, newspaper and wire reports.

recent years, issuing a 20-year bond in May 2012 for US$1.25 billion, which was followed by 10- and 20-year bonds in May of this year worth US$1.625 billion each and carrying coupons of 4.3% and 5.625%, respectively.

These trends in G3 currency issuance correspond roughly to the pattern for FCY bonds outstanding in the region (**Table 6**). The largest issuer of FCY bonds in Indonesia, the Philippines, and Viet Nam is the government, while banks, financial

Table 6: Size and Composition of FCY Bond Markets

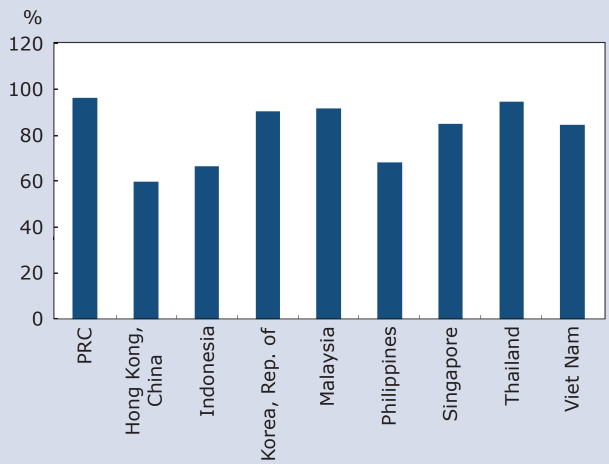
	2Q12		4Q12		2Q13	
	Amount (US$ billion)	% share	Amount (US$ billion)	% share	Amount (US$ billion)	% share
China, People's Rep. of (PRC)						
Total	122	100.0	148	100.0	160	100.0
Government	20	16.6	21	14.0	15	9.6
Banks and FIs	34	27.6	46	31.0	51	32.1
Corporate	68	55.9	82	55.0	93	58.3
Hong Kong, China						
Total	115	100.0	122	100.0	129	100.0
Government	2	1.4	2	1.3	2	1.2
Banks and FIs	31	27.1	33	26.6	34	26.1
Corporate	82	71.5	88	72.1	94	72.7
Indonesia						
Total	48	100.0	50	100.0	59	100.0
Government	26	54.0	27	54.5	30	51.4
Banks and FIs	3	6.5	3	5.8	3	5.5
Corporate	19	39.4	20	39.6	25	43.1
Korea, Rep. of						
Total	152	100.0	151	100.0	151	100.0
Government	25	16.1	24	15.7	23	15.2
Banks and FIs	67	43.9	68	45.3	70	46.6
Corporate	61	40.0	59	39.1	58	38.2
Malaysia						
Total	29	100.0	30	100.0	29	100.0
Government	3	11.3	3	10.7	2	7.2
Banks and FIs	11	36.8	12	39.4	8	29.4
Corporate	15	51.9	15	49.9	18	63.4
Philippines						
Total	44	100.0	43	100.0	45	100.0
Government	35	79.5	34	80.2	33	74.0
Banks and FIs	1	3.3	1	3.1	1	1.6
Corporate	7	17.2	7	16.7	11	24.3
Singapore						
Total	35	100.0	39	100.0	42	100.0
Government	0	0.0	0	0.0	0	0.0
Banks and FIs	24	67.0	25	65.3	26	62.6
Corporate	12	33.0	13	34.7	16	37.4
Thailand						
Total	9	100.0	13	100.0	16	100.0
Government	1	14.9	1	10.7	1	7.4
Banks and FIs	4	43.2	6	46.7	7	46.3
Corporate	4	41.9	5	42.6	7	46.3
Viet Nam						
Total	3	100.0	3	100.0	5	100.0
Government	2	77.4	2	76.6	4	82.3
Banks and FIs	0	8.6	0	9.2	0	0.0
Corporate	0	14.0	0	14.3	1	17.7
Emerging East Asia (EEA)						
Total	556	100.0	599	100.0	635	100.0
Government	114	20.4	114	19.1	111	17.3
Banks and FIs	175	31.4	195	32.5	201	31.7
Corporate	268	48.2	290	48.4	323	50.9
EEA Less PRC						
Total	434	100.0	451	100.0	475	100.0
Government	93	21.5	94	20.8	95	19.9
Banks and FIs	141	32.5	149	32.9	150	31.6
Corporate	200	46.0	209	46.3	230	48.4

FCY = foreign currency, FIs = financial institutions.
Source: *AsianBondsOnline*.

institutions, and corporates are the largest issuers in all other markets in the region. The largest amounts of FCY bond issuance in the region at the end of 2Q13 were in the PRC (US$160 billion); the Republic of Korea (US$151 billion); Hong Kong, China (US$129 billion); Indonesia (US$59 billion); and the Philippines (US$45 billion). While the amount of FCY government bonds issued in 2Q13 by the government in the Philippines (US$33 billion) was slightly larger than in Indonesia (US$30 billion), the FCY bonds issued by banks, financial institutions, and corporates in Indonesia (US$28 billion) were more than double those issued by the corporate sector in the Philippines (US$12 billion). Furthermore, banks and financial institutions were the largest FCY bond issuers in both the Republic of Korea and Singapore.

Figure 13 puts FCY issuance in emerging East Asia into perspective by providing data on LCY bonds as a share of total bonds at end-June. The lowest such ratio was found in Hong Kong, China, followed by Indonesia and the Philippines. The next lowest ratios were in Singapore and Viet Nam. Meanwhile, the PRC had the highest ratio.

Figure 13: LCY Bonds as % of Total Bonds



LCY = local currency, PRC = People's Republic of China.
Note: Data as of end-June 2013.
Source: *AsianBondsOnline*.

Market Returns

Market returns for Asia's bond and equity markets fell dramatically during the first 7 months of 2013.

Market returns in Asia fell dramatically during the first 7 months of 2013, with the Pan-Asian Index for LCY bonds falling 3.5% **(Table 7)** and the Far East ex-Japan Index of the MSCI Equity Index Returns falling 5.0% **(Table 8)**.

The most dramatic decline among the iBoxx Asia Bond Fund Index Family Returns was in Indonesia, where the bond market fell 17.8% on a US$ unhedged total return basis, followed by Singapore with a 7.8% decline, Malaysia with a 5.8% decline, and the Republic of Korea with a 4.4% decline. The only bond markets to report gains in the first 7 months of 2013 were the Philippines (7.5%) and the PRC (3.1%).

In equity markets, the Far East ex-Japan Index (US$ terms) fell 5.0% between the beginning of January and end-July. The largest declines were in the Republic of Korea (–10.6%) and the PRC (–9.8%). The Indonesian equity market was down 3.0%, compared with a 17.8% fall in bond returns on an US$ unhedged total return basis. The only market to have significantly positive returns in its equity market was the Philippines, which rose 9.7%. Equity markets in Hong Kong, China and Malaysia rose slightly at 1.1% and 0.7%, respectively. Over the same period, the MSCI index for the US rose 18.3%.

Table 7: iBoxx Asian Bond Fund Index Family Returns

Market	Modified Duration (years)	2011 Returns (%)		2012 Returns (%)		Jan–Jul 2013 Returns (%)	
		LCY Total Return Index	US$ Unhedged Total Return Index	LCY Total Return Index	US$ Unhedged Total Return Index	LCY Total Return Index	US$ Unhedged Total Return Index
China, People's Rep. of	6.64	5.6	10.4	2.4	3.6	1.5	3.1
Hong Kong, China	3.86	5.3	5.4	3.5	3.8	(3.3)	(3.4)
Indonesia	6.37	21.7	20.2	13.1	7.0	(12.3)	(17.8)
Korea, Rep. of	4.79	6.4	4.8	6.4	14.5	0.3	(4.4)
Malaysia	5.16	4.9	1.8	4.2	8.2	0.1	(5.8)
Philippines	7.80	15.9	15.8	10.4	17.9	14.0	7.5
Singapore	5.75	6.5	5.1	3.9	10.6	(3.8)	(7.8)
Thailand	5.11	5.0	0.3	3.3	6.5	0.3	(2.2)
Pan-Asian Index	5.51	–	7.0	–	7.9	–	(3.5)
HSBC ALBI	7.72	–	5.0	–	8.9	–	(5.6)
US Govt. 1–10 years	3.88	–	7.0	–	1.9	–	(1.3)

( ) = negative, – = not applicable, ALBI = Asian Local Bond Index, LCY = local currency, US = United States.
Notes:
1. Asian Bond Fund (ABF) indices contain only government debt and government-guaranteed debt obligations.
2. Market bond indices are from iBoxx Index Family. January–July 2013 returns reflect changes between end-December 2012 and end-July 2013 values.
3. Duration as of end-July 2013.
Sources: *AsianBondsOnline* and Bloomberg LP.

Table 8: MSCI Equity Index Returns

Market	2011 Returns (%)		2012 Returns (%)		Jan–Jul 2013 Returns (%)	
	LCY terms	US$ terms	LCY terms	US$ terms	LCY terms	US$ terms
China, People's Rep. of	(20.4)	(20.3)	18.7	19.0	(9.7)	(9.8)
Hong Kong, China	(18.5)	(18.4)	24.2	24.4	1.2	1.1
Indonesia	4.7	4.0	8.8	2.4	3.4	(3.0)
Korea, Rep. of	(11.5)	(12.8)	11.7	20.2	(6.1)	(10.6)
Malaysia	(0.2)	(2.9)	6.8	10.8	6.8	0.7
Philippines	(3.1)	(3.2)	34.7	43.9	16.0	9.7
Singapore	(20.0)	(21.0)	19.2	26.4	2.4	(1.8)
Thailand	(1.2)	(5.6)	26.9	30.9	(1.8)	(4.0)
Far East ex-Japan Index	(15.6)	(16.8)	15.5	19.0	(2.5)	(5.0)
MSCI US	–	(0.1)	–	13.5	–	18.3

( ) = negative, – = not applicable, LCY = local currency, MSCI = Morgan Stanley Capital International, US = United States.
Notes:
1. Market indices are from MSCI country indexes. January–July 2013 returns reflect changes between end-December 2012 and end-July 2013 values.
2. Far East ex-Japan includes the People's Republic of China; Hong Kong, China; Indonesia; the Republic of Korea; Malaysia; the Philippines; Taipei,China; and Thailand.
Sources: *AsianBondsOnline* and Bloomberg LP.