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The *Asia Bond Monitor* (ABM) reviews recent developments in East Asian local currency bond markets along with outlook, risks, and policy challenges. It covers the 10 members of the Association of Southeast Asian Nations (ASEAN) plus the People's Republic of China; Hong Kong, China; and the Republic of Korea.

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Emerging East Asian Local Currency Bond Markets: **A Regional Update**

Highlights

Economic Outlook

- Recent indicators in the United States (US) for employment and housing have been modestly hopeful. The rally of the US stock market since the beginning of the year has been another positive development, although its sustainability is unclear given the unresolved budget deadlock. Financial conditions in Europe have improved and in recent months the euro has rallied against the US dollar. Nevertheless, financial conditions in Europe remain fragile amid political uncertainty in Italy.

- In contrast, emerging East Asia's outlook is brightening with the People's Republic of China's (PRC) growth picking up toward the end of last year.[1] Meanwhile, the Southeast Asian economies continue to sustain robust growth supported by strong domestic demand.

LCY Bond Market Growth in Emerging East Asia

- The quarter-on-quarter (q-o-q) growth rate for emerging East Asia's local currency (LCY) bond market in 4Q12 was 3.0%, down slightly from 3.7% in 3Q12, as the region's LCY bond market reached US$6.5 trillion in size. The slight decline in the growth rate reflected a drop in the quarterly growth of government bonds from 3.5% in 3Q12 to 1.4% in 4Q12. However, much of the downturn in the government sector was offset by an increase in the corporate sector's growth rate from 4.2% in 3Q12 to 6.2% in 4Q12.

- The region's two most rapidly growing corporate bond markets in 4Q12 were those of Indonesia and the PRC, which grew 9.4% and 9.3%, respectively. The next three most rapidly growing corporate bond markets on a q-o-q basis were those of Thailand (6.7%), the Republic of Korea (4.1%), and Malaysia (3.9%).

- The slowdown of the region's growth rate in 4Q12 reflected mainly sluggish growth of only 0.9% in the PRC's government bond market, which accounted for 66% of the region's total government bond market at end-December, as well as slower growth in the government bond markets of Singapore (1.2%); the Republic of Korea (0.9%); and Hong Kong, China (0.5%).

- One factor responsible for the slow growth of the government bond sector in the PRC and several other markets has been a moderation of central bank bill issuance in recent quarters as sterilization activities have been reduced. Monetary Authority of Singapore (MAS) bills rose 12.6% q-o-q in 4Q12, however, as MAS has rapidly increased its bill issuance over the last year to expand the range of monetary policy tools at its disposal.

LCY Bond Market Structural Developments in Emerging East Asia

- The maturity profiles of the region's government bond markets generally lengthened in 2012, as evidenced by a modest expansion of maturities of 10 years or more, while the maturity profiles of corporate bond markets remained much more short-dated. In the Philippines and Indonesia, for example, around 45% of government bonds outstanding had remaining maturities of more than 10 years.

[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.

- Foreign holdings of emerging East Asian LCY government bonds continued to rise in 2012 in most markets. In Indonesia, the share of foreign holdings as a portion of total government bonds outstanding recovered from its downturn in mid-2012 to finish the year at 33%.

- Most government bond yield curves have shifted downward since the end of 3Q12 on the back of moderating inflation and reduced central bank policy rates. The PRC's curve, however, has continued to shift upward since the end of 3Q12, due to the lack of any monetary policy easing measures, while the performance of the economy has remained robust.

Risks to the Outlook

- Risks to the region's LCY bond markets are biased toward the downside, including (i) the budget deadlock threatening the US recovery, (ii) stronger growth potentially leading to higher interest rates and inflation, and (iii) a surge of destabilizing capital inflows into the region.

LCY Bond Market Developments in India

- India's LCY bond market expanded 24.3% in 2012, on the back of buoyant growth in both the government securities and corporate bond markets, to reach the equivalent of US$1 trillion.

- India's infrastructure needs are huge and they will be financed through both public–private partnership (PPP) projects and the LCY bond market.

Special Section: Managing Capital Flows in LCY Bond Markets

- Growth in the use of LCY bonds has helped facilitate management of the region's domestic economies and increased financial stability. It has also helped reduce yields and improve liquidity and efficiency in bond markets.

- Higher yields, appreciating currencies, improved credit ratings, and lower exchange rate volatility are all contributing to increased foreign participation in emerging East Asia's LCY bond markets. Lower global risk perceptions and more developed domestic financial markets are also contributing positively.

- Large inflows of foreign funds into the region's domestic economies can complicate policy management and may require balancing the needs of different policy objectives. In response, authorities in the region have implemented measures to manage the inflows of funds, including capital control measures to limit potentially destabilizing inflows.

Introduction: **Global and Regional Market Developments**

Emerging East Asia faces a global economic environment that is stabilizing but still weak.[2] The United States (US) turned in a weaker-than-expected growth performance in 4Q12 and the eurozone economies remain mired in recession and struggling to cope with high and rising unemployment. The recent downgrade of the United Kingdom's (UK) sovereign credit rating by Moody's from Aaa to Aa1 is another negative factor for the broader European outlook. In contrast, emerging East Asia's outlook is brightening with growth in the People's Republic of China (PRC) accelerating toward the end of last year. Meanwhile, the Southeast Asian economies continue to sustain robust growth supported by strong domestic demand. The unresolved budget deadlock in the US and the banking and debt crisis in Europe remain major risks for investors.

Confidence in eurozone financial markets has been rising and the euro has rallied against the US dollar in recent months. Nevertheless, financial conditions in the eurozone remain fragile with political uncertainty in Italy after the inconclusive election results. In addition, Cyprus is on the verge of a bailout of its banking system. While the size of the Cyprus bailout would be relatively small, there is reluctance within the European Union (EU) to proceed with a rescue package due to concerns over the huge size of Cyprus' banking system and fears that a bailout could saddle the Mediterranean island with an unsustainable level of debt. However, failure by the EU to rescue Cyprus could renew concerns about its commitment to the euro.

Emerging East Asia is showing signs of recovery. Growth in the region had been affected by the slowdown in the advanced economies that hit hard the export-oriented economies of Singapore; the Republic of Korea; and Hong Kong, China. However, in the PRC, the easing of monetary policy and a recovery in exports is helping to improve the growth outlook for the region's largest economy. Furthermore, growth in other emerging East Asian economies is expected to remain robust, supported by domestic consumption and investment growth.

Investors' risk perceptions of regional capital markets remain positive amid the improved regional growth outlook, even though this outlook is coupled with a continued weak global economic environment. The positive perceptions are reflected in widely falling bond yields, rising stock markets, and appreciating currencies across emerging East Asia **(Table A)**. Credit default swap (CDS) spreads in the region have remained relatively stable **(Figure A)**. Global investor sentiment has also improved with the narrowing of CDS spreads in several European economies as fears of a eurozone break-up have receded **(Figure B)**. Emerging market bond spreads similarly have benefited from rising investor confidence as spreads narrow **(Figure C)**.

Bond yields in the advanced economies have remained stable with a slight downward bias for the peripheral economies of the eurozone **(Figure D)**. The European Central Bank's commitment to keep government bond yields low has helped to reduce the bond yields of the peripheral economies. Low inflationary expectations in Europe have also contributed to lower yields. Meanwhile, the Bank of Japan has set an inflation target of 2.0%, putting downward pressure on the yen. As a result, Japan's currency has seen a sharp depreciation against the dollar. Yields in Japan, however, have remained stable.

Emerging East Asia's local currency (LCY) bond yields have been mixed, but have generally shown a downward bias since end-September. Amid some signs of recovery, the region's policymakers have been cautious about further reductions in policy rates. One exception is the State Bank of

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

Table A: Changes in Global Financial Conditions

	2-Year Government Bond (bps)	10-Year Government Bond (bps)	5-Year Credit Default Swap Spread (bps)	Equity Index (%)	FX Rate (%)
Major Advanced Economies					
United States	3	36	0	3.7	–
United Kingdom	18	18	(23)	7.8	1.7
Japan	(3)	(3)	(9)	28.3	(15.0)
Germany	22	22	(26)	6.1	(5.1)
Emerging East Asia					
China, People's Rep. of	19	16	(16)	14.3	1.1
Hong Kong, China	(5)	45	(5)	13.9	(0.01)
Indonesia	(90)	(60)	(17)	5.1	(1.7)
Korea, Rep. of	(7)	8	(15)	(1.7)	2.4
Malaysia	(1)	(4)	(13)	(1.0)	(1.4)
Philippines	19	(78)	(18)	17.6	2.8
Singapore	(2)	(2)	0	7.4	(0.7)
Thailand	(20)	22	(14)	13.4	3.0
Viet Nam	(125)	(77)	–	24.1	0.2
Select European Markets					
Greece	(289)	(756)	0	32.6	(5.1)
Ireland	(152)	(86)	(129)	8.1	(5.1)
Italy	(64)	(74)	(75)	12.3	(5.1)
Portugal	(160)	(303)	(19)	18.5	(5.1)
Spain	(106)	(83)	(79)	7.4	(5.1)

– = not available, ( ) = negative, bps = basis points, FX = foreign exchange.
Notes:
1. Data reflect changes between 1 October 2012 and 31 January 2013.
2. For emerging East Asia, a positive (negative) value for the FX rate means the appreciation (depreciation) of the local currrency against the US dollar.
3. For European markets, a postive (negative) value for the FX rate means the depreciation (appeciation) of the local currrency against the US dollar.
Source: Bloomberg LP, Institute of International Finance (IIF), and Thomson Reuters.

Viet Nam (SBV), which reduced its discount rate and refinancing rate by 100 basis points (bps) each in December.

Meanwhile, interest rates remained low in most advanced economies and Japan's expanded asset purchase program should help keep interest rates low there for some time. Sovereign spreads in Viet Nam have tightened, while the spreads for other emerging market bonds have remained broadly stable **(Figure E)**.

The shares of foreign holdings in the region's LCY government bond markets have continued their upward trajectory **(Figure F)**. For example, more than 30% of Indonesian bonds are now held by foreigners, while Thailand's foreign share of bond holdings has reached 16.4%.

Risks to the region's LCY bond markets are biased toward the downside:

- **Government spending cuts threaten the US recovery.** While the threat of the "fiscal cliff" has been averted for now, the US still faces the threat of looming across-the-board budget cuts, which are known as the sequestration. The budget agreement at the beginning of the year postponed the sequestration until 1 March. The US Congress, which remains bitterly divided, will have to act before then to stop the sequestration from taking effect. If Congress fails to act, US government spending will be reduced by $1,200 billion over the next 10 years; $85 billion of the cuts would take effect in 2013. Spending cuts of such magnitude could derail the US' tentative

Figure A: Credit Default Swap Spreads[a, b] (senior 5-year)

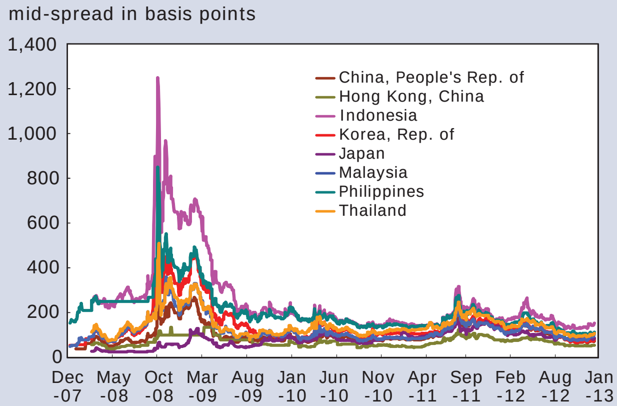


Figure B: Credit Default Swap Spreads for Select European Markets[a, b] (senior 5-year)

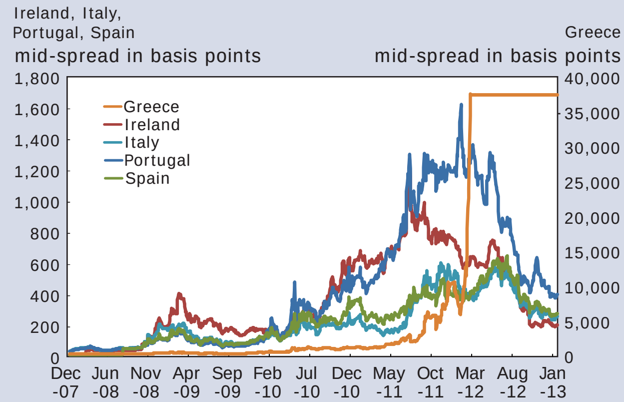


Figure C: US Equity Volatility and Emerging Market Sovereign Bond Spreads[b]

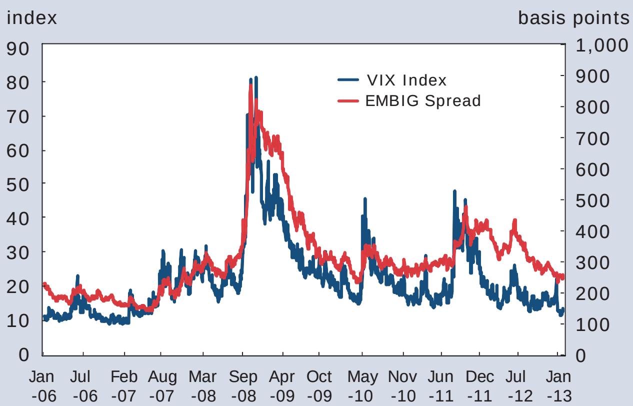


Figure D: 10-Year Government Bond Yields[b] (% per annum)

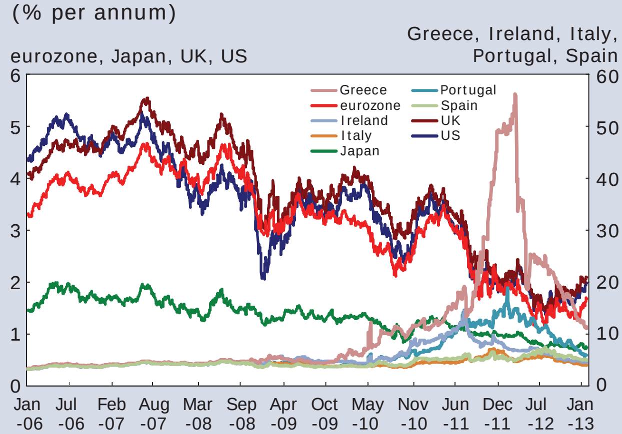


Figure E: JPMorgan EMBI Sovereign Stripped Spreads[a,b]

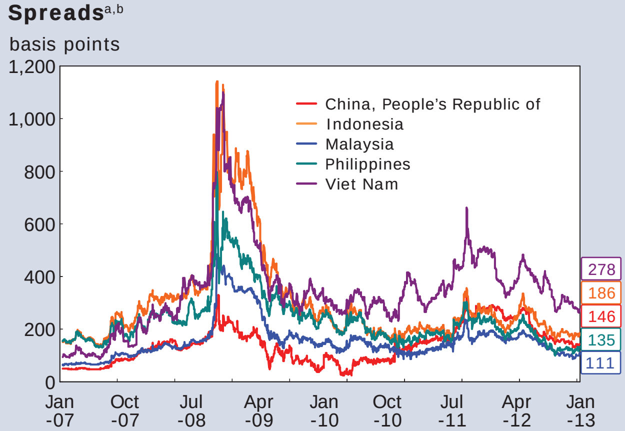
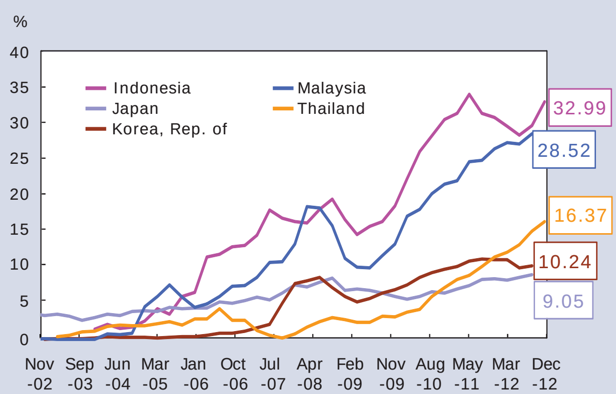


Figure F: Foreign Holdings of LCY Government Bonds in Select Asian Economies[c] (% of total)



EMBI = Emerging Markets Bond Index, EMBIG = Emerging Markets Bond Index Global, LCY = local currency, UK = United Kingdom, US = United States, VIX = Chicago Board Options Exchange Volatility Index.

Notes:

[a] In US$ and based on sovereign bonds.

[b] Data as of 31 January 2013.

[c] Data as of end-September 2012 except for Indonesia and Thailand as of end-December 2012.

Source: *AsianBondsOnline*, Bloomberg LP, and Thomson Reuters.

economic recovery. Without an agreement on a long-term plan to manage the budget, the US economy will continue to be subject to periodic bouts of uncertainty.

- **Stronger growth could lead to higher interest rates and inflation.** Inflationary pressures have remained relatively benign, allowing policymakers in the region to keep policy rates low to support growth. However, there are signs that economic conditions in the region are improving. There is also the potential threat of upward pressure on inflation from higher food prices. This could lead policymakers to reverse course and start raising policy rates to cool their economies, leading to falling bond prices.

- **Surge of capital inflows might contribute to appreciating local currencies and asset price bubbles.** The continued low interest rates prevailing in the advanced economies have raised concerns that emerging East Asia could be flooded with capital searching for higher yields. The relatively stronger economic conditions in the region have also attracted new foreign investors. These developments might put upward pressure on exchange rates, making exports less competitive. There are also concerns that higher levels of liquidity could lead to excessive credit growth, thus fueling asset price bubbles in the region.

Bond Market Developments in the Fourth Quarter of 2012

Size and Composition

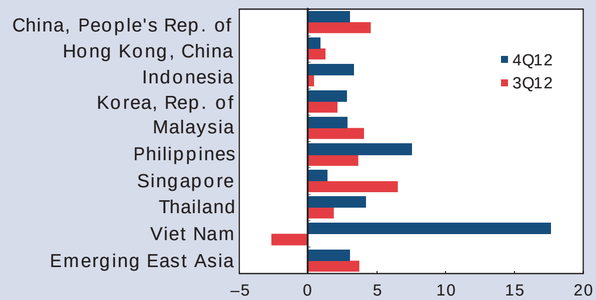
Total bonds outstanding in emerging East Asia's LCY bond market grew 3.0% q-o-q and 12.1% y-o-y to reach US$6.5 trillion at the end of 4Q12, primarily due to strong growth in the region's corporate bond sector in the last quarter of the year.[3]

The quarter-on-quarter (q-o-q) growth rate for emerging East Asia's local currency (LCY) bond market in 4Q12 was 3.0%, down slightly from 3.7% in 3Q12 **(Figure 1a)**. The five most rapidly growing markets in 4Q12 on a q-o-q basis were Viet Nam (17.6%), the Philippines (7.5%), Thailand (4.2%), Indonesia (3.3%), and the People's Republic of China (PRC) (3.0%) **(Table 1)**.

Some of the rapid growth of the Vietnamese and Philippine bond markets reflected the fact that these are the two smallest markets in the region, and thus have great potential for further growth and development, especially in their nascent corporate bond sectors. The growth of these two markets' government bond sectors, however, was the result of significant borrowing requirements in 2012. The budget deficit for Viet Nam was equal to 6.2% of gross domestic product (GDP) in the first 9 months of the year. The Philippine budget deficit for full-year 2012 is 2.3% of GDP, up slightly from 2.0% in 2011, reflecting, in part, an uptick in infrastructure investment in 2012.

The bond markets of the Republic of Korea and Malaysia were among the slower growing markets in the region in 4Q12, with both expanding only 2.8% q-o-q. The weakest q-o-q growth rate was that of Hong Kong, China, which came in at 0.9%, down slightly from 1.3% in 3Q12.

Figure 1a: Growth of LCY Bond Markets
(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 LCY base and do not include currency effects.
3. Emerging East Asia growth figures are based on end-December 2012 currency exchange rates and does not include currency effects.
4. For Singapore, corporate bonds outstanding quarterly figures based on *AsiaBondsOnline* estimates.

Source: 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).

The slight q-o-q decline in the region's 4Q12 growth rate was driven by a sharp decline in the region's growth rate for government bonds to 1.4% from 3.5% in 3Q12. Much of this downturn, however, was offset by a substantial increase in the corporate sector's q-o-q growth rate to 6.2% in 4Q12 from 4.2% in 3Q12.

The region's five most rapidly growing markets on a y-o-y basis in 4Q12 were Viet Nam, the Philippines, Malaysia, Thailand, and Singapore, which grew 42.7%, 20.5%, 19.9%, 19.8%, and 19.4%, respectively **(Figure 1b)**. The growth of Viet Nam's bond market was driven entirely by its government bond market, which grew 54.6% y-o-y at the same time its corporate bond

[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.

Table 1: Size and Composition of LCY Bond Markets

	4Q11		3Q12		4Q12		Growth Rate (LCY-base %)				Growth Rate (US$-base %)			
	Amount (US$ billion)	% share	Amount (US$ billion)	% share	Amount (US$ billion)	% share	4Q11		4Q12		4Q11		4Q12	
							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	3,392	100.0	3,667	100.0	3,811	100.0	3.1	5.9	3.0	11.2	4.5	11.1	3.9	12.4
Government	2,540	74.9	2,724	74.3	2,772	72.7	1.3	0.5	0.9	8.0	2.7	5.5	1.8	9.1
Corporate	852	25.1	943	25.7	1,040	27.3	8.7	26.0	9.3	20.8	10.2	32.2	10.2	22.0
Hong Kong, China														
Total	169	100.0	176	100.0	178	100.0	(0.8)	3.1	0.9	5.1	(0.6)	3.2	0.9	5.3
Government	91	53.7	93	52.8	93	52.7	0.9	3.9	0.5	3.0	1.1	4.0	0.5	3.2
Corporate	78	46.3	83	47.2	84	47.3	(2.8)	2.2	1.3	7.6	(2.5)	2.3	1.3	7.8
Indonesia														
Total	110	100.0	110	100.0	111	100.0	1.2	3.6	3.3	9.7	(1.0)	2.8	1.2	1.6
Government	93	85.2	92	83.8	92	82.8	(0.1)	0.3	2.2	6.6	(2.2)	(0.5)	0.1	(1.3)
Corporate	16	14.8	18	16.2	19	17.2	9.2	28.0	9.4	27.6	6.8	27.0	7.2	18.1
Korea, Rep. of														
Total	1,229	100.0	1,370	100.0	1,471	100.0	2.0	9.5	2.8	10.5	4.2	7.0	7.4	19.7
Government	510	41.5	543	39.6	572	38.9	(0.5)	6.0	0.9	3.7	1.7	3.5	5.4	12.3
Corporate	719	58.5	827	60.4	899	61.1	3.8	12.1	4.1	15.4	6.1	9.5	8.7	24.9
Malaysia														
Total	263	100.0	318	100.0	327	100.0	(0.7)	10.4	2.8	19.9	(0.1)	6.7	2.9	24.2
Government	158	59.8	192	60.3	196	59.9	(1.2)	12.0	2.2	20.0	(0.5)	8.3	2.2	24.3
Corporate	106	40.2	126	39.7	131	40.1	(0.05)	8.1	3.9	19.8	0.6	4.5	3.9	24.1
Philippines														
Total	77	100.0	91	100.0	100	100.0	3.6	5.8	7.5	20.5	3.4	5.7	9.4	28.9
Government	67	87.1	79	86.5	87	87.1	3.1	4.8	8.3	20.5	2.9	4.7	10.2	28.8
Corporate	10	12.9	12	13.5	13	12.9	6.8	13.4	2.3	20.7	6.7	13.3	4.1	29.1
Singapore														
Total	190	100.0	237	100.0	241	100.0	0.3	13.7	1.4	19.4	1.1	12.6	1.9	26.8
Government	118	62.2	139	58.7	142	58.6	0.8	16.0	1.2	12.6	1.6	14.8	1.7	19.5
Corporate	72	37.8	98	41.3	100	41.4	(0.5)	10.1	1.7	30.6	0.3	9.0	2.1	38.6
Thailand														
Total	225	100.0	265	100.0	279	100.0	(0.6)	5.3	4.2	19.8	(1.7)	0.3	5.0	23.6
Government	182	80.8	212	79.8	221	79.3	(1.4)	4.4	3.6	17.7	(2.5)	(0.5)	4.4	21.4
Corporate	43	19.2	54	20.2	58	20.7	3.1	9.1	6.7	28.8	1.9	3.9	7.6	32.8
Viet Nam														
Total	17	100.0	21	100.0	25	100.0	0.04	17.1	17.6	42.7	(0.9)	8.6	17.9	44.0
Government	15	88.3	20	92.5	24	95.7	0.03	20.8	21.8	54.6	(0.9)	12.0	22.0	56.1
Corporate	2	11.7	2	7.5	1	4.3	0.1	(5.0)	(33.2)	(47.6)	(0.9)	(11.9)	(33.1)	(47.1)
Emerging East Asia (EEA)														
Total	5,673	100.0	6,255	100.0	6,543	100.0	2.2	7.0	3.0	12.1	3.5	9.1	4.6	15.3
Government	3,774	66.5	4,093	65.4	4,199	64.2	0.8	2.6	1.4	8.8	1.9	5.1	2.6	11.2
Corporate	1,899	33.5	2,162	34.6	2,344	35.8	5.2	17.0	6.2	18.6	6.9	17.9	8.4	23.5
EEA excl. PRC														
Total	2,281	100.0	2,588	100.0	2,731	100.0	1.1	8.7	3.0	13.4	2.2	6.2	5.5	19.8
Government	1,234	54.1	1,369	52.9	1,427	52.2	(0.3)	6.9	2.3	10.3	0.4	4.4	4.2	15.6
Corporate	1,047	45.9	1,219	47.1	1,304	47.8	2.7	10.8	3.8	17.0	4.3	8.4	7.0	24.6
Japan														
Total	12,708	100.0	12,847	100.0	11,732	100.0	0.5	2.8	1.6	4.1	0.7	8.4	(8.7)	(7.7)
Government	11,556	90.9	11,741	91.4	10,738	91.5	0.6	3.3	1.8	4.8	0.8	9.0	(8.5)	(7.1)
Corporate	1,152	9.1	1,106	8.6	994	8.5	(0.8)	(1.8)	(0.01)	(2.7)	(0.6)	3.5	(10.1)	(13.7)
Memo Item: CNH														
Total	44	100.0	53	100.0	53	100.0	9.3	297.8	(1.2)	19.1	10.8	317.5	(0.3)	20.4
Government	7	14.8	13	24.5	12	22.9	(6.8)	36.7	(7.9)	84.1	(5.5)	43.4	(7.1)	86.0
Corporate	38	85.2	40	75.5	41	77.1	12.7	495.1	1.0	7.9	14.3	524.6	1.9	9.0
Memo Item: India														
Total	846	100.0	1,045	100.0	1,015	100.0	5.1	17.8	1.1	24.3	(3.0)	(0.8)	(2.9)	20.0
Government	674	79.7	830	79.5	804	79.2	6.0	17.9	0.7	23.5	(2.2)	(0.7)	(3.2)	19.2
Corporate	172	20.3	214	20.5	211	20.8	1.7	17.2	2.6	27.6	(6.2)	(1.2)	(1.4)	23.1

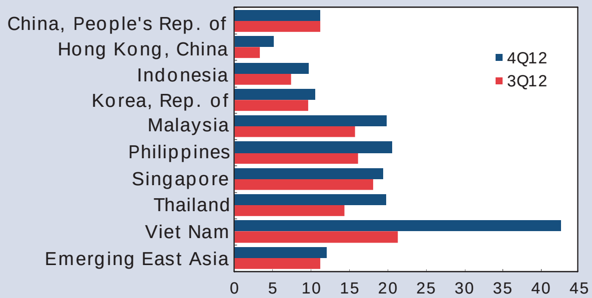
( ) = negative, LCY = local currency, q-o-q = quarter-on-quarter, y-o-y = year-on-year.

Notes:

1. For Singapore, corporate bonds outstanding quarterly figures based on *AsianBondsOnline* estimates. For Japan, 4Q12 data carried over from November 2012.
2. Corporate bonds include issues by financial institutions.
3. CNH bonds are renminbi-denominated bonds issued in Hong Kong, China. Data include certificates of deposit 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-December 2012 currency exchange rates and do not include currency effects.
6. 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: 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); Japan (Japan Securities Dealers Association); and India (Bloomberg LP).

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



LCY = local currency, y-o-y = year-on-year.
Notes:
1. Calculated using data from national sources.
2. Growth rates are calculated from LCY base and do not include currency effects.
3. Emerging East Asia growth figures are based on end-December 2012 currency exchange rates and does not include currency effects.
4. For Singapore, corporate bonds outstanding quarterly figures based on *AsiaBondsOnline* estimates.

Source: 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).

market shrank 47.6% y-o-y. New issuance in Viet Nam's corporate sector remained constrained by a combination of high interest rates and investor concerns about corporate sector credit quality as Vietnamese banks have become more cautious about extending new credit.

In the next four most rapidly growing markets (the Philippines, Malaysia, Thailand, and Singapore), the corporate sectors expanded at strong double-digit rates of growth. In addition, the y-o-y growth rates for government and corporate bond markets in both Malaysia and the Philippines in 4Q12 were almost the same: 20.0% and 19.8% for Malaysia's government and corporate bond markets, respectively, and 20.5% and 20.7% for the Philippines' government and corporate bond markets, respectively.

Asian LCY bond markets outside of emerging East Asia also have made significant progress in recent years. The Indian LCY bond market, in particular, has grown rapidly—24.3% y-o-y in 2012—while undergoing significant regulatory and structural changes. See **Box 1** on page 28 for more detail on the Indian LCY bond market.

Total government bonds outstanding in emerging East Asia grew only 1.4% q-o-q in 4Q12, reflecting very slow growth in the PRC even as growth in Viet Nam, the Philippines, Thailand, and several other markets remained relatively robust.

The slowdown in the region's q-o-q growth rate in 4Q12 was due mainly to sluggish growth of only 0.9% in the PRC's government bond market, which accounts for 66% of the region's total government bond market, as well as slower q-o-q growth in the government bond markets of Singapore (1.2%); the Republic of Korea (0.9%); and Hong Kong, China (0.5%). One factor responsible for the slow growth of the government bond sector in the PRC and several other markets has been the moderation of central bank bill issuance in recent quarters as sterilization activities have been reduced over the last year. The People's Bank of China (PBOC) ceased issuing new bills in the beginning of 2012. The stock of bills of the Hong Kong Monetary Authority (HKMA) rose by 0.4% y-o-y, while HKMA's bonds fell by 0.9% y-o-y. The stock of the Bank of Korea's (BOK) bills rose by 3.5%, but the stock of BOK's bonds fell by 3.3%.

While the stock of bills issued by the Monetary Authority of Singapore (MAS) grew by 12.6% q-o-q and 102.0% y-o-y in 4Q12, Singapore's overall government bond growth rate was a surprisingly low 1.2% q-o-q as the government cut back issuance of Singapore Government Securities (SGSs), which comprise both treasury bonds and bills, by 18.7% q-o-q and 19.7% y-o-y in the last quarter of the year. The growth of MAS bills has been very brisk since MAS first began issuing bills as part of its Money Market Operations (MMO) in April 2011. Previously, MAS used three instruments to inject and withdraw liquidity into and from the banking system as part of its daily MMO: (i) foreign exchange (FX) swaps or reverse swaps, (ii) SGS repos or reverse repos, and (iii) clean lending and borrowing. The timing and amount of individual MAS bill issues is decided by MAS in consultation with primary dealers. Any issuance of MAS bills involves MAS' estimate of its sterilization requirements, which can be driven by factors such as capital flows into and out of the region.

The next most rapidly growing government bond market in 4Q12 on a q-o-q basis after Viet Nam and the Philippines was Thailand (3.6%), followed by Malaysia and Indonesia, both of which expanded 2.2%.

Corporate Bond Market

The LCY corporate bond market in emerging East Asia grew 6.2% q-o-q in 4Q12, up from 4.2% growth recorded in 3Q12.

The largest LCY corporate bond market in emerging East Asia at the end of 4Q12 remained that of the PRC at a size equivalent to US$1 trillion, followed by the Republic of Korea at US$899 billion. The next largest corporate bond markets were those of Malaysia at US$131 billion; Singapore at US$100 billion; Hong Kong, China at US$84 billion; and Thailand at US$58 billion. The three remaining LCY corporate bond markets—Indonesia, the Philippines, and Viet Nam—are much smaller in size at US$19 billion, US$13 billion, and US$1 billion, respectively.

The two most rapidly growing corporate bond markets in 4Q12 on a q-o-q basis were those of Indonesia and the PRC, which grew 9.4% and 9.3%, respectively, despite the immense difference in size between these two markets. The next three most rapidly growing corporate bond markets on a q-o-q basis were those of Thailand (6.7%), the Republic of Korea (4.1%), and Malaysia (3.9%). Viet Nam's tiny corporate bond market (US$1 billion) actually contracted 33.2% during the quarter. As mentioned earlier, this reflected a combination of high issuance costs in Viet Nam, given persistently high domestic interest rates, as well as investor concerns over the credit quality of corporate bonds.

Indonesia's corporate bond sector is not only small in relation to the region's total bond market, but it also accounted for only 17.2% of Indonesia's LCY bond market at the end of 4Q12. Conventional corporate bonds accounted for 81.9% of total corporate bonds. Subordinated bank bonds accounted for 14.2% of the stock of Indonesia's corporate bonds at the end of the year and *sukuk* (Islamic bond) issues by corporate entities comprised only 3.5%. Indonesia's corporate bond market is also highly concentrated among a relatively small universe of issuers.

At the end of 4Q12, the bonds outstanding of the top 33 corporate bond issuers in Indonesia amounted to IDR150.3 trillion (US$15.3 billion), or 80.2% of total corporate bonds outstanding. Indonesia's top three LCY corporate bond issuers in 4Q12 were the same as in 3Q12, led by state-power firm PLN with outstanding bonds valued at IDR14.2 trillion, followed by leasing company Adira Dinamika Multifinance with bonds outstanding of IDR9.4 trillion, and telecommunications firm Indosat with bonds outstanding of IDR9.2 trillion.

The LCY corporate bond market in the Republic of Korea grew 15.4% y-o-y in 4Q12 to reach KRW956.7 trillion (US$899 billion) at the end of 4Q12. The top 30 LCY corporate bond issuers had cumulative bonds outstanding of KRW593.7 trillion, or 62.1% of the total. The largest issuer of corporate bonds remained government-owned Korea Land & Housing Corporation with bonds outstanding of KRW57.9 trillion, which accounted for about 10% of the total market.

Two of the largest new issues during the quarter were Nonghyup Bank's KRW700 billion 8-year bond carrying a 3.33% coupon and Korea Land & Housing Corporation's KRW500 billion 3-year bond with a 3.02% coupon. The longest-dated LCY corporate bond issued during the quarter was Korea Land & Housing Corporation's 40-year bond worth KRW90 billion. Two of the more interesting high-yield bonds issued in 4Q12 were (i) Dongbu Corporation's 1-year bond of KRW42 billion carrying an 8.9% coupon, and (ii) Kolon Global Corporation's 2.5-year bond of KRW100 billion with an 8.5% coupon. These bonds had small issue sizes and short-dated maturities, but their high yields make them attractive to more sophisticated private investors who understand the operating environment and business risks, rather than institutional investors who would be looking for longer-dated securities with an investment grade credit rating. The high-yield bond market in the Republic of Korea—and in some other markets in the region as well—has considerable potential for further growth and development, because it satisfies a need for higher yields on the part of investors such as private banking clients, who must currently look outside the region for higher returns on their bond investments.

Malaysia's LCY corporate bond market climbed to MYR401 billion (US$131 billion) at end-December, expanding 3.9% q-o-q and 19.8% y-o-y. As of end-December, the total bonds outstanding of the top 30 corporate bond issuers in Malaysia stood at MYR221.8 billion, accounting for 55.3% of total corporate bonds outstanding. Project Lebuhraya Usahasama Bhd., an expressway operator, remained the largest issuer of LCY corporate bonds in Malaysia with bonds outstanding valued at MYR30.6 billion. National mortgage corporation Cagamas and the government's investment-holding arm Khazanah followed with total bonds outstanding of MYR20.2 billion and MYR17.7 billion, respectively. Financial firms accounted for a third of the list of the top 30 LCY corporate bond issuers in Malaysia in 4Q12. Other bond issuers were from the following sectors: energy, gas, and water; transport, storage, and communications; quasi-government; and construction.

Ratio of Bonds Outstanding to Gross Domestic Product

The ratio of bonds outstanding to GDP in emerging East Asia rose slightly to 55.0% in 4Q12 from 54.0% in 3Q12.

The ratio of bonds outstanding to GDP in emerging East Asia rose slightly to 55.0% in 4Q12 from 54.0% in 3Q12 **(Table 2)**. Specifically, the ratio of government bonds to GDP fell slightly to 35.3% in 4Q12 from 35.4% in 3Q12, while the ratio of corporate bonds to GDP rose from 18.7% to 19.7%.

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

	4Q11	3Q12	4Q12
China, People's Rep. of			
Total	45.1	45.7	45.7
Government	33.8	33.9	33.3
Corporate	11.3	11.7	12.5
Hong Kong, China			
Total	67.6	68.3	68.9
Government	36.3	36.1	36.3
Corporate	31.3	32.2	32.6
Indonesia			
Total	13.4	13.1	13.2
Government	11.4	10.9	11.0
Corporate	2.0	2.1	2.3
Korea, Rep. of			
Total	114.5	120.1	129.0
Government	47.5	47.6	50.2
Corporate	67.0	72.5	78.8
Malaysia			
Total	94.6	105.1	108.2
Government	56.6	63.4	64.8
Corporate	38.0	41.8	43.4
Philippines			
Total	34.8	36.8	38.7
Government	30.3	31.8	33.7
Corporate	4.5	5.0	5.0
Singapore			
Total	75.5	86.8	88.4
Government	47.0	51.0	51.8
Corporate	28.6	35.8	36.6
Thailand			
Total	67.5	75.3	79.0
Government	54.5	60.1	62.7
Corporate	13.0	15.2	16.3
Viet Nam			
Total	14.4	15.9	17.7
Government	12.7	14.7	16.9
Corporate	1.7	1.2	0.8
Emerging East Asia			
Total	52.2	54.0	55.0
Government	34.7	35.4	35.3
Corporate	17.5	18.7	19.7
Japan			
Total	207.7	210.3	213.9
Government	188.9	192.2	195.8
Corporate	18.8	18.1	18.1

GDP = gross domestic product, LCY = local currency.
Notes:
1. Data for GDP are from CEIC. 4Q12 GDP figures carried over from 3Q12 except for the People's Republic of China, Indonesia, Japan, the Philippines, and Viet Nam.
2. For Singapore, corporate bonds outstanding quarterly figures based on *AsianBondsOnline* estimates. For Japan, 4Q12 bonds outstanding carried over from November 2012.

Source: 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 ratio of government bonds to GDP fell in the PRC from 33.9% to 33.3% between 3Q12 and 4Q12, but rose in all other markets. The largest such increase in the ratio of LCY government bonds to GDP was in the Republic of Korea, where the ratio rose from 47.6% to 50.2%. The huge size of the PRC government bond market, however, outweighed these increases in other markets, resulting in a modest decline of the ratio of government bonds to GDP for the region as a whole.

The largest increases in the ratios of corporate bonds to GDP occurred in the Republic of Korea (6.3 percentage points), Malaysia (1.6 percentage points), and Thailand (1.1 percentage points). The ratio of corporate bonds to GDP remained stable at 5.0% between 3Q12 and 4Q12 in the Philippines, but fell in Viet Nam from 1.2% to 0.8%. The ratio of corporate bonds to GDP rose in all of the remaining markets by 1 percentage point or less. Finally, the low ratio of bonds to GDP for Viet Nam's corporate sector reflected the tiny size—equivalent to only US$1 billion—of this market.

Issuance

LCY bond issuance in emerging East Asia totaled US$3.3 trillion in 2012, a decline of 8.4% from 2011. This decline reflected a 15.6% fall in government bond issuance in 2012, while corporate bond issuance rose 20.1%.

LCY bond issuance in emerging East Asia totaled US$3.3 trillion in 2012, a decline of 8.4% from 2011. Government bond issuance shrank 15.6% to US$2.4 trillion from US$2.8 trillion a year earlier, while corporate bond issuance rose 20.1% to US$860 billion from US$716 billion.

Quarterly issuance was volatile during the year, whether measured by government (including state-owned enterprises [SOEs]) and central bank issuance **(Figure 2a)**, corporate issuance **(Figure2b)**, or total issuance excluding the PRC and issuance by the PRC only **(Figure 2c)**.

Quarterly issuance by central banks and monetary authorities in 4Q12 rose slightly from 3Q12 **(Table 3)**. HKMA increased its issuance in 4Q12 by almost 20% to US$188 billion, while MAS and BOK increased their respective issuance by much more modest amounts. BI raised its issuance by 29.8% in 4Q12, but this still only amounted to US$4 billion, given the sharp reduction of BI's issuance of *Sertifikat* Bank Indonesia (SBI) over the last year. BI has sharply reduced the stock of SBI outstanding over the last several years to curb speculation on the direction of the rupiah–US$ exchange rate. Bank Negara Malaysia (BNM), meanwhile, reduced its q-o-q issuance by 25.7% in 4Q12.

Issuance by treasuries and other government agencies in emerging East Asia in 4Q12 fell sharply by 31.1% q-o-q as many annual issuance programs had already been completed by the beginning of the fourth quarter. In particular, the PRC, Indonesia, and the Philippines all reduced their 4Q12 government sector bond issuance by 30% or more. Thailand reduced its government bond issuance by 57.9% q-o-q in 4Q12, while Malaysia and Singapore reduced their issuance by about 20% each.

Issuance in the region's corporate bond sector grew 6.3% q-o-q and 6.6% y-o-y. The only large increases in new corporate issuance on a q-o-q basis came from the PRC and Indonesia, which saw their issuance levels rise 26.1% and 118.7%, respectively. The US$109 billion of new corporate issuance in the PRC was the largest in the region. The next largest amount of corporate issuance was in the Republic of Korea at US$93 billion. Taken together, corporate issuance in 4Q12 in the PRC and Republic of Korea accounted for US$201 billion out of the region's total corporate bond issuance of US$234 billion in the last quarter of the year.

Issuance in the region's smaller markets can be highly volatile quarter-to-quarter, since issuance by a relatively small number of government-owned companies, financial institutions, and large blue chip issuers from the private sector can skew

Figure 2a: Government (including SOE) and Central Bank Bond Issuance

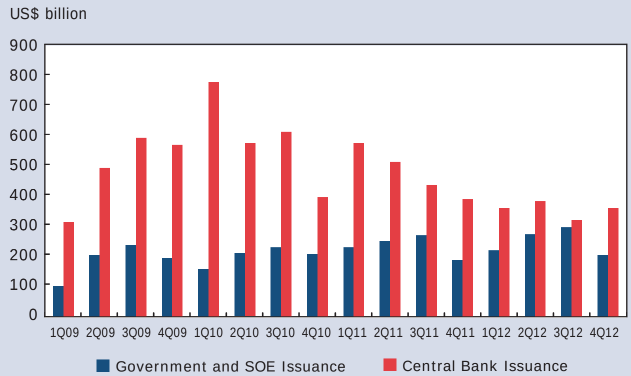


Figure 2b: Government (including SOE) and Corporate Bond Issuance

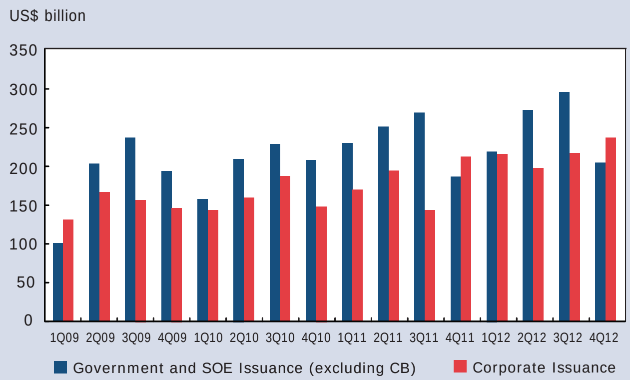
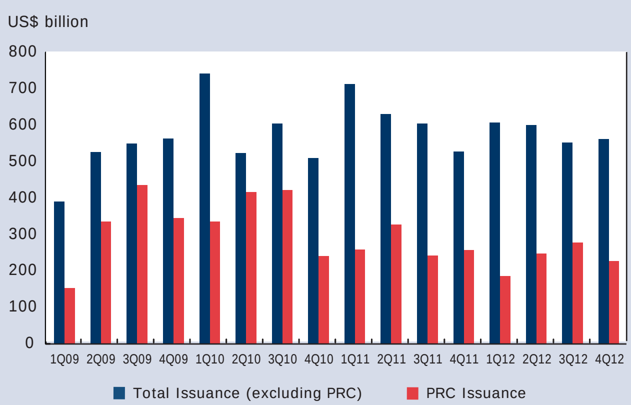


Figure 2c: Total LCY Bond Issuance



CB = central bank, LCY = local currency, PRC = People's Republic of China, SOE = state-owned enterprise.
Note: In the PRC, government issuance (including SOE issuance) includes policy bank bonds, local government bonds, and savings bonds.
Source: *AsianBondsOnline*.

issuance numbers in a given quarter. The smaller markets, nevertheless, can offer investors a good deal of diversity in terms of credit quality, yield, and maturity, with Indonesia being a case in point. In 4Q12, 40 new bond series were issued by 20 Indonesian corporates, with maturities ranging from 1 year to 7 years, and coupons ranging from 6.25% to 9.40%. Indonesia's new corporate bond issues in 4Q12 consisted entirely of conventional bonds with the exception of two *sukuk* issues and four subordinated bond series.

Money Market Trends and Bills-to-Bonds Ratios

The ratio of bills to bonds fell or remained unchanged in most emerging East Asian markets between the end of 3Q12 and the end of 4Q12.

The ratio of bills-to-bonds fell or remained unchanged between the end of 3Q12 and the end of 4Q12 in five out of the eight individual markets presented in **Figure 3a**. The ratio of bills to bonds rose only in Singapore, Thailand, and Viet Nam. The most dramatic decline was in the PRC due to the fact that the PBOC ceased issuance of bills in the beginning of 2012, resulting in a sharp decline of PBOC bills outstanding by the end of 3Q12 and their disappearance by the end of 4Q12 **(Figure 3b)**. On the other hand, the stock of bills issued by central banks and monetary authorities rose significantly on y-o-y basis in Malaysia, Singapore, Thailand, and Viet Nam. The State Bank of Viet Nam (SBV), however, dramatically increased its stock of bills in 4Q12 by 165.3% q-o-q to a level of US$3 billion, resulting in an increase of Viet Nam's bills-to-bonds ratio to 0.41 at the end of 4Q12 from 0.19 at the end of 3Q12 **(Table 4)**. SBV had no bills outstanding at the end of 4Q11. The bills-to-bonds ratio for Hong Kong, China stood at 4.3 at the end of 4Q12; however, Hong Kong, China is not included in Figure 3a because its very high ratio puts it on a different scale than other markets.

The region's stock of treasury bills at the end of 4Q12 was equivalent to US$98 billion. Of this

Table 3: LCY-Denominated Bond Issuance (gross)

	LCY (billion)		US$ (billion)		Growth Rate (LCY-base %)		Growth Rate (US$-base %)	
	4Q12	% share	4Q12	% share	4Q12		4Q12	
					q-o-q	y-o-y	q-o-q	y-o-y
China, People's Rep. of (PRC)								
Total	1,412	100.0	227	100.0	(18.8)	(12.8)	(18.1)	(11.9)
Government	735	52.1	118	52.1	(38.9)	(25.2)	(38.3)	(24.4)
Central Bank	0	0.0	0	0.0	–	–	–	–
Treasury and Other Govt.	735	52.1	118	52.1	(38.9)	12.4	(38.3)	13.6
Corporate	676	47.9	109	47.9	26.1	6.4	27.2	7.5
Hong Kong, China								
Total	1,509	100.0	195	100.0	16.3	12.1	16.4	12.4
Government	1,460	96.7	188	96.7	18.6	12.8	18.7	13.1
Central Bank	1,457	96.5	188	96.5	19.8	13.1	19.9	13.3
Treasury and Other Govt.	3	0.2	0	0.2	(79.3)	(45.5)	(79.3)	(45.3)
Corporate	50	3.3	6	3.3	(25.7)	(4.7)	(25.7)	(4.5)
Indonesia								
Total	87,135	100.0	9	100.0	8.9	(6.5)	6.7	(13.4)
Government	65,355	75.0	7	75.0	(6.7)	(15.3)	(8.6)	(21.6)
Central Bank	38,246	43.9	4	43.9	29.8	(25.9)	27.1	(31.4)
Treasury and Other Govt.	27,109	31.1	3	31.1	(33.2)	6.1	(34.5)	(1.7)
Corporate	21,780	25.0	2	25.0	118.7	36.4	114.2	26.3
Korea, Rep. of								
Total	170,220	100.0	160	100.0	6.3	5.2	11.0	13.9
Government	71,603	42.1	67	42.1	13.1	7.6	18.1	16.6
Central Bank	43,470	25.5	41	25.5	11.5	5.0	16.4	13.7
Treasury and Other Govt.	28,133	16.5	26	16.5	15.7	12.0	20.8	21.2
Corporate	98,617	57.9	93	57.9	1.9	3.5	6.4	12.0
Malaysia								
Total	139	100.0	45	100.0	(24.0)	27.1	(24.0)	31.6
Government	106	76.6	35	76.6	(24.8)	23.5	(24.8)	28.0
Central Bank	83	60.0	27	60.0	(25.7)	26.1	(25.6)	30.7
Treasury and Other Govt.	23	16.6	8	16.6	(21.5)	14.9	(21.4)	19.1
Corporate	33	23.4	11	23.4	(21.4)	40.2	(21.4)	45.2
Philippines								
Total	157	100.0	4	100.0	(32.9)	(25.2)	(31.7)	(20.1)
Government	141	89.8	3	89.8	(31.7)	(21.0)	(30.5)	(15.5)
Central Bank	0	0.0	0	0.0	–	–	–	–
Treasury and Other Govt.	141	89.8	3	89.8	(31.7)	(21.0)	(30.5)	(15.5)
Corporate	16	10.2	0.4	10.2	(41.6)	(49.3)	(40.6)	(45.8)
Singapore								
Total	89	100.0	73	100.0	(15.3)	(7.1)	(14.9)	(1.4)
Government	87	97.3	71	97.3	(8.9)	(6.1)	(8.5)	(0.3)
Central Bank	41	45.8	33	45.8	5.4	16.2	5.9	23.3
Treasury and Other Govt.	46	51.5	38	51.5	(18.7)	(19.7)	(18.4)	(14.8)
Corporate	2	2.7	2	2.7	(76.1)	(33.3)	(75.9)	(29.2)
Thailand								
Total	2,199	100.0	72	100.0	(9.1)	(20.8)	(8.4)	(18.3)
Government	1,858	84.5	61	84.5	(10.7)	(26.5)	(10.0)	(24.2)
Central Bank	1,693	77.0	55	77.0	0.3	(31.8)	1.0	(29.7)
Treasury and Other Govt.	165	7.5	5	7.5	(57.9)	289.7	(57.5)	301.9
Corporate	341	15.5	11	15.5	0.7	36.8	1.5	41.1

continued on next page

Table 3 *continued*

	LCY (billion)		US$ (billion)		Growth Rate (LCY-base %)		Growth Rate (US$-base %)	
	4Q12	% share	4Q12	% share	4Q12		4Q12	
					q-o-q	y-o-y	q-o-q	y-o-y
Viet Nam								
Total	111,936	100.0	5	100.0	557.7	913.1	559.1	922.5
Government	111,786	99.9	5	99.9	591.3	969.7	592.8	979.7
Central Bank	58,560	52.3	3	52.3	–	–	–	–
Treasury and Other Govt.	53,226	47.6	3	47.6	229.2	409.3	229.9	414.1
Corporate	150	0.1	0.01	0.1	(82.4)	(75.0)	(82.3)	(74.7)
Emerging East Asia (EEA)								
Total	–	–	790	100.0	(5.6)	(2.0)	(4.5)	0.8
Government	–	–	556	70.4	(9.9)	(5.2)	(9.1)	(2.9)
Central Bank	–	–	352	44.5	9.8	(11.0)	10.6	(9.0)
Treasury and Other Govt.	–	–	204	25.9	(31.1)	6.6	(30.4)	10.0
Corporate	–	–	234	29.6	6.3	6.6	8.6	10.9
EEA excl. PRC								
Total	–	–	563	100.0	1.0	3.1	2.3	7.1
Government	–	–	438	77.7	3.3	2.1	4.2	5.2
Central Bank	–	–	352	62.4	9.8	2.8	10.6	5.2
Treasury and Other Govt.	–	–	86	15.3	(16.7)	(0.5)	(15.6)	5.4
Corporate	–	–	125	22.3	(6.5)	6.8	(3.6)	14.1
Japan								
Total	51,396	100.0	592	100.0	(1.7)	6.1	(11.7)	(5.9)
Government	47,890	93.2	552	93.2	(2.2)	6.4	(12.1)	(5.7)
Central Bank	0	0.0	0	0.0	–	–	–	–
Treasury and Other Govt.	47,890	93.2	552	93.2	(2.2)	6.4	(12.1)	(5.7)
Corporate	3,507	6.8	40	6.8	6.3	2.1	(4.5)	(9.5)

– = not applicable, ( ) = negative, LCY = local currency, q-o-q = quarter-on-quarter, y-o-y = year-on-year.
Notes:
1. For Japan, government and corporate bond issuance based on *AsianBondsOnline* estimates.
2. Corporate bonds include issues by financial institutions.
3. Bloomberg LP end-of-period LCY–US$ rates are used.
4. For LCY base, emerging East Asia growth figures are based on end-December 2012 currency exchange rates and do not include currency effects.
Source: 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).

amount, US$49 billion was issued by Singapore and another US$37 billion by the PRC, leaving only US$12 billion divided among all other markets in emerging East Asia. The region's US$260 billion stock of central bank bills is somewhat more evenly distributed, as has been mentioned above. The average treasury bills-to-treasury bonds ratio for the region as a whole was 0.05 at the end of 4Q12, reflecting a small stock of treasury bills and almost US$2 trillion of treasury bonds.

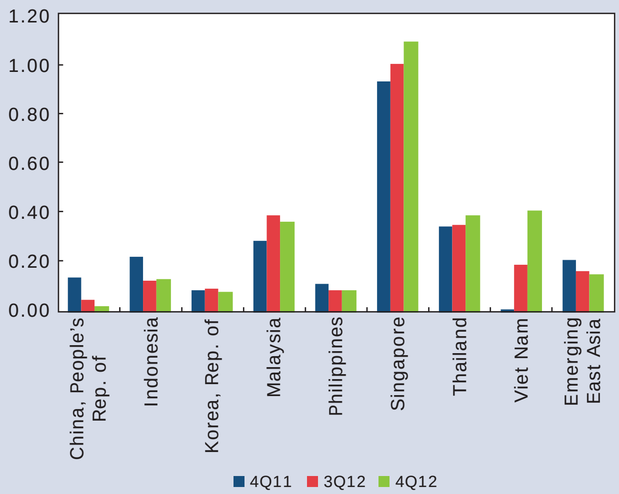
The region's stock of treasury bonds grew 11.6% y-o-y in 4Q12. Slightly over one-half of this amount (US$1.1 trillion) was issued by the PRC, US$368 billion was issued by the Republic of Korea, and US$142 billion by Malaysia. The remaining US$345 billion was more or less evenly distributed between Thailand (US$99 billion), Indonesia (US$81 billion), the Philippines (US$77 billion), and Singapore (US$68 billion).

Foreign Holdings

Foreign holdings of Asian LCY government bonds rose in most markets in the second half of 2012.

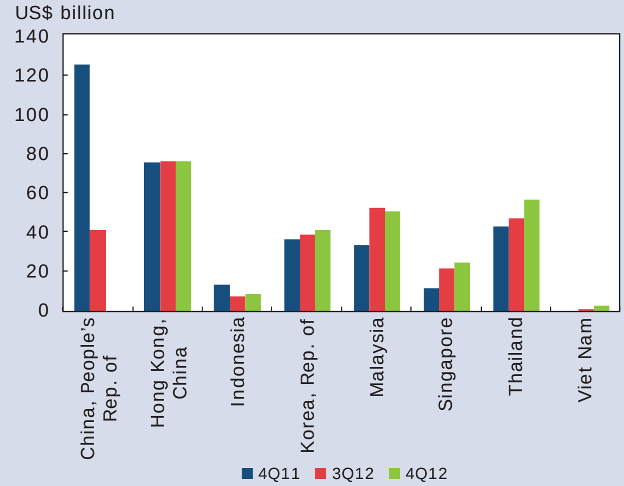
Foreign holdings of Asian LCY government bonds rose in late 2012 in most markets **(Figure 4)**. In

Figure 3a: Total Bills-to-Bonds Ratios



Note: 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.
Source: *AsianBondsOnline*.

Figure 3b: Central Bank Bills Outstanding



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

Indonesia, the share of foreign holdings to total government bonds recovered from a downturn in mid-2012 to finish the year at 33.0% of total holdings. This was only slightly below the all-time high for foreign holdings as a proportion of total holdings: 35.5% in July 2011. Foreign holdings of Malaysian government bonds rose to 28.5% of total holdings at end-September from 27.1% at end-June. Foreign holdings of Thai bonds rose to 16.4% of total holdings at end-December from 15.0% at end-September. Foreign holdings of bonds in the Republic of Korea were 10.2% of total holdings at end-September, which was down from a high of 11.2% at end-September 2011. For comparison, foreign holdings of Japanese bonds also rose slightly last year.

Figure 5 shows that net foreign investment flows into the Republic of Korea's LCY bond market turned negative in January following significant inflows in December. Monthly foreign investment flows are highly volatile and often reflect profit-taking by foreign investors as much as underlying economic and financial trends. The largest net outflows in January were generated by investors in Luxembourg, Thailand, and the United States (US). The only net inflows in January from a major investing country in the Republic of Korea's LCY bond market were from investors in the PRC.

Maturity Structure

The maturity profiles of the region's government bond markets generally lengthened in 2012, with a modest expansion in maturities of 10 years or more, while the maturity profiles of the region's corporate bond markets remained much more short-dated.

The maturity profiles of the region's government bond markets remained concentrated at the shorter-end of the yield curve for Hong Kong, China; the Republic of Korea; Thailand; and Viet Nam **(Figure 6a)**. These four markets had 40% or more of their bonds outstanding in remaining maturities ranging between more than 1 year and 3 years. Approximately 42% of the outstanding government bonds in the Republic of Korea and Thailand had maturities in this range. For Hong Kong, China and Viet Nam, the proportion of bonds outstanding with maturities between more than 1 year and 3 years was 50% and 58%, respectively.

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

	4Q11		3Q12		4Q12		Government Bills-to-Bonds Ratio			Growth Rate (LCY-base %) 4Q12		Growth Rate (US$-base %) 4Q12	
	Amount (US$ billion)	% share	Amount (US$ billion)	% share	Amount (US$ billion)	% share	4Q11	3Q12	4Q12	q-o-q	y-o-y	q-o-q	y-o-y
China, People's Rep. of (PRC)													
Total	1,362	100.0	1,354	100.0	1,349	100.0				(1.2)	(2.0)	(0.4)	(1.0)
Total Bills	167	12.3	69	5.1	37	2.7	0.14	0.05	0.03	(47.4)	(78.2)	(46.9)	(78.0)
Treasury Bills	43	3.1	28	2.1	37	2.7	0.04	0.03	0.03	30.1	(14.5)	31.3	(13.6)
Central Bank Bills	125	9.2	41	3.0	0	0.0	0.59	0.19	0.00	–	–	–	–
Total Bonds	1,195	87.7	1,285	94.9	1,312	97.3				1.3	8.7	2.1	9.8
Treasury Bonds	983	72.1	1,072	79.2	1,098	81.4				1.5	10.6	2.4	11.7
Central Bank Bonds	213	15.6	213	15.7	215	15.9				0.0	0.0	0.9	1.0
Hong Kong, China													
Total	91	100.0	93	100.0	93	100.0				0.5	3.0	0.5	3.2
Total Bills	75	83.3	76	81.5	76	81.3	5.00	4.42	4.34	0.1	0.4	0.2	0.7
Treasury Bills	0	0.0	0	0.0	0	0.0	–	–	–	–	–	–	–
Central Bank Bills	75	83.3	76	81.5	76	81.3	8.46	8.52	8.57	0.1	0.4	0.2	0.7
Total Bonds	15	16.7	17	18.5	18	18.7				2.0	15.7	2.1	15.9
Treasury Bonds	6	6.8	8	8.9	9	9.2				4.7	39.6	4.7	39.9
Central Bank Bonds	9	9.9	9	9.6	9	9.5				(0.4)	(0.9)	(0.4)	(0.6)
Indonesia													
Total	93	100.0	92	100.0	92	100.0				2.2	6.6	0.1	(1.3)
Total Bills	17	18.2	10	11.3	11	11.7	0.22	0.13	0.13	5.5	(31.8)	3.4	(36.8)
Treasury Bills	3	3.7	3	3.3	2	2.5	0.05	0.04	0.03	(21.0)	(26.3)	(22.6)	(31.7)
Central Bank Bills	14	14.6	7	8.0	8	9.1	–	–	–	16.5	(33.2)	14.1	(38.1)
Total Bonds	76	81.8	82	88.7	81	88.3				1.7	15.1	(0.4)	6.6
Treasury Bonds	76	81.8	82	88.7	81	88.3				1.7	15.1	(0.4)	6.6
Central Bank Bonds	0	0.0	0	0.0	0	0.0				–	–	–	–
Korea, Rep. of													
Total	450	100.0	497	100.0	520	100.0				0.2	6.7	4.7	15.5
Total Bills	37	8.1	43	8.6	41	7.9	0.09	0.09	0.09	(8.0)	3.5	(3.9)	12.0
Treasury Bills	0	0.0	4	0.8	0	0.0	0.00	0.01	0.00	–	–	–	–
Central Bank Bills	37	8.1	39	7.8	41	7.9	0.35	0.37	0.37	1.7	3.5	6.1	12.0
Total Bonds	414	91.9	454	91.4	479	92.1				1.0	7.0	5.5	15.8
Treasury Bonds	308	68.4	350	70.5	368	70.8				0.7	10.5	5.2	19.6
Central Bank Bonds	106	23.5	104	21.0	111	21.3				1.9	(3.3)	6.4	4.7
Malaysia													
Total	157	100.0	191	100.0	194	100.0				1.8	19.1	1.9	23.4
Total Bills	35	22.3	53	28.0	52	26.7	0.29	0.39	0.36	(2.9)	42.8	(2.9)	48.0
Treasury Bills	1	0.9	1	0.7	1	0.7	0.01	0.01	0.01	0.0	0.0	0.0	3.6
Central Bank Bills	34	21.4	52	27.3	50	26.0	–	–	–	(3.0)	44.6	(3.0)	49.8
Total Bonds	122	77.7	137	72.0	142	73.3				3.7	12.4	3.7	16.4
Treasury Bonds	122	77.7	137	72.0	142	73.3				3.7	12.4	3.7	16.4
Central Bank Bonds	0	0.0	0	0.0	0	0.0				–	–	–	–
Philippines													
Total	65	100.0	76	100.0	84	100.0				9.2	21.2	11.2	29.6
Total Bills	7	10.4	6	8.1	7	8.0	0.12	0.09	0.09	7.8	(6.8)	9.7	(0.4)
Treasury Bills	7	10.4	6	8.1	7	8.0	0.12	0.09	0.09	7.8	(6.8)	9.7	(0.4)
Central Bank Bills	0	0.0	0	0.0	0	0.0	–	–	–	–	–	–	–
Total Bonds	58	89.6	69	91.9	77	92.0				9.3	24.5	11.3	33.1
Treasury Bonds	58	89.6	69	91.9	77	92.0				9.3	24.5	11.3	33.1
Central Bank Bonds	0	0.0	0	0.0	0	0.0				–	–	–	–

continued on next page

Table 4 *continued*

	4Q11		3Q12		4Q12		Government Bills-to-Bonds Ratio			Growth Rate (LCY-base %) 4Q12		Growth Rate (US$-base %) 4Q12	
	Amount (US$ billion)	% share	Amount (US$ billion)	% share	Amount (US$ billion)	% share	4Q11	3Q12	4Q12	q-o-q	y-o-y	q-o-q	y-o-y
Singapore													
Total	118	100.0	139	100.0	142	100.0				1.2	12.6	1.7	19.5
Total Bills	57	48.3	70	50.1	74	52.2	0.93	1.00	1.09	5.6	21.9	6.1	29.3
Treasury Bills	46	38.5	48	34.3	49	34.7	0.74	0.69	0.73	2.4	1.5	2.9	7.7
Central Bank Bills	12	9.8	22	15.7	25	17.5	–	–	–	12.6	102.0	13.2	114.4
Total Bonds	61	51.7	69	49.9	68	47.8				(3.2)	4.0	(2.7)	10.4
Treasury Bonds	61	51.7	69	49.9	68	47.8				(3.2)	4.0	(2.7)	10.4
Central Bank Bonds	0	0.0	0	0.0	0	0.0				–	–	–	–
Thailand													
Total	167	100.0	192	100.0	201	100.0				3.8	16.6	4.6	20.3
Total Bills	43	25.7	50	26.2	56	28.1	0.35	0.35	0.39	11.4	27.5	12.3	31.5
Treasury Bills	0	0.0	3	1.7	0	0.0	0.00	0.04	0.00	–	–	–	–
Central Bank Bills	43	25.7	47	24.4	56	28.1	1.05	0.97	1.24	19.3	27.5	20.2	31.5
Total Bonds	124	74.3	142	73.8	144	71.9				1.1	12.9	1.9	16.4
Treasury Bonds	83	49.9	94	48.7	99	49.2				4.8	15.1	5.6	18.7
Central Bank Bonds	41	24.5	48	25.1	46	22.7				(6.1)	8.3	(5.4)	11.7
Viet Nam													
Total	7	100.0	12	100.0	15	100.0				30.2	110.9	30.5	112.9
Total Bills	0	1.4	2	16.0	4	29.2	0.01	0.19	0.41	137.4	4263.4	138.0	4304.0
Treasury Bills	0.1	1.4	0.8	6.9	2	10.5	0.01	0.08	0.15	100.2	1474.8	100.6	1489.5
Central Bank Bills	0	0.0	1	9.2	3	18.7	–	–	–	165.3	–	165.9	–
Total Bonds	7	98.6	10	84.0	11	70.8				9.8	51.4	10.0	52.8
Treasury Bonds	7	98.6	10	84.0	11	70.8				9.8	51.4	10.0	52.8
Central Bank Bonds	0	0.0	0	0.0	0	0.0				–	–	–	–
Emerging East Asia (EEA)													
Total	2,511	100.0	2,645	100.0	2,690	100.0				0.4	4.3	1.7	7.1
Total Bills	438	17.4	379	14.3	358	13.3	0.21	0.17	0.15	(6.5)	(20.2)	(5.7)	(18.4)
Treasury Bills	100	4.0	94	3.6	98	3.6	0.06	0.05	0.05	2.9	(5.1)	3.7	(1.8)
Central Bank Bills	338	13.5	285	10.8	260	9.7	0.92	0.76	0.68	(9.6)	(24.7)	(8.8)	(23.2)
Total Bonds	2,073	82.6	2,266	85.7	2,333	86.7				1.5	9.5	3.0	12.5
Treasury Bonds	1,705	67.9	1,891	71.5	1,953	72.6				1.9	11.6	3.2	14.5
Central Bank Bonds	368	14.7	374	14.1	380	14.1				(0.2)	(0.1)	1.6	3.2
EEA excl. PRC													
Total	1,149	100.0	1,291	100.0	1,341	100.0				2.0	11.6	3.9	16.8
Total Bills	271	23.6	310	24.0	321	23.9	0.31	0.32	0.31	2.7	14.8	3.5	18.4
Treasury Bills	57	5.0	66	5.1	61	4.6	0.08	0.08	0.07	(8.6)	1.5	(7.9)	6.9
Central Bank Bills	214	18.6	244	18.9	260	19.4	1.37	1.51	1.57	5.7	18.5	6.6	21.5
Total Bonds	878	76.4	981	76.0	1,020	76.1				1.8	10.6	4.0	16.2
Treasury Bonds	722	62.9	820	63.5	855	63.7				2.3	13.0	4.3	18.4
Central Bank Bonds	156	13.5	161	12.5	165	12.3				(0.6)	(0.2)	2.5	6.3
Japan													
Total	10,056	100.0	10,208	100.0	9,336	100.0				1.8	4.7	(8.5)	(7.2)
Total Bills	390	3.9	385	3.8	346	3.7	0.04	0.04	0.04	0.0006	(0.0008)	(10.1)	(11.3)
Treasury Bills	390	3.9	385	3.8	346	3.7	0.04	0.04	0.04	0.0006	(0.0008)	(10.1)	(11.3)
Central Bank Bills	0	0.0	0	0.0	0	0.0	–	–	–	–	–	–	–
Total Bonds	9,666	96.1	9,823	96.2	8,991	96.3				1.8	4.9	(8.5)	(7.0)
Treasury Bonds	9,666	96.1	9,823	96.2	8,991	96.3				1.8	4.9	(8.5)	(7.0)
Central Bank Bonds	0	0.0	0	0.0	0	0.0				–	–	–	–

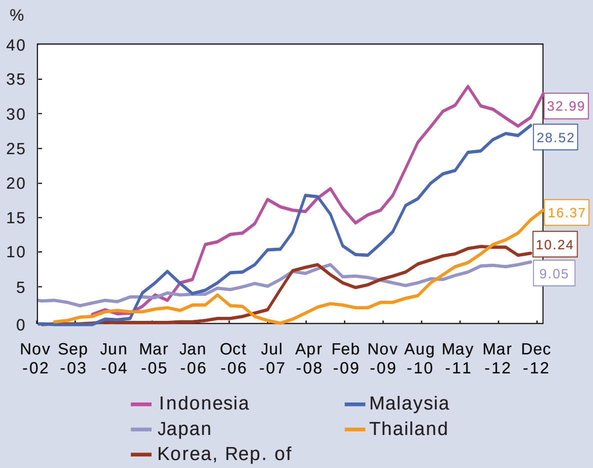
– = not applicable, ( ) = negative, LCY = local currency, q-o-q = quarter-on-quarter, y-o-y = year-on-year.

Notes:

1. For Japan, 4Q12 data carried over from November 2012.
2. Bloomberg LP end-of-period LCY–US$ rates are used.
3. For LCY-base, emerging East Asia growth figures are based on end-December 2012 currency exchange rates and do not include currency effects.
4. Total figures per market refer to bills and bonds issued by the central government and the central bank. They exclude bonds issued by policy banks and state-owned enterprises. Bills are defined as securities with original maturities of less than 1 year.

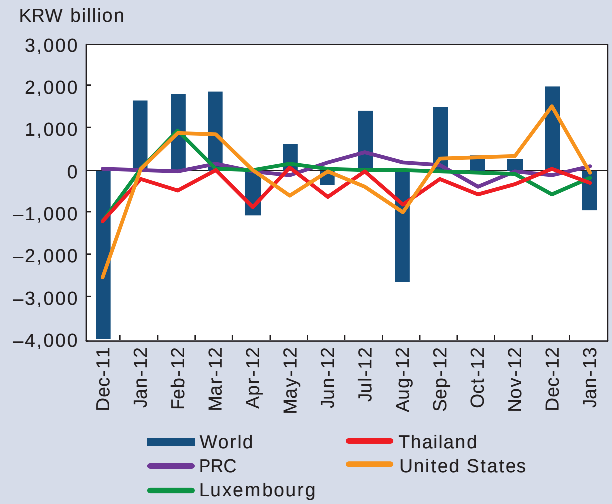
Source: People's Republic of China (*ChinaBond*); Hong Kong, China (Hong Kong Monetary Authority); Indonesia (Bank Indonesia and Indonesia Stock Exchange); Republic of Korea (Bloomberg LP); Malaysia (Bank Negara Malaysia); Philippines (Bureau of the Treasury); Singapore (Monetary Authority of Singapore);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

Figure 4: Foreign Holdings of LCY Government Bonds in Select Asian Economies (% of total)



LCY = local currency.
Note: Data as of end-September 2012 except for Indonesia and Thailand as of end-December 2012.
Source: *AsianBondsOnline*.

Figure 5: Net Foreign Investment by Country in LCY Bonds in the Republic of Korea



LCY = local currency, PRC = People's Republic of China.
Source: Financial Supervisory Service (FSS).

In the Philippines and Indonesia, around 46% of government bonds outstanding had remaining maturities of more than 10 years. This resulted in a situation for both Indonesia and the Philippines where the greatest amount of market liquidity was concentrated at the longer-end of the curve, with very limited liquidity for maturities of 5 years or less. Singapore, the PRC, and Malaysia, on the other hand, had the greatest concentration of their government bonds—32%, 35%, and 40%, respectively—in remaining maturities of more than 5 years and up to 10 years.

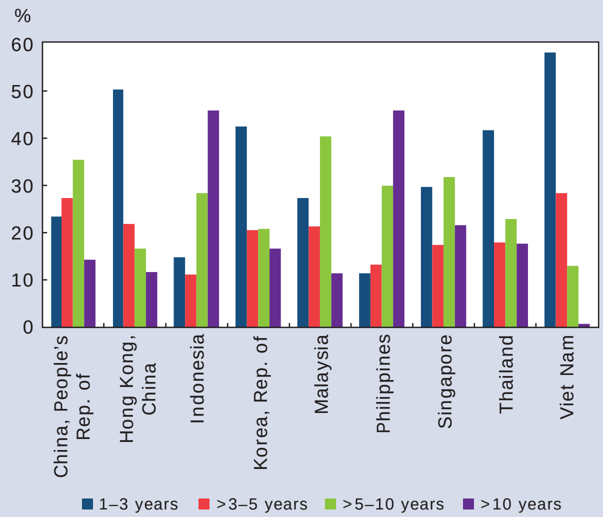
Figure 6b compares the proportion of bonds outstanding in remaining maturities of more than 10 years at the end of 4Q12 with the proportion outstanding at the end of 4Q11 for each economy in the region except Viet Nam. The largest increases in the proportion of bonds with maturities of more than 10 years were in Indonesia and the Philippines. The Philippine government has conducted a series of large debt exchanges in recent years that radically lengthened the maturity structure of Philippine government debt. Indonesia has also engaged in numerous debt buyback and debt switch transactions over most of the last decade. The efforts of both governments have been so successful that they can now issue very long-dated bonds—with maturities of 20 years or more—at very reasonable interest rates. The maturity profiles of government bond markets in Thailand, Malaysia, and the Republic of Korea have also lengthened over the last year, but this has primarily been a result of market conditions as these governments are able to issue in longer maturities at lower interest rates. In the case of the Republic of Korea, an additional factor has been the development over the last 2 years of the 10-year futures contract for Korean Treasury Bonds (KTBs).

Maturity Profiles for Corporate Bonds

The maturity profiles of the region's corporate bond markets vary in structure across the region's individual economies **(Figure 7a)**. Among emerging East Asia's corporate bond markets, Hong Kong, China; the Republic of Korea; and Viet Nam have the largest share of their maturities in a range of more than 1 year to 3 years.

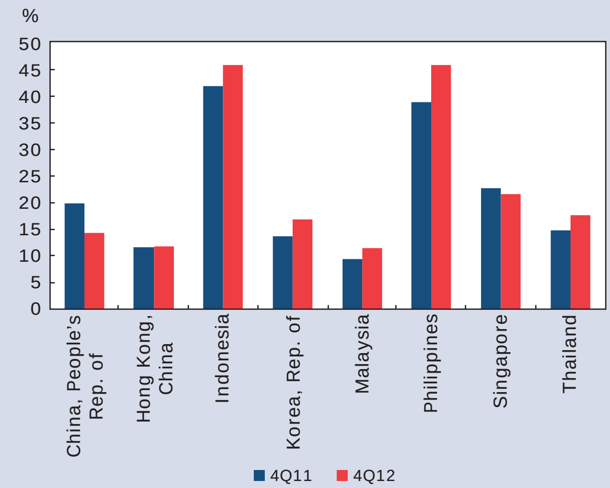
Indonesia's corporate bond market has broadly similar amounts of bonds outstanding in the

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



Note: Data as of end-December 2012.
Source: *AsianBondsOnline*.

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



Note: Viet Nam's local currency (LCY) government bonds with maturtities of more than 10 years were less than 1% of the total in 4Q12 and less than 3% in 4Q11.
Source: *AsianBondsOnline*.

ranges of more than 1 year to 3 years and more than 3 years to 5 years. More than 5 years and up to 10 years is the dominant maturity range in the PRC, Malaysia, the Philippines, Singapore, and Thailand. **Figure 7b** shows that the proportion of corporate bonds with maturities of more than 5 years and up to 10 years increased between 4Q11 and 4Q12 for all corporate bond markets in the region except for the PRC and Indonesia.

The proportion of bonds with maturities in excess of 10 years remains small in most corporate bond markets. Malaysia's relatively large stock of longer-dated bonds is a result of its active market for *sukuk*, which typically have longer maturities. The longer-dated bonds in the Singapore market seem to reflect investor appetite for longer maturities from Singapore's large number of blue chip companies, as well as a recent trend toward increased issuance of perpetual bonds with no fixed maturity date. In the PRC, a large portion of the bonds with longer maturities are subordinated debt bonds issued by banks.

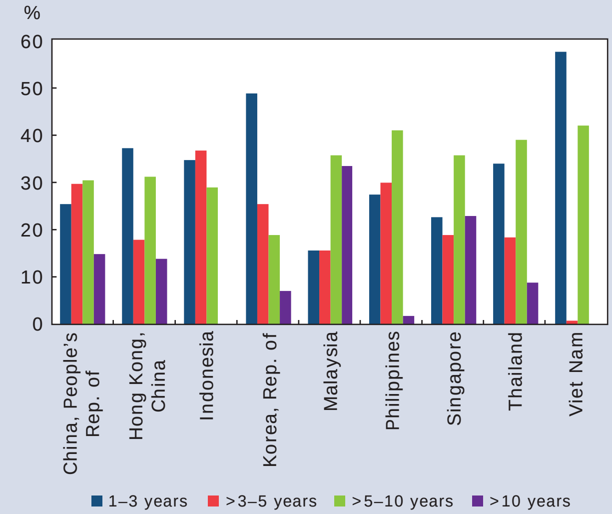
Issuance of bonds with maturities of more than 5 years and up to 10 years, and bonds with maturities of more than 10 years, is expected to grow as the region's corporate bond markets become more well-established and as demand for longer-dated and higher-yielding securities rises among institutional investors in the region.

Government Bond Yield Curves

Most government bond yield curves have shifted downward since the end of 3Q12 on the back of moderating inflation and reduced central bank policy rates.

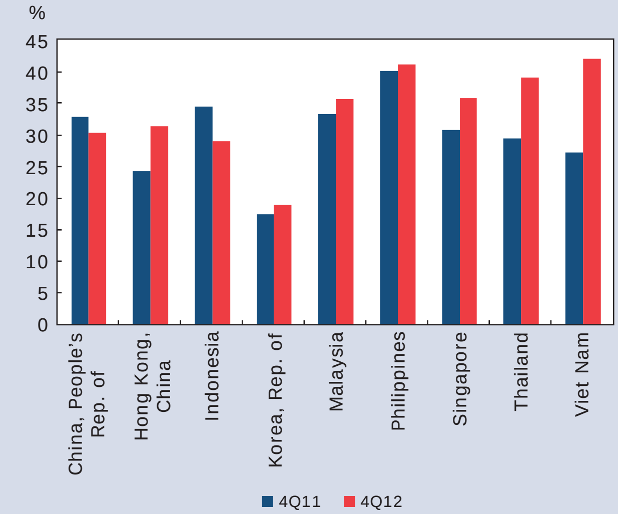
Most government bond yield curves have shifted downward since the end of 3Q12 **(Figure 8)** on the back of stable inflation **(Figures 9a, 9b)** and less active monetary policy stances being taken by most central banks and monetary authorities. Policy rates—with the exception of modest reductions in October in Thailand, the Republic of Korea, and the Philippines—have remained largely unchanged **(Figures 10a, 10b)**. Since the end of 4Q12, the Thai baht and Philippine peso have emerged as the most rapidly appreciating currencies in emerging East Asia, representing a return to the trend that was very much in evidence prior to the 2008 global

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



Note: Data as of end-December 2012.
Source: *AsianBondsOnline*.

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



Source: *AsianBondsOnline*.

financial crisis. Meanwhile, the yen has continued to depreciate rapidly, reflecting in large part a deliberate change in policy by the new Japanese government **(Table 5)**.

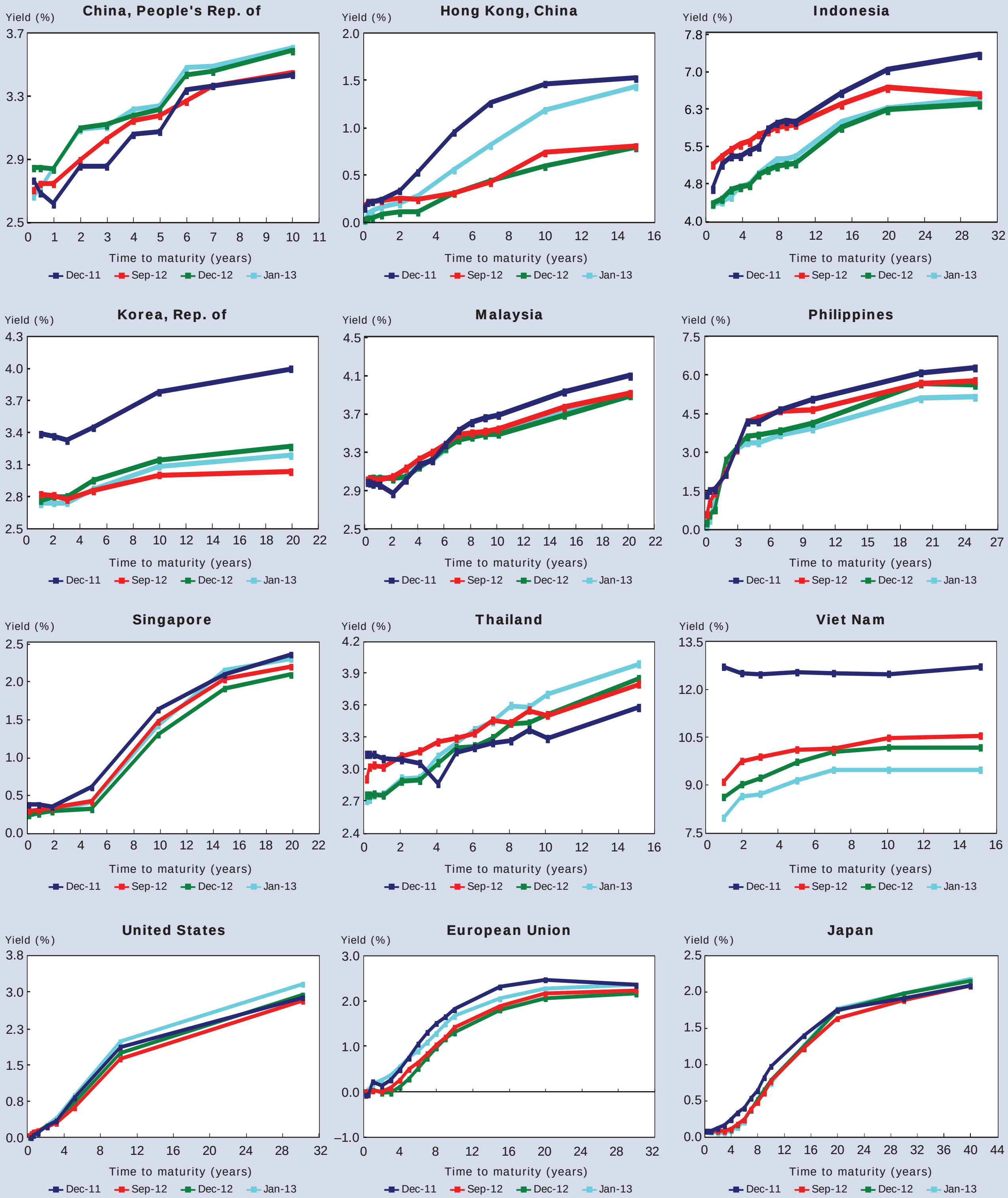
Some of the yield curve movements mentioned above are the result of monetary policy actions undertaken in 4Q12. Both the Bank of Thailand and BOK reduced their policy rates by 25 basis points (bps) in October from 3.00% to 2.75%. Bangko Sentral ng Pilipinas (BSP) reduced its policy rates by 25 bps in October, bringing the overnight borrowing (reverse repurchase) rate and the lending (repurchase) rate to 3.50% and 5.50%, respectively. SBV reduced its discount and refinancing rates by an additional 100 bps each on 24 December. However, SBV's base interest rate remained unchanged at 9.00%. Meanwhile, BNM decided to keep its overnight policy rate steady at 3.00% after its Monetary Policy Committee meeting on 31 January. BNM has kept its benchmark rate at this level since May 2011.

The movements of individual yield curves since the end of 3Q12 have varied widely in response to these factors and other policy actions.

The sharpest downward movements of yield curves were seen in Indonesia, the Philippines, and Viet Nam. Yields in Indonesia dropped the most from the shorter-end through the belly of the curve, shedding 78 bps–87 bps between the end of 3Q12 and the end of 4Q12, before recovering by a modest 1 bp–14 bps in the belly of the curve in January. (Indonesia's policy rate has remained unchanged since February 2012.) Yields in the Philippines continued to fall from the end of 3Q12 through end-January. This decline was the sharpest in the belly of the curve where yields fell more than 90 bps. The downward shift of the Philippine yield curve followed on the heels of a reduction in Philippine policy rates in October, as mentioned above. Meanwhile, yields in Viet Nam fell by as much as 65 bps–116 bps between the end of 3Q12 and end-January.

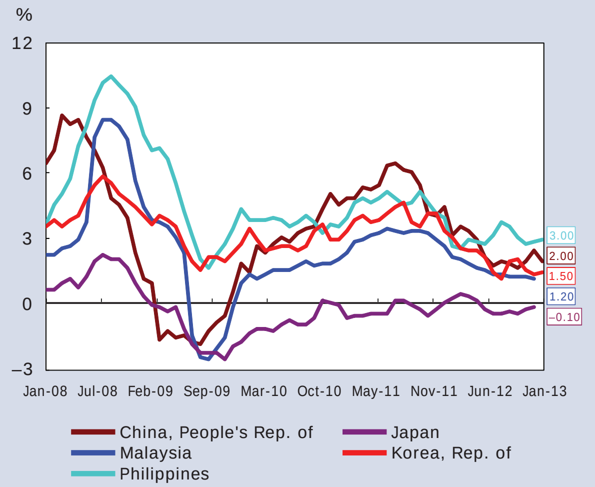
The government bond yield curves of the Republic of Korea and Thailand both steepened between the end of 3Q12 and end-January, although they attained this outcome through different paths. The yield curve for the Republic of Korea steepened sharply between the end of 3Q12 and the end of 4Q12, falling 6 bps at the very short-end and

Figure 8: Benchmark Yield Curves—LCY Bonds



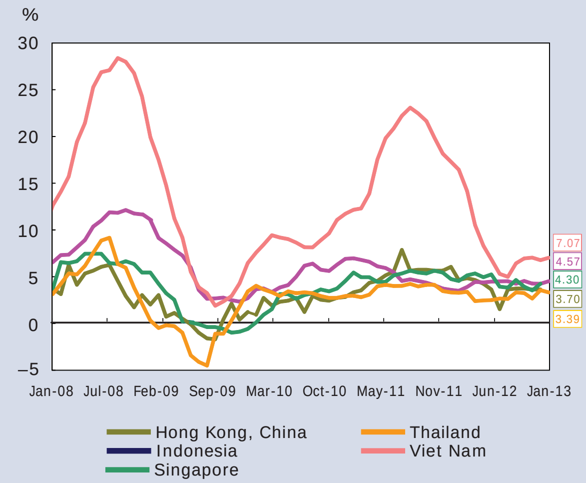
LCY = local currency.
Source: Based on data from Bloomberg LP.

Figure 9a: Headline Inflation Rates



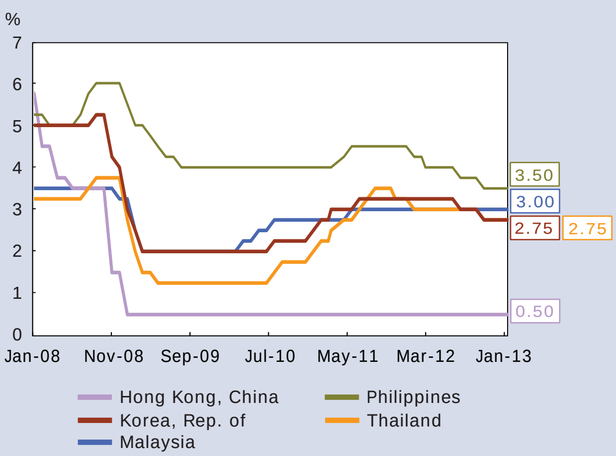
Note: Data as of end-January 2013 except for Japan and Malaysia as of end-December 2012.
Source: Bloomberg LP.

Figure 9b: Headline Inflation Rates



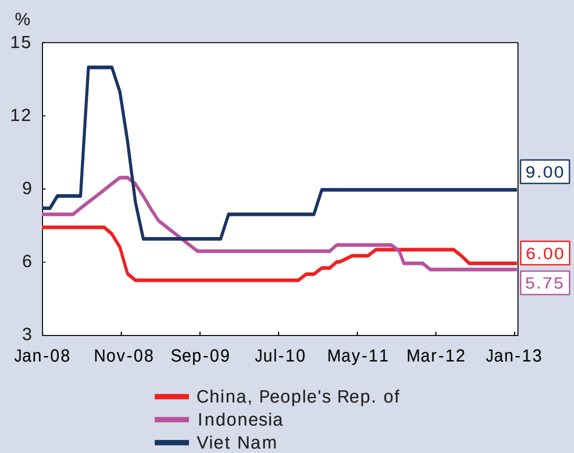
Note: Data as of end-January 2013 except for Hong Kong, China and Singapore as of end-December 2012.
Source: Bloomberg LP.

Figure 10a: Policy Rates



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

Figure 10b: Policy Rates



Note: Data as of end-January 2013.
Source: Bloomberg LP except for Viet Nam (State Bank of Viet Nam).

rising 14 bps and 23 bps for the 10- and 20-year maturities, respectively. Yields then fell 6 bps–8 bps over most of the curve in January. The Thai curve, on the other hand, steepened between the end of 3Q12 and end of 4Q12, falling as much as 15 bps–27 bps at the shorter-end of the curve and 8 bps–16 bps in the belly of the curve, while rising 0.4 bps and 5 bps for the 10- and 15-year maturities at the longer-end. The Thai curve then steepened further during the month of January, falling 1 bp–5 bps at the shorter-end of the curve and rising 14 bps–19 bps at the longer-end.

The yield curve for Hong Kong, China shifted downward between the end of 3Q12 and end of 4Q12, but fell more at the shorter-end of the curve, steepening in the process. The yield curve for Hong Kong, China then shifted upward during the month of January, steepening further, with

Table 5: Appreciation (Depreciation) of Emerging East Asian Currencies (%)

Currency	2011	2012	As of 31 January 2013	
	y-o-y	y-o-y	q-o-q	y-o-y
CNY	5.0	1.0	0.2	1.4
HKD	0.07	0.2	(0.06)	0.0
IDR	(0.8)	(7.4)	0.5	(7.7)
KRW	(2.3)	8.3	(2.2)	3.2
MYR	(3.3)	3.6	(1.5)	(2.1)
PHP	(0.1)	6.9	0.8	5.2
SGD	(1.0)	6.1	(1.3)	1.7
THB	(4.7)	3.1	2.5	3.8
VND	(7.3)	0.9	0.0	0.8
JPY	5.5	(11.3)	(5.4)	(16.8)

( ) = negative, q-o-q = quarter-on-quarter, y-o-y = year-on-year.
Notes:
1. Currency rates refer to local currency per unit of a United States (US) dollar.
2. A positive (negative) value means appreciation (depreciation) of the local currency against the US dollar.
Source: Bloomberg LP.

yields rising around 60 bps at the longer-end of the curve, while only rising about 6 bps at the shorter-end.

The yield curve for Singapore shifted downward between the end of 3Q12 and end of 4Q12, flattening in the process, with yields falling 12 bps–17 bps at the longer-end of the curve, but only 4 bps–6 bps at the shorter-end. In January, however, the Singapore yield curve shifted upward as much as 21 bps–24 bps at the longer-end of the curve, while remaining essentially unchanged at the shorter-end.

The Malaysian yield curve was largely unchanged at end-January compared with the end of 3Q12. It flattened slightly in 4Q12 as yields rose at the shorter-end of the curve but fell from the 2-year maturity through the longer-end of the curve. The curve then steepened slightly in January between the shorter-end, where yields fell, and the belly of the curve, where yields rose slightly.

The PRC's curve continued its upward shift in 4Q12 amid the lack of any policy rate movement as the PRC's economy has remained relatively robust. Policy rates were last cut in the first week of July 2012, when the PBOC reduced its 1-year deposit rate by 25 bps and its 1-year lending rate by 31 bps. The PBOC announced on 21 January that it will begin using short-term liquidity operations as an additional tool to manage the money supply. The main tools for this new effort will be repurchase and reverse repurchase agreements with maturities of less than 7 days. This announcement, however, has had little effect on the market to date.

Finally, the spread between yields for the 2- and 10-year maturities widened in most markets between the end of 3Q12 and end-January **(Figure 11)**. Yield spreads tightened, however, in the PRC, Malaysia, and the Philippines. The tightening of yield spreads in both the PRC and Malaysia was quite modest, reflecting movements of only a few basis points in each case. The tightening of yield spreads in the Philippines, however, was quite dramatic, falling from 240 bps at the end of 3Q12 to 149 bps at end-January on the back of a decline in the Philippines' 10-year yield from 4.68% at end-September to 3.93% at end-January. This reflected the reduction in Philippine policy rates in 4Q12, as mentioned above, as well as continued high levels of capital inflows and workers' remittances.

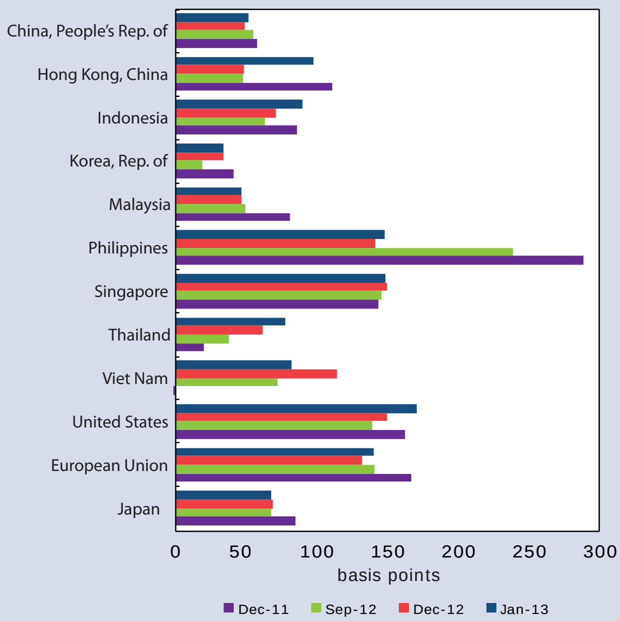
Corporate Bond Credit Spreads

The movement of corporate bond credit spreads between end-September and end-January differed greatly across markets in the region.

Credit spreads for high-grade corporate bonds demonstrated a greater amount of movement between end-December 2011 and end-December 2012 than was the case for high-yield corporate bond credit spreads **(Figure 12a)**.

Credit spreads in the PRC market have shown little movement since end-December 2011 for maturities of more than 10 years. Credit spreads for maturities of less than 5 years, however, have moved a great deal: tightening between end-December 2011 and end-September 2012, then widening between end-September and end-

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



Source: Based on data from Bloomberg LP.

December, before finally tightening again between end-December and end-January.

High-grade corporate credit spreads in the Republic of Korea tightened 14 bps–23 bps between end-December 2011 and end-September 2012. They then moved little between end-September and end-December, except for a modest tightening of spreads for maturities of more than 3 years. Credit spreads in the Republic of Korea shifted downward across the entire curve between end-December and end-January.

Corporate bond credit spreads in Malaysia tightened dramatically along most of the curve between end-December 2011 and end-September 2012. They moved little in 4Q12 and in January, except at the very short-end of the curve, gradually tightening between end-September and end-December, and then tightening again in January.

The Thai curve for high-grade corporate bond spreads was among the most active in the region in 2012, tightening in the belly and very short-end of the curve between end-December 2011 and end-September 2012. Thai corporate credit spreads then widened at the very short-end of the curve (maturities of 0.5 years and 1 year) and at the very long-end of the curve (4 years) between end-September and end-December.

The PRC's high-yield corporate credit spreads **(Figure 12b)** widened dramatically between end-December 2011 and end-September 2012, but then tightened modestly along the entire curve between end-September and end-December. The PRC's credit spreads hardly moved at all in January, except at the very short-end of the curve, where spreads widened slightly.

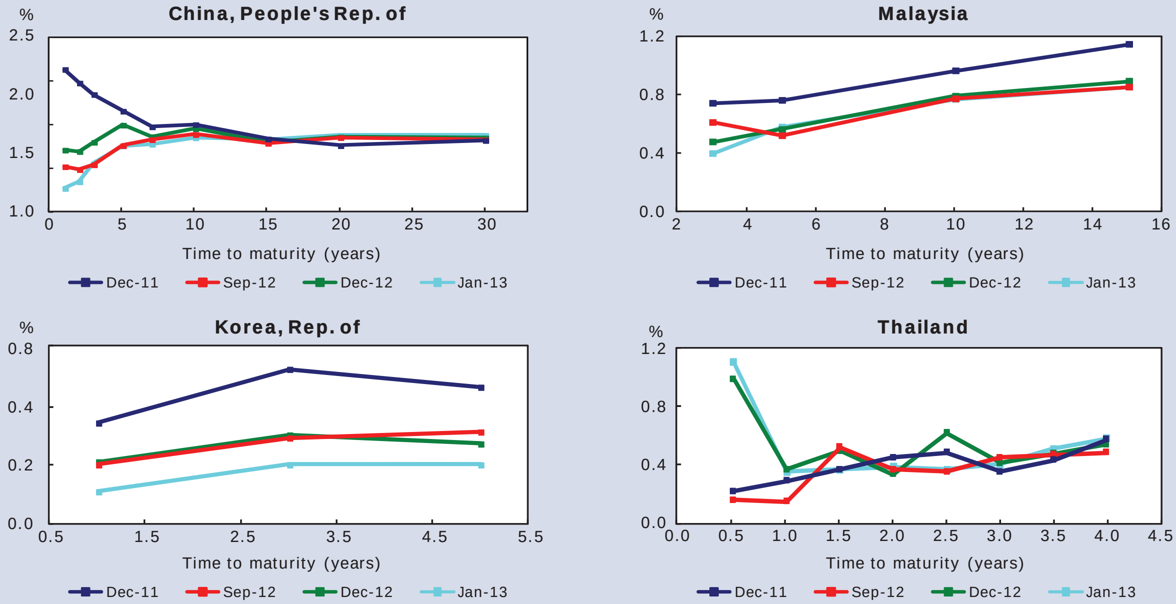
Credit spreads for Malaysian high-yield corporate bonds hardly moved at all between end-December 2011 and end-January 2013. They widened by only a very tiny amount between end-December 2011 and end-September 2012, except at the very long-end of the curve, where they tightened slightly. Between end-September and end-January, high-yield credit spreads for Malaysia tightened by very small amounts, except at the short-end of the curve.

High-yield credit spreads for the Republic of Korea gradually widened between end-September 2012 and end-January 2013. They first widened slightly along the entire curve between end-September and end-December, then further widened along the entire curve in January.

Finally, between end-December 2011 and end-September 2012, most Thai high-yield corporate credit spreads widened for maturities of less than 3 years and the 4-year maturity, while spreads for maturities of 3 and 3.5 years tightened. Between end-September and end-December, credit spreads for all maturities widened, except for the maturities at the very short-end of the curve, which tightened.

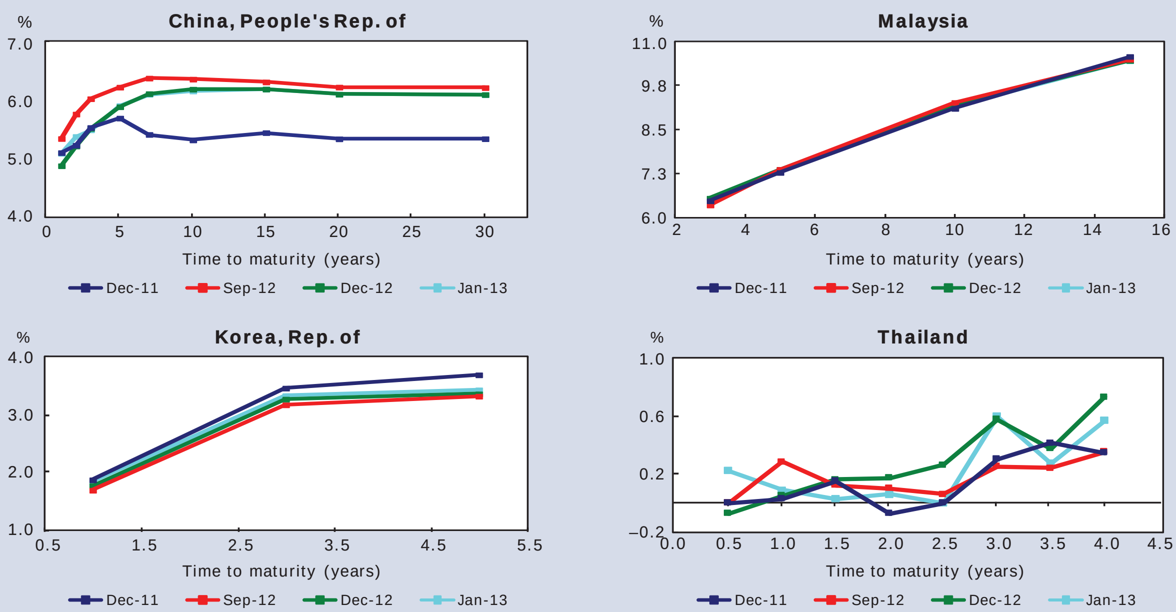
This variation in the movements of corporate bond credit spread curves across the region since end-December 2011 underlines the fact that liquidity is still very limited in emerging East Asian corporate bond markets.

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.
Source: People's Republic of China (*ChinaBond*), Republic of Korea (EDAILY *BondWeb*), Malaysia (Bank Negara Malaysia), and Thailand (ThaiBMA).

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



LCY = local currency.
Notes:
1. For the People's Republic of China, credit spreads are obtained by subtracting corporate indicative yields rated as AAA from corporate indicative yields rated as BBB.
2. For Malaysia, credit spreads are obtained by subtracting corporate indicative yields rated as AAA from corporate indicative yields rated as BBB.
3. For the Republic of Korea, credit spreads are obtained by subtracting corporate indicative yields rated as AAA from corporate indicative yields rated as BBB+.
4. For Thailand, credit spreads are obtained by subtracting corporate indicative yields rated as AAA from corporate indicative yields rated as A.
Source: People's Republic of China (*ChinaBond*), Republic of Korea (EDAILY *BondWeb*), Malaysia (Bank Negara Malaysia), and Thailand (ThaiBMA).

Box 1: India's Local Currency Bond Market: What Can ASEAN+3 Learn from Its Development?[a]

Overview

The local currency (LCY) bond market in India consists of the government securities market, which includes central and state government securities, and the corporate bond market. Government securities can be classified into Government of India (GOI) bonds, treasury bills, cash management bills, special securities, state government bonds, and agency bonds. GOI bonds are long-term debt instruments issued to meet the government's long-term financing requirements, especially the financing of the government's fiscal deficit and infrastructure projects. Treasury bills are short-term debt instruments with tenors of 91, 182, and 364 days, while cash management bills have tenors of less than 91 days; both are used to facilitate the government's cash management operations. Special securities are issued to certain entities—such as fertilizer companies, the Food Corporation of India, and oil marketing companies—to serve as compensation in lieu of cash subsidies.

Major participants in the government securities market include commercial banks, insurance companies, and primary dealers. Other participants include co-operative banks, mutual funds, pension funds, and regional rural banks. The Reserve Bank of India (RBI) is the regulator of the government securities market, as well as the repurchase agreement (repo) market, the money market, and the over-the-counter (OTC) derivatives market. Government securities are auctioned by RBI on behalf of the government. RBI uses the Negotiated Dealing System (NDS), which was introduced in 2002, as the primary auction platform for government securities. Secondary trading of government securities is made through OTC, NDS, or the Negotiated Dealing System–Ordered Matching (NDS–OM), which was introduced by the RBI in 2005 and is maintained by the Clearing Corporation of India Limited (CCIL). CCIL serves as the clearing and settlement agency for government securities. The settlement system for government securities is based on delivery-versus-payment (DVP).

In the corporate bond market, the major participants are institutional investors, such as banks, non-financial corporates, insurance companies, pension funds, and primary dealers. However, retail investors are gradually entering the market. The corporate bond market is regulated by RBI with respect to repo transactions, OTC derivatives, and banks' exposure to corporate bonds. The Securities and Exchange Board of India (SEBI) also acts as a regulator of the corporate bond market, except for unlisted privately placed bonds. Private placements dominate the primary market for corporate bonds.

The government in recent years has introduced policy measures to develop the LCY government and corporate bond markets in India. In February, RBI decided to allow standalone primary dealers to become members of SEBI-approved stock exchanges in order to conduct proprietary transactions in corporate bonds. In January, the use of repos on certificates of deposit, commercial paper, and non-convertible debentures with maturities of less than 1 year was allowed. (The use of repos on corporate bonds was first permitted in January 2010.)

In January, RBI decided to increase the sub-limit on investment by foreign institutional investors (FIIs) and long-term investors—such as central banks, endowment funds, insurance funds, multilateral agencies, pension funds, and sovereign wealth funds—in government-dated securities by US$5 billion to reach US$15 billion, bringing the total limit on government securities to US$25 billion. Also, RBI decided to raise the limit on FII investment in corporate non-infrastructure debt by US$5 billion to reach US$25 billion; this increased the total corporate debt limit from US$45 billion to US$50 billion, which includes the sub-limit for infrastructure bonds of US$25 billion.

Meanwhile, the 1-year lock-in period and 5-year initial maturity restriction were both removed for the US$12 billion sub-category for investment in corporate long-term infrastructure bonds, effective February 2013, while the 1-year lock-in period for the US$10 billion reserved for FII investments in Infrastructure Debt Funds was also removed. In December 2011, the guidelines on the use of credit default swaps (CDS) on corporate bonds took effect, enabling market participants to hedge the credit risk associated with corporate bonds.

In August 2012, RBI released a report of the Working Group on Enhancing Liquidity in Government

[a] The Association of Southeast Asian Nations (ASEAN)+3 comprises Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Viet Nam, plus the People's Republic of China; Hong Kong, China; and the Republic of Korea.

Securities and the Interest Rate Derivatives Market that outlined recommendations to improve secondary market liquidity. Among the main recommendations regarding the government securities market were (i) consolidation of outstanding government securities based on a plan specified in the report, (ii) a gradual increase in the FII limit on government securities, (iii) the allocation of specific securities to each primary dealer for market-making, (iv) gradual reduction in the upper limit on the held-to-maturity portfolio, and (v) development of a term repo market.

How Does Bond Market Development in India Compare with Emerging East Asia?

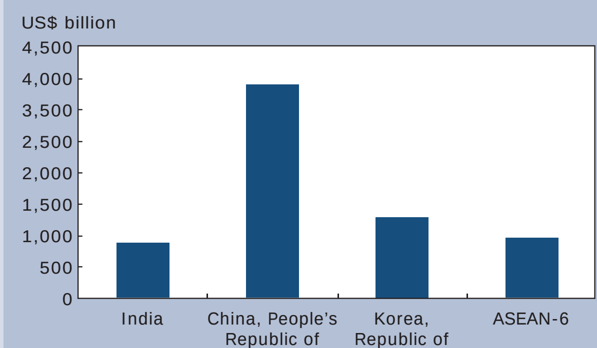
India's LCY bond market is one of the largest and fastest-growing bond markets in developing Asia. By the end of 2012, the outstanding amount of India's LCY bonds stood at INR55.8 trillion (US$1.0 trillion), which is about 27% the size of the People's Republic of China's (PRC) LCY bond market, 69% the size of the Republic of Korea's market, and 94% the size of the combined markets of six members of the Association of Southeast Asian Nations (ASEAN) **(Figure B1)**.[b] On an LCY basis, the outstanding size of the Indian bond market grew 24% in 2012 on the back of buoyant growth in both government securities and corporate bonds.

Government securities account for the majority of Indian LCY bonds, comprising 79% of total LCY bonds outstanding at the end of 2012. The share of LCY government securities in India was larger than the shares of LCY government bonds in the PRC, the Republic of Korea, and emerging East Asia, which stood at 73%, 39%, and 64%, respectively **(Figure B2)**. The relatively large share of government securities in India can be attributed to the government's financing of its wide fiscal deficit and heavy debt burden. In 2012, the outstanding size of LCY government securities climbed 23% to INR44.2 trillion.

Between 2000 and 2012, the average annual growth rate of Indian LCY bonds outstanding (on a US$ basis) was 18%, as both government securities and corporate bonds grew steadily by 18% and 19%, respectively. In comparison, the PRC's LCY bond market (on a US$ basis) grew by an average annual rate of 28% during this period, as LCY government bonds climbed 25% and LCY corporate bonds soared 64% **(Figure B3)**.

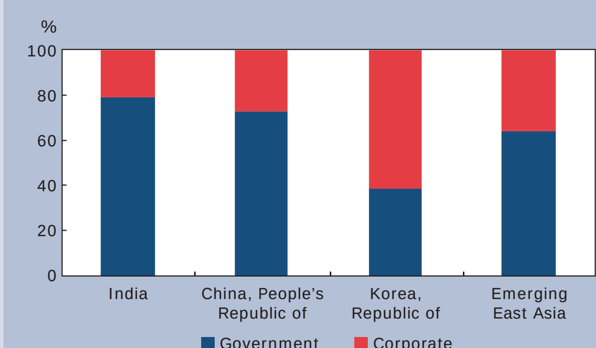
GOI bonds comprised the largest share of Indian LCY government securities, amounting to INR30.3 trillion, or 68% of the total at the end of 2012, compared with 81% in 2000 **(Figure B4a)**. In addition, municipal and state agency bonds constituted 20% of total government securities at the end of 2012, an increase from a share of 14% in 2000, and grew by an average annual rate of 22% (on an LCY basis) between 2000 and 2012. Such growth in municipal and state agency bonds stems from an increasing need by municipalities to finance their urban infrastructure

Figure B1: Size of LCY Bond Markets



LCY = local currency.
Notes:
1. Data as of 31 December 2012.
2. ASEAN-6 comprises Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Viet Nam.
Source: *AsianBondsOnline*, OREI calculations based from Bloomberg data.

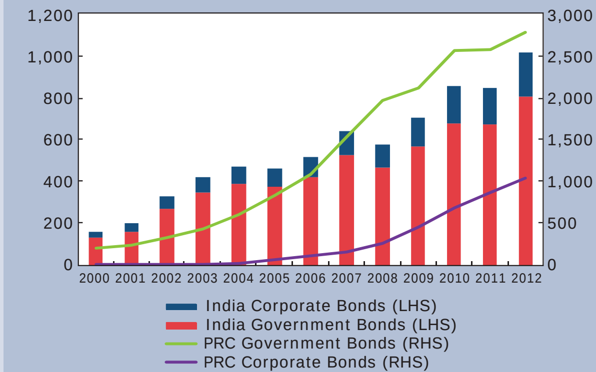
Figure B2: LCY Government and Corporate Bonds as Share of Total



LCY = local currency.
Note:
1. Data as of 31 December 2012.
2. ASEAN-6 comprises Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Viet Nam.
Source: *AsianBondsOnline*, OREI calculations based from Bloomberg data.

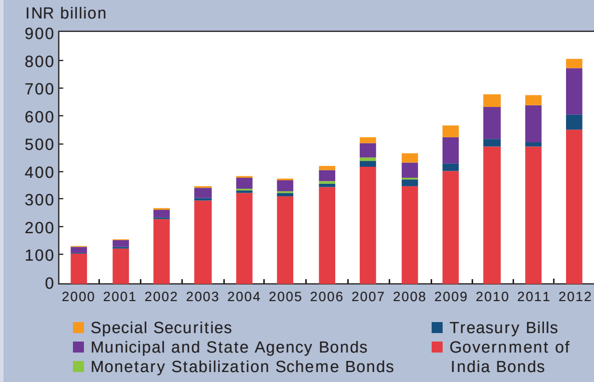
[b] Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Viet Nam.

Figure B3: LCY Corporate and Government Bonds Outstanding in India and the PRC
(US$ billion)



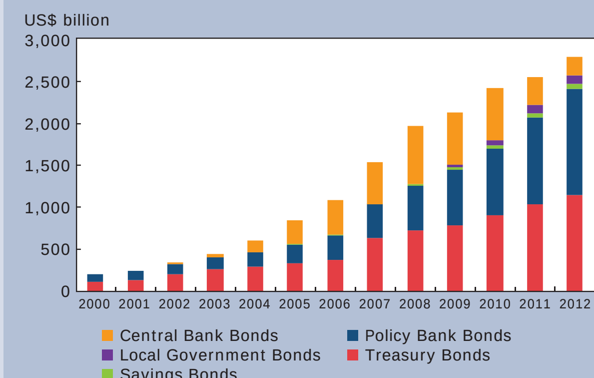
LCY = local currency, LHS = left-hand side, PRC = People's Republic of China, RHS = right-hand side.
Source: *AsianBondsOnline*, OREI calculations based on Bloomberg data.

Figure B4a: LCY Government Securities Outstanding in India by Type of Instrument



LCY = local currency.
Source: Bloomberg LP.

Figure B4b: LCY Government Securities Outstanding in the PRC by Type of Instrument



LCY = local currency, PRC = People's Republic of China.
Source: Bloomberg LP.

projects. On the other hand, the largest share in the PRC's LCY government bond market at the end of the year consisted of policy bank bonds—which are bonds issued by the Agricultural Development Bank of China, China Development Bank, and Export–Import Bank of China—amounting to CNY7.9 trillion (US$1.3 trillion) or 46% of total government bonds outstanding at the end of 2012, followed by treasury bonds at 41% **(Figure B4b)**.

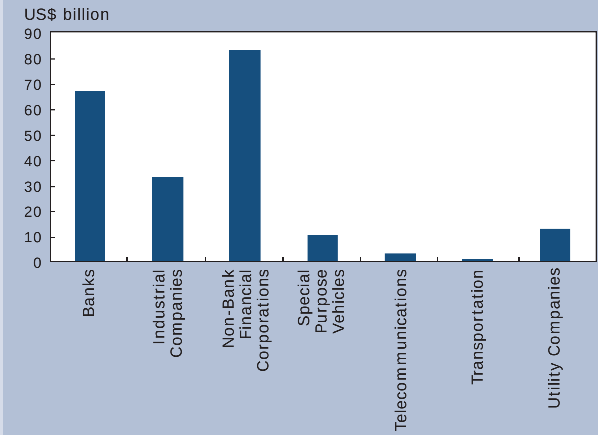
By the end of 2012, the outstanding amount of LCY corporate bonds in India stood at INR11.6 trillion, which is larger than most emerging East Asian corporate bond markets, except for the PRC and the Republic of Korea. Financial institutions comprised the largest issuer group of corporate bonds in India, as banks and non-bank financial corporations constituted 32% and 40%, respectively, of total corporate bonds outstanding at the end of 2012 **(Figure B5a)**. The two largest non-bank financial institution bond issuers were state-owned companies: Power Finance Corporation and Rural Electrification Corporation.

Meanwhile, in the PRC, industrial companies are the largest issuer of LCY corporate bonds, with bonds outstanding amounting to CNY4.3 trillion, which accounted for 46% of the total, as of mid-January 2013 **(Figure B5b)**. Banks are the second-largest issuer of LCY corporate bonds in the PRC, constituting 16% of the total.

LCY government securities with tenors of more than 5 years and up to 10 years comprised the largest share of India's government securities market, which is similar to the situation in the PRC. At the end of 2012, the share of this segment in India was 45%, while for the PRC it stood at 35% **(Figure B6a)**. Longer-dated government securities, specifically those with tenors of more than 10 years, had the second-highest share in the government securities market in India at 30%; in the PRC, this segment comprised the smallest share at 14%. In the LCY corporate bond market, tenors of more than 5 years and up to 10 years also accounted for the largest share in both India and the PRC at 36% and 30%, respectively **(Figure B6b)**.

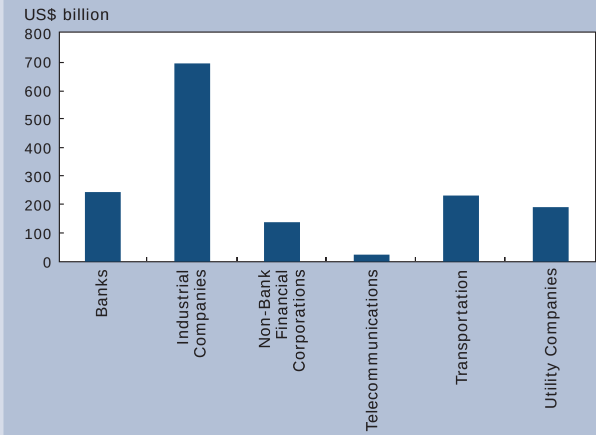
Liquidity in India's LCY bond market is more pronounced for government securities than for corporate bonds, similar to most emerging East Asian markets; this can be seen in the higher turnover ratio

Figure B5a: LCY Corporate Bonds Outstanding in India by Sector



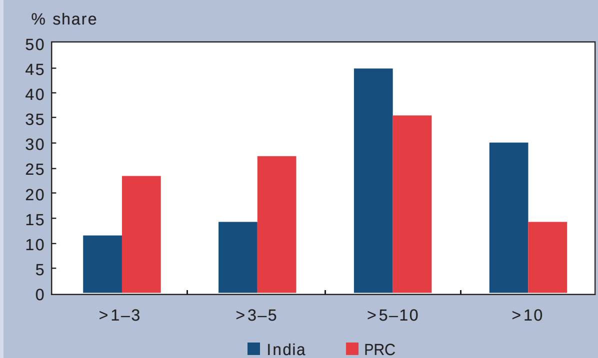
LCY = local currency.
Note: Data as of 31 December 2012.
Source: Bloomberg LP.

Figure B5b: LCY Corporate Bonds Outstanding in the PRC by Sector



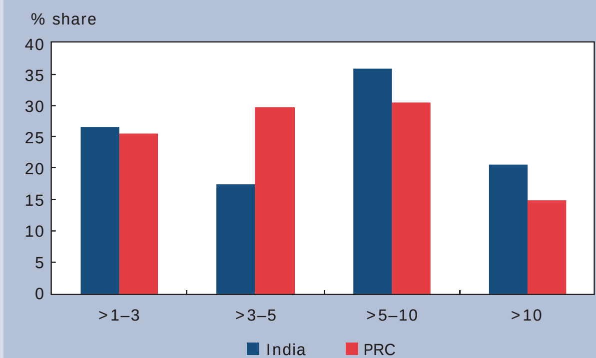
LCY = local currency, PRC = People's Republic of China.
Note: Data as of 15 January 2013.
Source: Bloomberg LP.

Figure B6a: Maturity Profile of LCY Government Bonds in India and the PRC



LCY = local currency, PRC = People's Republic of China.
Note: Data as of 31 December 2012.
Source: *AsianBondsOnline*, OREI calculations based on Bloomberg data.

Figure B6b: Maturity Profile of LCY Corporate Bonds in India and the PRC



LCY = local currency, PRC = People's Republic of China.
Note: Data as of 31 December 2012.
Source: *AsianBondsOnline*, OREI calculations based on Bloomberg data.

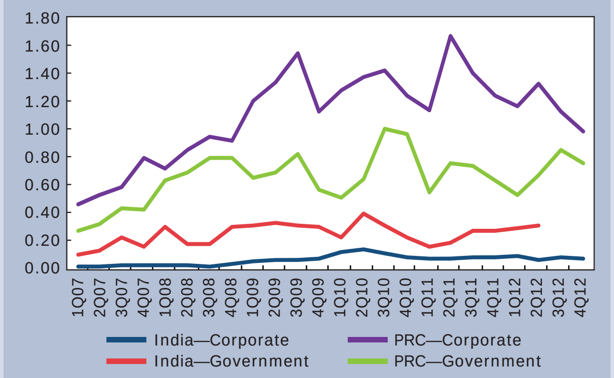
for government securities compared with corporate bonds. However, there appears to be greater bond market liquidity in the PRC than in India as evidenced by the former's higher turnover ratios for both government and corporate bonds **(Figure B7)**.

Net foreign institutional investment into the Indian debt market stood at INR332.9 billion in the first 11 months of 2012 **(Figure B8)**. Net foreign institutional investments into the debt market had soared to more than INR400 billion in 2010 and 2011. This trend of increasing foreign investor participation in the LCY bond market in India in recent years follows a pattern seen in several ASEAN+3 markets, including Indonesia, Japan, the Republic of Korea, Malaysia, and Thailand.

Infrastructure Financing and Public–Private Partnerships

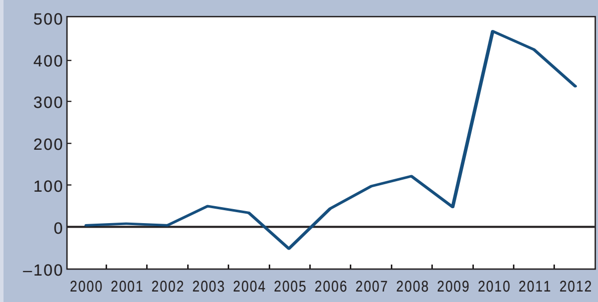
The amount of infrastructure investment with private sector participation in India is relatively large. Between 1990 and 2011, infrastructure investment with private participation in India totaled US$273.4 billion, which was more than in several ASEAN+3 countries during the same period, including the PRC (US$54.3 billion), Indonesia

Figure B7: Turnover Ratios of LCY Government and Corporate Bonds in India and the PRC



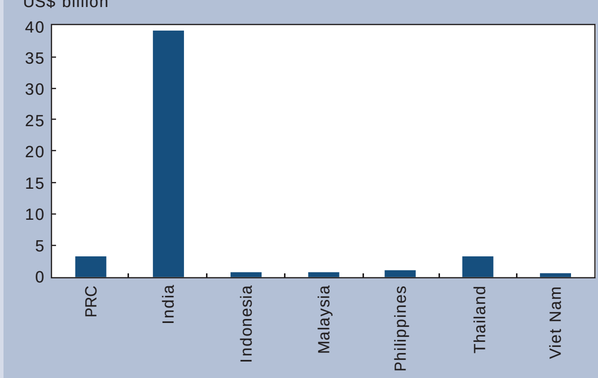
LCY = local currency, PRC = People's Republic of China.
Note: Data as of 31 December 2012.
Source: *AsianBondsOnline*, OREI calculations based on data from Bloomberg data, Reserve Bank of India (RBI), and Securities and Exchange Board of India (SEBI).

Figure B8: Net Foreign Institutional Investment in Debt Instruments in India



Note: 2012 data through November.
Source: Securities and Exchange Board of India (SEBI).

Figure B9: Infrastructure Investment with Private Sector Participation



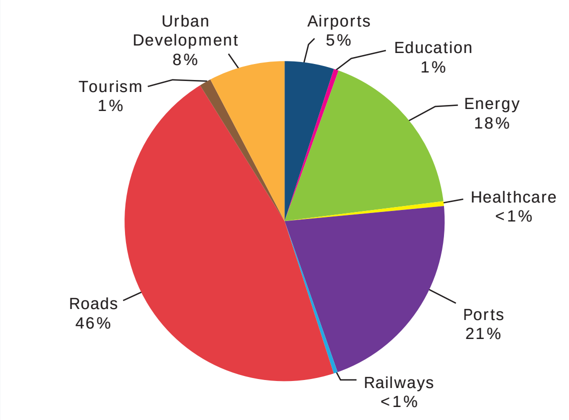
PRC = People's Republic of China.
Note: Data for 2011.
Source: The World Bank.

(US$43.4 billion), Malaysia (US$50.8 billion), the Philippines (US$54.1 billion), Thailand (US$43.4 billion), and Viet Nam (US$8.7 billion). In 2011 alone, private infrastructure investment stood at US$38.9 billion in India, compared with the PRC's US$3.3 billion, Thailand's US$3.3 billion, the Philippines' US$1.1 billion, Malaysia's US$869 million, Indonesia's US$848 million, and Viet Nam's US$627 million **(Figure B9)**.

India's infrastructure investment needs continue to be significant. The Committee on Infrastructure Financing estimated in its report released in October 2012 that India's infrastructure development under the 12th Five Year Plan for 2012–17 will require INR51.5 trillion, of which 47% will come from public–private partnerships (PPP). Based on the Ministry of Finance's PPP database, there have been a total of 758 PPP projects in India, with estimated cumulative investments of INR3.8 trillion, through July 2011. About 46% of the investments in PPP projects in India (INR1.8 trillion) were in roads, followed by ports and energy with shares of 21% and 18%, respectively **(Figure B10)**. The LCY bond market is an area that could play an important role in supporting the country's infrastructure development.

The main source of infrastructure financing in India is the banking sector. However, future bank lending is likely to be constrained by the need for capital augmentation necessitated by Basel III guidelines, by their asset–liability management (ALM) mismatch, and by regulatory limits in their lending and investment exposure. In this regard, a well-developed corporate bond market is essential to help support infrastructure financing, particularly by attracting long-term financing from institutional investors such as insurance companies and pension funds. Various regulatory measures have been put forth by the government to develop the corporate bond market, such as raising the FII limit on investment in corporate bonds, introducing CDS as a hedging tool against credit risks associated with corporate bonds, and allowing the use of repos for corporate bonds. Further reforms are needed as the market for corporate debt faces challenges such as insufficient liquidity, a narrow investor base, and the lack of a robust bankruptcy framework, among others.

Figure B10: Investment in PPP Projects in India by Sector (% share)



PPP = public–private partnership.
Note: Data as of July 2011.
Source: Ministry of Finance, Government of India.

The Government of India has embarked on initiatives and policy measures to support infrastructure financing:

- RBI has provided regulatory measures that enhanced the exposure limits of banks for infrastructure lending, allowed banks to invest in unrated bonds issued by companies engaged in infrastructure activities within the limit of 10% for unlisted statutory liquidity ratio (SLR) securities, and enabled the use of foreign reserves for infrastructure development, among others.

- The government established the India Infrastructure Finance Company (IIFCL) in 2006 to provide long-term financial assistance to viable infrastructure projects and has permitted the Industrial Finance Corporation of India (IFCI), Infrastructure Development Finance Company (IDFC), Life Insurance Corporation of India (LIC), and infrastructure financing entities to issue tax-saving infrastructure bonds.

- The government also created the India Infrastructure Project Development Fund (IIPDF), with basic financing of INR1 billion, to support the development of bankable and credible PPP projects.

- In January, IIFCL launched its first credit-enhanced infrastructure bond in India with the support of the Asian Development Bank (ADB).

In September 2012, ADB approved an INR7.2 billion facility, designed in tandem with IIFCL, to develop the infrastructure bond market in India by channeling insurance and pension funds into infrastructure sectors, such as energy, railways, roads, and water. Under this facility, ADB, IIFCL, and other local finance companies will provide partial guarantees to LCY bonds issued by Indian companies for the funding of infrastructure projects. The partial guarantees will boost the credit rating of a typical infrastructure project from BBB- or A to AA, allowing pension funds and insurance companies to purchase the bonds.

Infrastructure needs for the ASEAN+3 region are also huge. Based on data from Bhattacharyay (2010),[c] the combined infrastructure investment needs of ASEAN+3 (excluding Brunei Darussalam, Japan, the Republic of Korea, and Singapore) for 2010–20 total US$5.5 trillion, which would account for 66% of Asia's total infrastructure investment needs. The PRC has the largest amount of infrastructure investment needs in the ASEAN+3 region at US$4.4 trillion, followed by Indonesia (US$450 billion), Malaysia (US$188.1 billion), Thailand (US$172.9 billion), the Philippines (US$127.1 billion), Viet Nam (US$109.8 billion), Myanmar (US$21.7 billion), Cambodia (US$13.4 billion), and Lao People's Democratic Republic (US$11.4 billion).

Initiatives to spearhead infrastructure development have been conducted in several ASEAN+3 countries. In Malaysia, DanaInfra Nasional Berhad was created in March 2011 as a special purpose vehicle designed to finance the government's infrastructure projects. It launched the DanaInfra Retail Sukuk, the country's first exchange-traded bonds and *sukuk* (Islamic bonds), which are known as ETBS. The ETBS were first offered to retail investors in January and listed on Bursa Malaysia in February to help finance the country's mass rapid transit projects. The initial issuance amounted to MYR300 million and carried a maturity of 10 years.

In the Philippines, two PPP projects had been awarded to the private sector as of September 2012: (i) the PPP for School Infrastructure Project Phase 1 with an estimated project cost of US$389 million, and (ii) the Daang–Hari SLEX Link Road Project with an estimated cost of US$46.6 million. The school

[c] B.N. Bhattacharyay. 2010. Estimating Demand for Infrastructure in Energy, Transport, Telecommunications, Water, and Sanitation in Asia and the Pacific: 2010–2020. *ADBI Working Paper* No. 48. Tokyo: Asian Development Bank Institute (ADBI).

infrastructure project, which aims to build around 9,300 classrooms in three regions in the northern part of the country, was awarded to two private sector consortiums in August 2012. The Citicore-Megawide Consortium Inc. sold PHP6.5 billion worth of 10-year bonds with a one-year grace period to local banks in December 2012 with the proceeds to be used to fund the construction of classrooms under the school infrastructure project. The road project was awarded to Ayala Corporation. Meanwhile, there are around 20 PPP projects that are still in the pipeline. To encourage financial institutions to participate in the Philippine government's PPP program, the Monetary Board of the Philippine central bank—Bangko Sentral ng Pilipinas (BSP)—decided to extend for another 3 years the original 3-year period allowing a separate single borrower's loan limit of 25% of the net worth of the lending bank for undertaking infrastructure or development projects through the PPP program.

As mentioned above, India's infrastructure investment needs are relatively large and part of the needed financing can be sourced from PPPs. Its LCY bond market can also play a key role in infrastructure development. Specifically, bond financing will have a larger role as future bank financing is likely to be constrained by Basel III guidelines and regulatory limits on lending and investment. India has seen significant amounts of private investment in its infrastructure sector and robust growth in its LCY bond market amid a number of market and regulatory developments and initiatives undertaken by the government.

Similarly, the infrastructure investment needs of the ASEAN+3 region are also large. However, private sector investment in the region's infrastructure remains low when compared with India. Furthermore, several ASEAN+3 bond markets are not as developed as India's. Against this backdrop, the lessons from the experiences of India in harnessing private infrastructure investment and promoting bond financing for infrastructure may be useful for ASEAN+3 policymakers seeking to spearhead infrastructure development.

G3 Currency Issuance

Emerging East Asia's G3 currency issuance reached US$131 billion in 2012; robust issuance activity in January suggests that G3 currency issuance in 2013 might match or exceed the impressive levels of 2012.

G3 currency bond issuance in emerging East Asia soared to US$130.8 billion in 2012, while issuance in January 2013 alone reached US$16.3 billion **(Table 6)**. The three largest amounts of G3 issuance in 2012 came from the PRC (US$31 billion); the Republic of Korea (US$30.9 billion); and Hong Kong, China (US$27.9 billion). The fourth and fifth largest issuers were Singapore (US$12.8 billion) and Indonesia (US$12.1 billion). The most interesting aspect of these outcomes is that the PRC has displaced the Republic of Korea from its traditional position as the largest G3 currency issuer in the region. (G3 currency bond issuance out of the PRC last year reflected large amounts of issuance from SOEs and real estate companies.) In addition, Hong Kong, China more than tripled its 2011 volume of G3 currency issuance (US$8.6 billion) in 2012.

Other noteworthy G3 currency issuance patterns in the region include Singapore achieving a six-fold increase in its level of G3 currency issuance from US$1.9 billion in 2011 to US$12.8 billion in 2012, and Indonesia doubling its G3 currency issuance in 2012 to US$12.1 billion, with as much of the increase coming from the corporate sector as from the government. In 2012, the Indonesian government issued two US$-denominated bonds totaling US$3.75 billion and one *samurai* bond worth JPY60 billion (US$92 million), compared to only one sovereign bond of US$2.5 billion in 2011. The only market to not significantly increase its G3 currency issuance in 2012 was the Philippines, whose issuance of US$3.65 billion was only slightly higher than US$3.45 billion of new issuance in 2011.

The largest individual G3 bond issues in 2012 were the two Indonesian sovereign bonds of US$2.0 billion and US$1.75 billion, followed

Table 6: 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**	

1–31 January 2013		
Issuer	**US$ (million)**	**Issue Date**
China, People's Rep. of	**4,452**	
Country Garden 7.5% 2023	750	10-Jan-13
Agile Property 8.25% Perpetual	700	18-Jan-13
Caifu Holdings 8.75% 2020	600	24-Jan-13
Kaisa Group 10.25% 2020	500	8-Jan-13
Yuexiu Property 3.25% 2018	350	24-Jan-13
Hopson Development 9.875% 2018	300	16-Jan-13
Fantasia Holdings 10.75% 2020	250	22-Jan-13
Powerlong Real Estate 11.25% 2018	250	25-Jan-13
Others	752	
Hong Kong, China	**5,242**	
Shimao Property 6.625% 2020	800	14-Jan-13
Sun Hung Kai Properties 3.625% 2023	500	16-Jan-13
Metropolitan Light 5.25% 2018	450	17-Jan-13
Champion MTN 3.75% 2023	400	17-Jan-13
ICBC Asia 1.11% 2014	400	11-Jan-13
Hengdeli Holdings 6.25% 2018	350	29-Jan-13
Lai Sun Finance 5.7% 2018	350	18-Jan-13
Cosco Pacific Finance 4.375% 2023	300	31-Jan-13
Hysan MTN 3.5% 2023	300	16-Jan-13
ICBC Asia 1.11 2014	300	11-Jan-13
Others	1,092	
Indonesia	**500**	
Indo Energy Finance 6.375% 2023	500	24-Jan-13
Korea, Rep. of	**2,147**	
Korea Development Bank 1.0% 2016	500	22-Jan-13
Korea Development Bank 1.5% 2018	500	22-Jan-13
Shinhan Bank 1.875% 2018	350	30-Jan-13
Kookmin Bank 1.375% 2016	300	15-Jan-13
Others	497	
Malaysia	**845**	
Sime Darby 2.053% 2018	400	29-Jan-13
Sime Darby 3.29% 2023	400	29-Jan-13
Others	45	
Philippines	**1,150**	
JG Summit 4.375% 2023	750	23-Jan-13
ICTSI 4.625% 2023	400	16-Jan-13
Singapore	**930**	
Olam International	750	29-Jan-13
Others	180	
Thailand	**1,000**	
Thai Oil 3.625% 2023	500	23-Jan-13
Thai Oil 4.875% 2043	500	23-Jan-13
Viet Nam	**0**	
Emerging East Asia Total	**16,266**	
Memo Items:		
India	**1,250**	
Export–Import Bank of India 4.0% 2023	750	14-Jan-13
Power Grid Corporation of India 3.875% 2023	500	17-Jan-13
Sri Lanka	**0**	

Source: Bloomberg LP, newspaper and wire reports.

by corporate issuances from 1MDB Energy in Malaysia (US$1.75 billion), Hutchison Whampoa's 5-year bond issued in June (US$1.65 billion) and 10-year bond issued in January (US$1.5 billion), and CNOOC Finance's 10-year bond issued in May (US$1.5 billion), and the 25-year sovereign bonds issued by the Philippines (US$1.5 billion).

G3 currency issuance continued to increase rapidly in January, reaching US$16.3 billion by the end of the month, driven largely by issuance from Hong Kong, China and the PRC. In fact, Hong Kong, China was the largest issuer in January, issuing G3 currency bonds worth US$5.2 billion, which exceeded the PRC's issuance of US$4.5 billion. Much of the January G3 currency issuance in the PRC was from real estate companies. The sources of G3 currency issuance in other markets in the region were more diverse, including from the Korea Development Bank in the Republic of Korea, Sime Darby in Malaysia, JG Summit in the Philippines, and Olam International in Singapore.

Market Returns

Market returns for emerging East Asia's bond and equity markets were exceptionally strong in 2012, but weakened markedly in January 2013.

Market returns for emerging East Asia's bond and equity markets were exceptionally strong in 2012, but weakened markedly in January 2013. The Pan-Asia IBoxx Bond Index rose 7.6% in 2012, but declined 0.4% in January **(Table 7)**. With regard to equities, the MSCI Far East ex-Japan Index rose 19.0% in 2012, but its year-to-date return for January was a more sluggish 1.3% **(Table 8)**.

The strongest performer in the IBoxx Asian Bond Fund Index in January was the Philippines with a US$ unhedged total return of 4.3%, compared with –0.4% for the region as a whole. The only other markets with a positive return in the IBoxx

Table 7: iBoxx Asian Bond Fund Index Family Returns

Market	Modified Duration (years)	2011 Returns (%)		2012 Returns (%)		2013 YTD 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	6.66	5.4	9.9	2.4	3.5	0.3	0.4
Hong Kong, China	4.07	5.2	5.2	3.5	3.7	(1.1)	(1.2)
Indonesia	7.18	19.7	18.4	12.3	6.7	(0.9)	(2.2)
Korea, Rep. of	4.76	6.2	4.7	6.2	13.5	0.6	(1.1)
Malaysia	5.14	4.7	1.8	4.1	7.9	0.2	(1.2)
Philippines	7.17	14.8	14.7	9.9	16.5	3.4	4.3
Singapore	6.20	6.3	5.0	3.9	10.0	(0.9)	(2.3)
Thailand	5.05	4.9	0.3	3.2	6.3	(0.3)	2.2
Pan-Asian Index	5.60	–	6.8	–	7.6	–	(0.4)
HSBC ALBI	7.66	–	4.9	–	8.6	–	(0.3)
US Govt. 1 year–10 years	3.95	–	6.8	–	1.8	–	(0.4)

– = not applicable, ( ) = negative, ALBI = Asian Local Bond Index, LCY = local currency, US = United States, YTD = year-to-date.
Notes:
1. The Asian Bond Fund (ABF) indices contain only government debt and government-guaranteed debt obligations.
2. Market bond indices are from the iBoxx Index Family. Returns for 2013 are year-to-date as of end-January 2013.
3. Annual returns are computed for each year using a natural logarithm of end-of-year index value/beginning-of-year index value.
4. Duration as of end-January 2013.
Source: *AsianBondsOnline* and Bloomberg LP.

Table 8: MSCI Equity Index Returns

Market	2011 Returns (%)		2012 Returns (%)		2013 YTD 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	4.2	4.1
Hong Kong, China	(18.5)	(18.4)	24.2	24.4	5.9	5.8
Indonesia	4.7	4.0	8.8	2.4	3.3	2.2
Korea, Rep. of	(11.5)	(12.8)	11.7	20.2	(2.4)	(4.1)
Malaysia	(0.2)	(2.9)	6.8	10.8	(3.3)	(4.8)
Philippines	(3.1)	(3.2)	34.7	43.9	6.7	7.7
Singapore	(20.0)	(21.0)	19.2	26.4	2.7	1.4
Thailand	(1.2)	(5.6)	26.9	30.9	3.2	5.8
Far East ex-Japan Index	(15.6)	(16.8)	15.5	19.0	2.0	1.3
MSCI US	–	(0.1)	–	13.5	–	5.2

– = not applicable, ( ) = negative, LCY = local currency, MSCI = Morgan Stanley Capital International, US = United States, YTD = year-to-date.
Notes:
1. Market indices are from MSCI country indexes. 2013 returns are year-to-date as of end-January 2013.
2. Far East ex-Japan includes the People's Republic of China; Hong Kong, China; Indonesia; the Republic of Korea; Malaysia; the Philippines; Singapore; Taipei,China; and Thailand.

Source: *AsianBondsOnline* and Bloomberg LP.

Asian Bond Fund Index—on a US$ unhedged total return basis—were Thailand (2.2%) and the PRC (0.4%). Returns in January for Hong Kong, China; Indonesia; the Republic of Korea; Malaysia; and Singapore were all negative.

The region's equity markets performed somewhat better in January than its LCY bond markets. The MSCI Far East ex-Japan Index had a positive year-to-date return of 1.3% at end-January. The Philippines was again the best performing market with a return of 7.7%, followed by Hong Kong, China and Thailand, both of which had returns of 5.8%. Meanwhile, the Republic of Korea and Malaysia had negative returns of –4.1% and –4.8%, respectively.

Policy and Regulatory Developments

People's Republic of China

The PRC Mulls Increasing QFII and RQFII Quotas

On 15 January, the Chairman of the China Securities Regulatory Commission, Guo Shuqing, announced that the People's Republic of China (PRC) plans to increase the quotas for Qualified Foreign Institutional Investors (QFII) and Renminbi Qualified Foreign Institutional Investors (RQFII). The quotas could possibly be increased tenfold in the future, he said. Guo also said that the PRC will support two-way balanced portfolio investment, which would allow non-residents to diversify existing investments in the PRC.

PBOC to Use Short-Term Liquidity Operations to Manage Money Supply

On 21 January, the People's Bank of China (PBOC) announced that it will begin using short-term liquidity operations as an additional tool to manage the money supply. The main tools will be repo and reverse repo agreements with maturities of less than 7 days.

Hong Kong, China

HKMA Revises Rules on CNH

On 15 January, the Hong Kong Monetary Authority (HKMA) released two new regulations making it easier for banks to hold offshore renminbi (CNH). The first one allows banks to include renminbi currency futures as part of the calculation of a bank's net open position. The second one shortens the notice period from two business days to one business day for banks seeking to tap the HKMA renminbi liquidity facility.

DBS Launches Renminbi Index

On 16 January, DBS Bank Ltd. (Hong Kong, China) launched a DBS Renminbi Index for VVinning Enterprises (DRIVE). The index measures actual usage and acceptance of the renminbi among enterprises in Hong Kong, China, and gauges sentiment for the expanded use of the renminbi as a global currency. The index is based on a survey along four dimensions: (i) actual business performance in the last 12 months and expectations for the next 12 months, (ii) past and future demand for renminbi in business operations, (iii) use of renminbi in trade settlement, and (iv) ease of access to renminbi financing. The initial index value in 4Q12 was 54.9; future updates are to be released quarterly.

Indonesia

BI Announces New Capital Adequacy Ratios for Banks

In December, Bank Indonesia (BI) announced new capital requirements for banks as part of efforts to strengthen the banking system. Beginning in March, banks will be required to maintain a capital adequacy ratio (CAR) of between 8% and 14%, depending on their risk profile. Currently, the CAR for all banks is set at 8%. Based on the new regulation, banks with a low risk profile will continue to maintain a CAR of 8%, banks with a second-level risk profile will be required to maintain a CAR of 9%–10%, and those with a third-level risk profile will be required to maintain a ratio of 10%–11%. High-risk banks (fourth- and fifth-level risk profiles) will be required to maintain a CAR of 11%–14%. BI also set a special requirement, known as a capital equivalency maintained asset (CEMA), for foreign banks operating in Indonesia.

Indonesian Government to Hedge FCY Liabilities Against Fluctuations in Interest and Exchange Rates

In January, the Ministry of Finance issued a regulation that would allow the government to hedge its foreign currency (FCY)-denominated liabilities, for both bonds and international loans, against fluctuations in interest and exchange rates. The decree, however, did not indicate which specific hedging instruments it will use. The mechanism for conducting hedging transactions is still being formulated by the government. The decree requires the government counterparty for hedging transactions to have at least an A credit rating from two international rating agencies.

Republic of Korea

FSC Releases Legislative Notice on Proposed Covered Bonds Act

The Financial Services Commission (FSC) released a legislative notice on its proposed Covered Bonds Act in October. The notice includes the definition of covered bonds and eligible issuers, the cover pool, registration of the issuance plan and cover pool, the management of the cover pool, and the preferential rights of covered bond investors. The FSC reported in its January press release that the draft bill of the Covered Bond Act was approved by the Cabinet on 29 January.

FSC Sets Implementation Plan for Basel III

The FSC stated in December that it will set a specific timeline for domestic implementation of Basel III in the Republic of Korea, and that this will reflect global trends with respect to other countries' implementation experiences. The FSC reported that 11 countries had finalized their implementation plans for Basel III, while 15 countries, including the Republic of Korea, had drafted regulations for Basel III implementation.

Malaysia

BNM and SC Sign MOU to Strengthen Joint Regulatory Oversight

On 30 October, Bank Negara Malaysia (BNM) and Securities Commission Malaysia (SC) signed a Memorandum of Understanding (MOU) to improve their joint regulatory oversight. The MOU provides for enhanced collaboration between BNM and SC, with the aim of promoting financial sector and capital market stability. The MOU reinforces the intent to collaborate, cooperate, and share information to enable both agencies to effectively carry out their respective mandates.

SC Introduces New Capital Market Regulations

On 2 January, SC announced new capital market regulations through the Capital Markets and Services (Amendment) Act 2012 (CMSA 2012), which aims to encourage market innovation, promote market efficiency, and allow for more informed investment decisions. CMSA 2012 introduces a new approval framework that will facilitate the offering of a broader array of capital market products for the benefit of issuers, intermediaries, and investors. New regulations under CMSA 2012 include, among others, (i) guidelines for business trusts that allow for greater fundraising flexibility and provide investors with an opportunity to invest in a new asset class, (ii) revised guidelines on private debt securities and *sukuk* (Islamic bonds) that allow publicly listed companies and banks to offer bonds and *sukuk* to retail investors, and (iii) the establishment of a consolidated capital market compensation fund.

RAM Ratings Launches Global and ASEAN Ratings Scale

In January, RAM Ratings Services Bhd. launched its global and Association of Southeast Asian Nations (ASEAN) ratings scales. The scale will enable RAM to benchmark ratings against global and regional peers. The Credit Guarantee and Investment Facility (CGIF) was the first institution to be given a global and ASEAN rating of AAA by RAM.

Philippines

BSP Adopts Disclosure Rules for Capital Instruments

On 1 February, Bangko Sentral ng Pilipinas (BSP) added disclosure requirements, which are Basel III compliant, for debt instruments issued by banks. BSP has added a client suitability measure to determine whether the investor understands the risks involved in an investment. A risk disclosure statement must also be included that outlines the risks as well as the processes that would follow once thresholds are breached.

AMLA Amendments Approved

On 7 February, Congress ratified amendments to the Anti-Money Laundering Act (AMLA). The amendments include expanding the list of covered institutions required to report transactions in excess of PHP500,000 and the list of unlawful activities covered by the AMLA. The covered institutions were expanded to include companies such as forex dealers, pawnshops, remittance agents, and pre-need firms. Unlawful activities include terrorism, financing of terrorism, fraud, and bribery.

Singapore

PBOC Appoints Clearing Bank for Renminbi in Singapore

On 8 February, the PBOC appointed the Industrial and Commercial Bank of China's (ICBC) Singapore branch as the clearing bank for renminbi in Singapore. The Monetary Authority of Singapore (MAS) will work closely with the PBOC and ICBC in implementing clearing arrangements in Singapore. The appointment of a renminbi clearing bank in Singapore marks a milestone in financial cooperation between the PBOC and MAS, and will enable Singapore to facilitate greater use of the renminbi for trade, investment, and other economic activities in the region.

Thailand

MOF Permits Eight Foreign Entities to Issue LCY Bonds in Thailand

The Ministry of Finance (MOF) has permitted eight foreign entities to sell THB-denominated bonds and debentures in Thailand, totaling THB59 billion, between 1 January and 30 September. These entities and their respective authorized bond issuance amounts are as follows: (i) Industrial Bank of Korea (THB10 billion), (ii) ING Bank (THB10 billion), (iii) Korea Eximbank (THB10 billion), (iv) Shinhan Bank (THB10 billion), (v) Woori Bank (THB10 billion), (vi) Rabobank Nederland (THB4 billion), (vii) Noble Group (THB3.5 billion), and (viii) Ministry of Finance of Lao PDR (THB1.5 billion).

BOT Provides Notification on Basel III's Capital Adequacy Framework

In December, the Bank of Thailand (BOT) provided notification on Basel III's capital adequacy framework. The central bank informed Thai banks of the requirement to maintain a minimum common equity ratio of 4.5%, a Tier 1 ratio of 6.0%, and a total capital ratio of 8.5%. The notification also stipulates that branches of foreign banks are required to maintain a total capital ratio of 8.5%.

Viet Nam

SBV Cut Key Rates in December for the Sixth Time in 2012

On 24 December, the State Bank of Viet Nam (SBV) cut key interest rates for the sixth time in 2012 in a continuation of its policy of monetary easing. The discount rate and the refinancing interest rate were each cut by an additional 100 bps to 7.0% and 9.0%, respectively.

Managing Capital Flows in Local Currency Bond Markets

Introduction

Capital inflows have surged in recent years after a sharp drop during the 2008/09 global financial crisis.

The volume and pace of capital flows to emerging East Asian economies have surged, posing a serious challenge to macroeconomic management and financial stability.[5] The strong foreign investor appetite for the region's assets is reflected in the fact that net capital inflows rose from their troughs in early 2009 to their recent peak in just 5 quarters: by mid-2010, gross inflows had surpassed previous highs attained in 2007. Conversely, it took 25 quarters for net capital inflows to fully recover in the aftermath of the 1997/98 Asian financial crisis (IMF 2011).

The recent surge in inflows has been characterized as the third wave of capital inflows into the region. The first wave started in the early 1990s, but was disrupted by the crippling Asian financial crisis. The second wave began in the early 2000s and ended with the onset of the global financial crisis. In 2008, following the Lehman collapse, there was a reversal of capital flows as market uncertainty rose and increased risk perception resulted in a flight to safe assets.

The reversal in capital inflows after the global financial crisis lasted only a short while and had minimal impact on the region's financial systems.

Fortunately for the region, the impact of capital outflows on the broader economy during the 2008/09 global financial crisis was less disruptive than during the 1997/98 Asian financial crisis. Part of the reason was that Asian policymakers had learned well the lessons from the previous crisis and by 2008 the region had strengthened both its financial systems and macroeconomic fundamentals. Although there were initially large capital outflows from the region during the global financial crisis, these did not precipitate a banking or currency crisis. The region's economies and financial systems remained resilient and did not suffer as much as those of the United States (US) and Europe. When investors realized that the economic and financial conditions in emerging East Asia remained robust, foreign funds soon returned to the region.

The swift resumption of capital inflows into the region in 2009 was seen as a strong vote of confidence in the region's economies, underscoring their resilience in the face of the global financial crisis. However, as the size of the capital inflows continued to grow, especially in 2010, concerns arose about a repeat of the 1997/98 Asian financial crisis. Policymakers feared that a surge in capital flows could lead to asset bubbles and put upward pressure on exchange rates. There were also concerns about sudden reversals of capital inflows, which could destabilize asset prices and financial markets. As can be seen from the severe recession following the 1997/98 Asian financial crisis, the cost of capital flow volatility can be very high indeed.

Capital inflows in recent years have been driven by both improved economic fundamentals in the region and low interest rates in advanced economies.

The increased capital inflows into emerging East Asia are not necessarily a result of just domestic reforms and policies—the "pull factors." They also reflect the ultra-loose monetary policies in the industrial economies and low returns in mature markets—the "push factors." These factors have led to a major rebalancing of global institutional portfolio flows toward Asian assets, driven by improving economic fundamentals,

[5] Emerging East Asia, as discussed in this section, comprises the People's Republic of China; Hong Kong, China; Indonesia; the Republic of Korea; Malaysia; the Philippines; Singapore; and Thailand.

diversification needs, lower portfolio volatility, and the hunt for yields. The US Federal Reserve's continued quantitative easing could further spur capital inflows into the region. This has sparked concerns among the region's policymakers over how to manage these inflows. In particular, portfolio flows to the region have emerged as a channel for volatility originating in the mature markets of the US and Europe due to distortions in the interest rate regimes in these developed markets.

This special section examines the role of the region's local currency (LCY) bond markets as conduits for volatile capital flows. Emerging East Asia's LCY bond markets have grown by leaps and bounds since the 1997/98 Asian financial crisis. At that time, the lack of well-developed LCY bond markets was cited as a major contributor to the currency and maturity mismatches that plagued the region during the crisis.

LCY bond markets in the region have seen strong interest from foreign investors.

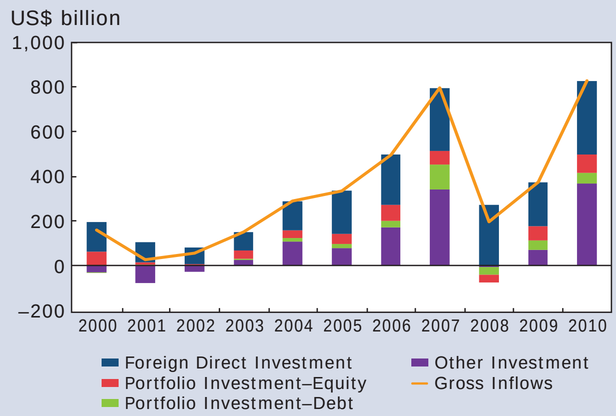
Emerging East Asia's LCY bond markets have shown remarkable growth. The region's LCY bonds have emerged as a distinct asset class and are now attracting strong foreign investor interest. Foreign holdings of domestic Asian government bonds have significantly risen in recent years, driven by yield differentials, the growth potential of the region, and expectations of currency appreciation. But these foreign inflows into Asian domestic bond markets, which are a relatively new phenomenon, have also been volatile and could pose challenges to monetary authorities and market regulators. Monitoring and managing capital inflows into LCY bond markets is important as these inflows can have an impact on fiscal and monetary policies.

Historical Overview of Capital Inflows

The capital inflows into the region can be broadly divided into three categories: (i) foreign direct investment (FDI), (ii) portfolio investment, and (iii) other investment. Certain types of capital flows are seen to be more conducive for development than others. FDI, in particular, is seen as the most desirable type of capital inflows because it facilitates the transfer of technology and opens up opportunities for new markets abroad. Further, FDI is seen to be more stable and less prone to sudden reversals. In fact, FDI flows in 2000–10 remained relatively stable in emerging East Asia, even during the 2008/09 global financial crisis when other types of inflows dropped precipitously **(Figures 13, 14)**.

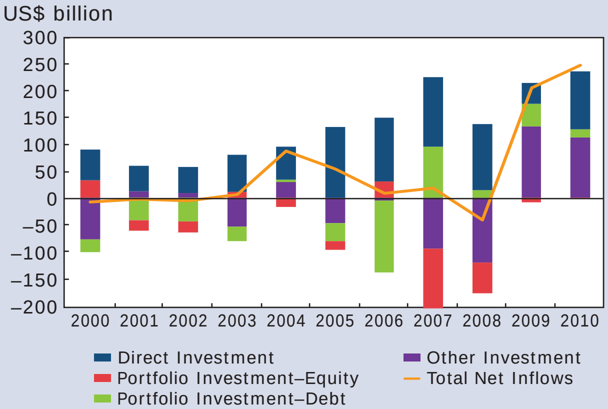
Portfolio investment comprises bond and equity flows, and is usually perceived to be the most volatile of capital flows. Bond and equity investors are generally viewed as short-term investors chasing after the latest investment trend. Portfolio flows are not considered to be as beneficial to a host economy as FDI since they do not involve the transfer of knowledge and technology. In addition, they can be subject to herding behavior and contagion effects, which can lead to sudden, large capital outflows. This was demonstrated in 2008 after the collapse of Lehman Brothers when there was a huge outflow of portfolio investment from the region.

Figure 13: Composition of Gross Inflows in Emerging East Asia



Notes:
a. Gross Inflows = Foreign Direct Investment + Portfolio Investment + Other Investment.
b. Emerging East Asia comprises the People's Republic of China; Hong Kong, China; Indonesia; the Republic of Korea; Malaysia; the Philippines; Singapore; and Thailand.
Source: ADB staff calculations based on balance of payments data (BPM5) from *International Financial Statistics*, IMF.

Figure 14: Composition of Net Inflows in Emerging East Asia



Notes:
a. Net Inflows = Net Direct Investment + Net Portfolio Investment + Net Other Investment.
b. Emerging East Asia comprises the People's Republic of China; Hong Kong, China; Indonesia; the Republic of Korea; Malaysia; the Philippines; Singapore; and Thailand.
Source: ADB staff calculations based on balance of payments data (BPM5) from *International Financial Statistics*, IMF.

The final type of capital inflows is other investment, which consists mostly of bank lending. Traditionally, bank lending is seen as more stable than portfolio flows as banks usually prefer to maintain long-term relationships with their clients. However, past experience suggests that during crises banks tend to pull back from their lending. For example, during the 1997/98 Asian financial crisis, most of the reversal in capital flows was driven by a plunge in bank lending. Not surprisingly, other investment flows remained low in many Asian economies in the aftermath of the Asian financial crisis. However, there has been an increase in other investment flows into the region in recent years.

FDI remains an important component of capital flows into the region, but there is considerable diversity across countries.

Looking at the capital account composition, FDI continues to be a major source of capital inflows for emerging East Asia **(Table 9)**. Roughly comparable in size to FDI is other investment inflows. There has also been a trend toward a greater share of portfolio investment inflows, both in equity and debt. However, the aggregate data masks considerable diversity within the region in the composition of capital flows in 2000–10. In Malaysia and Thailand, for example, FDI has grown in importance and represents a huge portion of capital inflows. In Indonesia, FDI and portfolio debt investment combined account for about half of all capital inflows. FDI remains the largest source of capital inflows into the PRC, but portfolio investment and other investment are growing in importance over time. Finally, capital inflows into the Republic of Korea's capital account are mostly in the form of portfolio investment.

Portfolio investment's share of capital inflows has been growing due to financial market liberalization and development.

Since the early 1990s, and continuing after the 1997/98 Asian financial crisis, the share of portfolio investment in the region's capital account has increased, although FDI and other investment still comprise the lion's share. As a result, there are rising concerns that portfolio investment flows could become a source of volatility in emerging East Asia. The growing share of portfolio investment in the capital account can be attributed to the gradual liberalization and development of financial markets in the region. Furthermore, the degree of capital market integration has also been increasing, coupled with a push by policymakers to encourage greater intra-regional investment flows.

Debt security portfolio investment has also grown in emerging East Asia. In Indonesia, Malaysia, the Philippines, and Thailand, debt market investment began increasing as a share of portfolio inflows in 2004. By 2009/10, in the aftermath of the global financial crisis, portfolio inflows to the region went mainly to debt markets. The growth in portfolio debt securities investment in much of the region could be an indication that the bond markets in these countries are developing and becoming more attractive for foreign investors. On the other hand, foreign investment in debt securities in the PRC remains minimal.

Table 9: Composition of Gross Capital Inflows Over Time (% of total inflows)

	1980–89				1990–99				2000–10			
	Foreign Direct Investment	Portfolio Investment		Other Investment	Foreign Direct Investment	Portfolio Investment		Other Investment	Foreign Direct Investment	Portfolio Investment		Other Investment
		Equity	Debt			Equity	Debt			Equity	Debt	
China, People's Rep. of	37.06	–	12.71	50.23	90.14	2.24	3.76	3.86	63.18	10.17	0.50	26.15
Hong Kong, China	–	–	–	–	(26.69)	(39.59)	2.20	164.08	49.42	18.17	(0.13)	32.54
Indonesia	9.58	–	1.85	88.57	50.51	(7.31)	26.72	30.08	50.66	14.46	52.97	(18.09)
Korea, Rep. of	27.18	–	14.48	58.34	15.53	25.25	27.38	31.84	15.03	9.30	52.38	23.28
Malaysia	51.78	–	27.12	21.10	81.14	–	(8.31)	28.92	103.62	(9.88)	21.76	(9.81)
Philippines	15.88	–	3.07	81.05	22.76	4.69	22.06	50.49	48.28	17.65	37.66	(3.59)
Singapore	44.41	3.99	-0.57	52.17	48.06	5.02	0.32	46.60	44.40	5.85	1.26	48.49
Thailand	20.95	10.89	4.37	63.79	35.46	13.18	11.12	40.24	86.41	23.14	5.99	(15.55)

– = data unavailable, ( ) = negative.
Source: ADB staff calculations based on balance of payments data (BPM5) from *International Financial Statistics*, IMF.

As portfolio inflows tend to be volatile, it is important to understand what is driving the inflows.

As capital inflows can be volatile, policymakers are keen to better understand the determinants of such inflows into the region. While it is clear that capital flows can bring benefits to the receiving economy, there are risks associated with volatile capital flows. For policymakers to better judge their benefits and costs, they need to understand the determinants of capital inflows.

One reason for the increased concern is that in most countries in the region portfolio investment is more volatile than FDI **(Table 10)**. Other investment flows are also showing increasing volatility in most countries **(Table 11)**. As emerging East Asian economies continue to develop their financial systems and the share of other investment and portfolio flows in the capital account grows, capital flow volatility is also increasing.

A major fear of the region's policymakers is that capital flows might suddenly reverse. This is what happened in 2008 at the height of the global financial crisis when large amounts of capital began flowing out of the region. **Table 12** shows that in 2008 nonregional investors were more likely to withdraw their funds than regional investors. (The exception was the case of Indonesia, where regional investors withdrew more of their money than nonregional investors.) Therefore, there is some basis for the claim that regional investors are more confident in emerging East Asia's medium- and long-term prospects than

Table 10: Coefficient of Variation of Capital Inflows

	PRC	HK	ID	KR	MY	PH	SG	TH
Foreign Direct Investment	1.14	0.53	1.72	1.24	0.86	0.93	1.19	1.06
Equity Capital	1.11	1.73	1.24	1.31	0.74	0.90	1.22	1.02
Reinvested Earnings	0.66	0.62	–	–	–	1.63	–	0.37
Other Capital	0.79	1.62	13.57	1.10	1.31	1.77	0.89	2.53
Portfolio Investment	1.50	1.55	1.90	1.69	44.14	2.03	3.89	1.71
Equity Securities	0.99	1.16	4.44	4.12	7.37	2.11	3.99	1.79
Debt Securities	1.29	37.55	1.72	1.90	8.10	2.16	5.12	2.99
Other Investments	2.33	17.70	3.98	3.30	5.78	1.89	1.60	6.15
Gross Inflows	**1.34**	**1.77**	**1.59**	**1.52**	**1.84**	**1.21**	**1.35**	**1.63**

– = data unavailable; HK = Hong Kong, China; ID = Indonesia; KR = Republic of Korea; MY = Malaysia; PH = Philippines; PRC = People's Republic of China; SG = Singapore; TH = Thailand.
Source: ADB staff calculations based on balance of payments data (BPM5) from *International Financial Statistics*, IMF.

Table 11: Coefficient of Variation of Capital Inflows Over Time

	1980–89				1990–99				2000–10			
	Foreign Direct Invest-ment	Portfolio Investment		Other Invest-ment	Foreign Direct Invest-ment	Portfolio Investment		Other Invest-ment	Foreign Direct Invest-ment	Portfolio Investment		Other Invest-ment
		Equity	Debt			Equity	Debt			Equity	Debt	
China, People's Rep. of	0.59	–	1.02	0.90	0.57	1.22	1.39	4.62	0.56	0.82	1.03	1.36
Hong Kong, China	–	–	–	–	0.35	1.52	0.28	0.36	0.49	1.05	130.88	2.36
Indonesia	0.52	–	3.02	0.51	1.10	6.82	1.22	1.74	1.47	1.16	1.13	3.14
Korea, Rep. of	1.08	–	3.37	6.26	1.08	0.83	1.38	2.20	0.67	7.40	1.12	3.32
Malaysia	0.43	–	1.44	3.88	0.27	–	1.30	1.64	0.61	7.37	4.59	7.07
Philippines	1.47	–	2.05	1.42	0.51	1.74	1.21	0.74	0.56	2.32	1.99	22.96
Singapore	0.47	1.21	1.10	0.97	0.53	1.39	2.17	1.64	0.56	2.89	3.25	0.85
Thailand	1.03	1.69	2.63	0.73	0.64	1.15	1.50	3.14	0.40	1.41	4.54	6.38

– = data unavailable.
Note: Coefficient of variation is calculated as standard deviation divided by average of values corresponding to a period range.
Source: ADB staff calculations based on balance of payments data (BPM5) from *International Financial Statistics*, IMF.

nonregional investors. But even as emerging East Asia's intra-regional share of portfolio investment has risen, nonregional sources remain much more important **(Table 13)**. The region's policymakers should facilitate greater intra-regional investment to encourage greater capital flow stability.

Rising Foreign Participation in Emerging East Asian Bond Markets

One of the most significant financial developments in emerging economies, particularly emerging East Asia, has been the rapid growth of LCY debt markets. In the past 10 years, emerging East Asia's LCY bond markets have grown by over 16% annually and now account for nearly 10% of total global bonds outstanding. The region's expanding LCY bond markets have reduced the need to borrow in foreign currency (FCY), allowing governments and companies to borrow more in LCY and at longer maturities.

Growth in the use of LCY bonds has helped facilitate management of the region's economies and increased financial stability.

A heavy reliance on foreign borrowing in the past has complicated the use of macroeconomic policy as a countercyclical tool. For example, when faced with an economic slowdown, expansionary policies tend to cause exchange rates to depreciate. This has the impact of increasing the debt servicing costs of FCY bonds, forcing governments to either reduce spending or raise taxes. Large holdings of FCY debt also tend to lead to monetary policies that are primarily focused on managing exchange rates rather than stabilizing the domestic economy. The growth of LCY bond markets has mitigated some of these difficulties in economic management and improved the resilience and financial stability of many emerging East Asian economies.

Table 12: Portfolio Investment Decline in 2008 by Region (% of total per region)

	Emerging East Asia	Rest of the World	Total Decline in Portfolio Investment
China, People's Rep. of	33.36	45.47	39.77
Hong Kong, China	44.69	45.93	45.77
Indonesia	52.29	31.13	35.85
Korea, Rep. of	7.27	48.79	43.26
Malaysia	35.97	48.78	45.09
Philippines	22.11	49.46	46.94
Singapore	31.30	50.25	48.71
Thailand	38.25	43.52	42.70

Emerging East Asia comprises the People's Republic of China; Hong Kong, China; Indonesia; the Republic of Korea; Malaysia; the Philippines; Singapore; and Thailand.
Source: IMF Coordinated Portfolio Investment Survey.

Not only has there been a shift toward greater reliance upon LCY bonds recently, the region's investor base is also diversifying. While domestic

Table 13: Regional Sources of Portfolio Investment Liabilities (% of total investment)

	Origin of Investment	1997	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
China, People's Rep. of	Emerging East Asia	5.41	49.91	43.21	41.83	46.56	41.83	39.83	47.05	52.06	45.53	49.72	55.10
	Rest of the World	94.59	50.09	56.79	58.17	53.44	58.17	60.17	52.95	47.94	54.47	50.28	44.90
Hong Kong, China	Emerging East Asia	4.52	5.70	7.63	7.06	7.47	12.14	12.74	12.39	12.64	9.02	8.57	10.47
	Rest of the World	95.48	94.30	92.37	92.94	92.53	87.86	87.26	87.61	87.36	90.98	91.43	89.53
Indonesia	Emerging East Asia	18.22	17.01	26.10	15.81	16.02	19.71	17.95	22.28	16.57	16.91	23.36	19.71
	Rest of the World	81.78	82.99	73.90	84.19	83.98	80.29	82.05	77.72	83.43	83.09	76.64	80.29
Korea, Rep. of	Emerging East Asia	0.78	11.49	13.98	14.82	13.00	10.43	11.25	13.32	21.77	21.48	17.11	18.48
	Rest of the World	99.22	88.51	86.02	85.18	87.00	89.57	88.75	86.68	78.23	78.52	82.89	81.52
Malaysia	Emerging East Asia	23.24	43.17	45.59	37.31	37.81	37.18	29.61	28.79	33.57	26.60	24.55	25.37
	Rest of the World	76.76	56.83	54.41	62.69	62.19	62.82	70.39	71.21	66.43	73.40	75.45	74.63
Philippines	Emerging East Asia	6.14	21.84	16.72	13.19	11.34	9.51	8.90	9.22	13.53	12.38	13.55	11.46
	Rest of the World	93.86	78.16	83.28	86.81	88.66	90.49	91.10	90.78	86.47	87.62	86.45	88.54
Singapore	Emerging East Asia	3.30	6.94	9.56	11.82	11.55	11.01	9.77	8.13	10.90	10.23	13.65	12.51
	Rest of the World	96.70	93.06	90.44	88.18	88.45	88.99	90.23	91.87	89.10	89.77	86.35	87.49
Thailand	Emerging East Asia	10.78	31.32	30.65	26.54	23.84	21.90	17.66	15.51	16.71	12.42	15.33	15.26
	Rest of the World	89.22	68.68	69.35	73.46	76.16	78.10	82.34	84.49	83.29	87.58	84.67	84.74

Note: Emerging East Asia comprises the People's Republic of China; Hong Kong, China; Indonesia; the Republic of Korea; Malaysia; the Philippines; Singapore; and Thailand.
Source: IMF Coordinated Portfolio Investment Survey.

banks and financial institutions still dominate many LCY bond markets, their share is declining as both domestic and foreign institutional investors like mutual funds, pension funds, and insurance companies grow in importance. In particular, foreign investors' holdings of emerging East Asian LCY bonds have increased significantly over the past few years and they play an important role in developing these markets. Apart from expanding the investor base and improving liquidity, they bring in expertise and technology that is beneficial to developing local markets. In general, investor heterogeneity tends to promote trading as different classes of investors have varying risk profiles and trading strategies. Therefore, foreign participation can help price discovery and lead to more liquid and efficient markets, all of which help to lower the cost of borrowing.

The attraction of emerging East Asian LCY bonds lies in strong credit quality and the potential for further currency appreciation. The credit quality of Asian debt has improved significantly in recent years, as evidenced by ratings upgrades in Indonesia and the Philippines. The improved credit quality has been driven by strong growth prospects, fiscal discipline, increased financial openness, rising productivity, growth in corporate profitability, and attractive yields. By most measures, emerging East Asian governments are in much better fiscal health than the US and eurozone economies.

Increased foreign investor participation has helped reduce yields and improve liquidity and efficiency in the region’s LCY bond markets.

Greater foreign investment has helped depress yields in the region by increasing the demand for LCY bonds. Foreign investors may act as an important provider of liquidity in many local markets. Domestic banks and financial institutions, which are still the major buyers of government debt in the region, tend toward a buy-and-hold strategy. Furthermore, the scrutiny of foreign investors and analysts may help improve the monitoring and assessment of credit risks in the region.

However, certain classes of foreign investors can also increase volatility because of their sensitivity to macroeconomic imbalances. During times of market stress, this can impact the conduct of monetary policies if central banks intervene to stabilize government bond yields and exchange rates. The region witnessed the withdrawal of foreign funds in some local markets after the collapse of Lehman Brothers in September 2008. This led to a jump in bond yields and pushed up the cost of borrowing for governments and companies. When authorities unveiled massive fiscal support packages and eased monetary policies, and the region's economies subsequently recovered, foreign investors soon returned to emerging East Asia's LCY bond markets.

What Is Driving Foreign Fund Inflows into the Region?

To better understand the nature of capital flows in the region, we try to examine the determinants of the level of foreign holdings in government securities. As mentioned above, the factors determining capital flows can be classified broadly into two categories. The first group—push factors—are related to conditions specific to the sending country. Examples of push factors include economic conditions and interest rates in the sending country that influence how investors perceive the attractiveness of investing abroad. The ongoing loose monetary policies in the US and Europe, and the resultant low interest rates, are major push factors causing capital to flow from the developed economies into emerging markets.

The second group—pull factors—are related to conditions in the receiving country. These could include domestic economic conditions and structural factors such as legal frameworks, rule of law, and the existence of capital controls. For example, a stable domestic macroeconomic environment that generates falling inflationary expectations could be expected to increase domestic demand for monetary assets that can be supplied by capital inflows. A positive productivity shock that increases the efficiency of the economy could also attract more capital inflows.

For policymakers in the region trying to manage capital inflows, it is important to distinguish between push and pull factors. If capital flows are driven more by push factors, this would suggest that the receiving countries are more vulnerable to external shocks and policymakers in the receiving countries will have less influence over such flows. However, if capital flows are mostly the result of pull factors, policymakers in the receiving country will have a greater ability to influence capital flows. In addition, if there is a common external factor driving capital flows into the region, there may be a need for regional cooperation among the countries affected to manage the capital flows.

To better understand the factors driving foreign flows into the region, we estimate a panel regression model using quarterly data from 1Q04 through 4Q11 for four Asian economies—Indonesia, the Republic of Korea, Malaysia, and Thailand—to examine the determinants of foreign participation in an LCY bond market.[6] Our specification is based on the risk–return framework of portfolio management and can be written as follows:

$$ShareFI_t = \beta_0 + \beta_1 Spread_t + \beta_2 ERPremium_t + \beta_3 ERVolatility_t + \beta_4 Ratings_t + \beta_5 BAS_t + \varepsilon_t$$

The dependent variable in our regression equation is the percentage share of foreign holdings in an LCY bond market. Our independent variables consist of factors that affect the returns and risks of foreign investors participating in an LCY bond market. The first variable is the government bond yield spreads between local markets and global markets (US Treasuries), denoted as *Spread*. This is measured by the difference in yields on 5-year LCY government bonds and the yield on the 5-year US Treasury bond. A higher spread will be expected to increase foreign participation. Next we have the expected change in exchange rates (*ERPremium*), measured using the 6-month forward premium. This variable indicates the expected currency gains investors can realize from holding an LCY bond, with a higher premium representing greater exchange rate appreciation gains for foreign investors.

We then include several variables to measure risk such as exchange rate volatility (*ERVolatility*),

[6] S. Mitra and T.H. Ng. 2013. Managing Foreign Fund Flows into Asia's Local Currency Bond Markets. *Asian Capital Market Development and Integration: Challenges and Opportunities*.

credit ratings (*Ratings)*, and the bid–ask spread (*BAS*). The exchange rate volatility measures valuation risks as fluctuations in the exchange rate make it difficult for investors to forecast the dollar value of an LCY investment and creates uncertainties in the dollar pricing of an asset; thus, a negative relationship between volatility and foreign investor participation is expected.

Aside from valuation risks, investors are also concerned about default risks. A commonly used indicator for default probability is sovereign credit ratings as these capture characteristics pertaining to economic structure, growth prospects, external liquidity, fiscal performance, debt burden, and monetary flexibility, all of which are important indicators of the economy's health and repayment capacity. Our credit ratings variable is constructed using the numerical scale from Standard & Poor's (S&P) sovereign credit ratings. Higher values indicate lower ratings, hence we expect to see a negative relationship between credit ratings and foreign participation. The bid–ask spread is a measure of bond market liquidity and can also indicate risks where a large spread indicates an illiquid market. We would expect foreign participation to be less in markets with higher bid–ask spreads.

Higher yields, appreciating currencies, improved credit ratings, and lower exchange rate volatility increase foreign participation in LCY bond markets.

The results of our estimation are shown in column 1 of **Table 14**. Our return and risk variables are all significant and have the expected sign. The result of the estimation confirms that higher returns in domestic bond markets, both in terms of yield spreads and expected appreciation of regional currencies, are significant factors influencing foreign portfolio inflows into domestic government bond markets. Higher exchange rate volatility discourages foreign investment in LCY bond markets as it increases fluctuations in the value of portfolio holdings in FCY terms. The credit ratings of emerging East Asian markets are a significant factor in influencing foreign participation in local debt markets, while higher liquidity also helps in attracting foreign investors. Non-resident investors, particularly short-term or leveraged players, prefer deep and liquid markets for easy entry and exit. Our results show that lower bid–ask spreads, which indicate greater liquidity, are associated with higher levels of foreign participation. A liquid financial market enables investors to better price their investments and minimize price fluctuations, resulting in reduced uncertainty in return valuation.

The Lehman crisis had an impact on foreign participation but not financial openness.

To account for possible structural breaks following the Lehman Brothers collapse, the equation was extended to include a crisis dummy (*Lehman)* that takes on the value of 1 in the crisis period. In addition, we have also added a measure of financial openness (*FinOpen*) that captures the degree of restrictions imposed on foreign investors. We use the financial openness index computed by Chinn and Ito (2008) as our indicator.[7] The resulting equation is below:

$$\begin{aligned} ShareFI_t = \beta_0 + \beta_1 Spread_t + \beta_2 ERPremium_t \\ + \beta_3 ERVolatility_t + \beta_4 Ratings_t + \beta_5 BAS_t \\ + \beta_6 Lehman_t + \beta_7 FinOpen_t + \varepsilon_t \end{aligned}$$

The results of the estimation with the two additional variables are shown in column 2 of Table 14. We found the dummy variable for the Lehman collapse to be significant. This suggests that foreign fund inflows into the region continue to be affected by global conditions. However, the coefficient for financial openness was not found to be significant. One reason could be that the increase in global liquidity has made capital controls less of a constraint. Another reason is that since the countries in our sample all have relatively open capital markets the differences in financial openness scores may not be big enough to be an important factor.

[7] M. Chinn and H. Ito. 2008. *A New Measure of Financial Openness. Journal of Comparative Policy Analysis*. 10(3). pp. 378–407.

Table 14: Regression Results

Dependent Variable: Foreign Holdings of LCY Bonds (as % of LCY bond market size)

	Model Specifications		
	(1)	(2)	(3)
Yield Spread (%)	1.655	1.897	1.517
	(0.724)*	(0.645)**	(0.623)*
Exchange Rate Premium	0.009	0.009	0.010
	(0.003)**	(0.003)**	(0.002)**
Exchange Rate Volatility	–0.024	–0.022	–0.022
	(0.008)**	(0.007)**	(0.008)**
Credit Ratings (FCY Sovereigns)	–25.033	–24.866	–22.278
	(4.248)**	(4.574)**	(5.879)**
Bid–Ask Spread (%)	–0.068	–0.072	–0.082
	(0.023)**	(0.023)**	(0.026)**
Dummy Variable for Lehman Collapse		–2.236	
		(0.229)**	
Financial Openness		0.503	
		(0.586)	
Interaction Term (Lehman Dummy * VIX)			–0.052
			(0.005)**
Domestic Credit (% of GDP)			0.089
			(0.026)**
Constant	89.438	88.468	73.522
	(14.834)	(15.876)	(19.502)
R-squared	0.857	0.861	0.871
Adjusted R-squared	0.845	0.847	0.857
No. of Observations	108	108	108

FCY = foreign currency, GDP = gross domestic product, LCY = local currency.
Notes: 1. * and ** indicate significance at the 5% and 1% level of significance, respectively.
2. Standard errors are in parenthesis.
3. All variables are stationary.

Lower global risk perceptions and more developed domestic financial markets are contributing to higher foreign participation in emerging East Asia's LCY bond markets.

Risks in advanced countries' financial markets may also be an important determinant of foreign participation in the region's LCY bond market. Higher risks in these markets may result in greater risk aversion among foreign investors, thus reducing interest in the region's bond market. The VIX, a measure of volatility in equity markets, is used to measure risks in foreign financial markets. To capture whether market jitters in mature markets are transmitted to emerging markets through foreign investors' appetite for LCY bonds, VIX is entered as an interaction term (*VIX*Lehman*) in the equation. A negative coefficient for the interaction between the Lehman crisis dummy and the VIX indicates a flight to safety in which nervous foreign players move out of emerging bond markets perceived to be riskier. The banking sector is likewise an important player in the domestic bond market as banks act as both market-makers and investors. The banks can either compete with foreign investors in their demand for LCY bonds or encourage foreign investment as a healthy banking sector increases investor confidence in the domestic financial system; a positive coefficient indicates the latter relationship. Domestic credit (*DC*) is added to the specification to measure the size of the banking sector:

$$ShareFI_t = \beta_0 + \beta_1 Spread_t + \beta_2 ERPremium_t + \beta_3 ERVolatility_t + \beta_4 Ratings_t + \beta_5 BAS_t + \beta_6 (VIX_t * Lehman_t) + \beta_7 DC_t + \varepsilon_t$$

The results of the expanded regression are shown in column 3 of Table 14. We found the interaction term to be negative and significant. This highlights the potential for sudden withdrawals of funds from the region during periods of heightened global uncertainty and crisis. We also find that domestic credit positively affects foreign flows into the LCY bond market, highlighting the important role of the banking sector in bond market development. Banks and financial institutions are the largest holders of government bonds in most emerging East Asian markets, where they act as key market-makers.

Managing Foreign Fund Inflows

Both domestic and global factors are important determinants of inflows into the region's bond markets.

Our empirical results suggest that push and pull factors are both responsible for capital inflows into the region's LCY bond markets. Improved macroeconomic conditions, and the subsequent improvement in credit ratings and stability in exchange rates, have all contributed to increased capital inflows. Bond market characteristics, such as liquidity, also prove to be significant in attracting foreign investors. This suggests the importance of continuing to develop LCY bond markets—increasing the market size, improving return prospects, and enhancing market liquidity—to bring stability to beneficial foreign participation.

However, we also found that the conditions in global financial markets affected the flow of funds in the region. Global market volatility has a significant negative impact on foreign participation in emerging East Asian LCY bond markets. This highlights the potential for sudden withdrawals during periods of heightened global uncertainty and crisis. While the region looks relatively well-placed to deal with any sudden reversal in capital flows, policymakers must remain vigilant. Strong macroeconomic fundamentals within emerging East Asia suggest the cause of future capital reversals will likely emanate from outside the region, most likely due to volatility in global financial markets. This may drive investors away to safe haven assets—as happened in 2008.

Large inflows of funds can complicate policy management and may require balancing the needs of different policy objectives.

The significant impact of capital inflows has made policymakers more aware of the importance of judiciously managing them. Even inflows of funds of a more permanent nature can complicate policy management and may require policymakers to make tradeoffs on policy objectives. Large amounts of capital inflows put pressure on exchange rates and increase demand in the economy, potentially leading to exchange rate appreciation and overheating, respectively. Capital inflows may also result in asset price inflation and inflationary pressures if the authorities either do not allow the exchange rate to appreciate or are unable to engage in sterilization activities. Large capital flows through domestic bond markets can also hamper the monetary policy transmission mechanism. Central banks in Indonesia, the Republic of Korea, and Malaysia have raised policy rates at various points in the last few years to dampen the impact of rising liquidity. But large inflows of foreign investment in domestic bonds in these countries have exerted downward pressure on long-term interest rates, thereby constraining the transmission of the upward adjustments in policy rates.

The concerns of policymakers about capital inflows are not limited to macroeconomic effects. The impacts of capital inflows are usually magnified through the financial system. Inflows from abroad can help ease liquidity constraints and result in higher consumption and investment. This will tend to exacerbate the highs and lows of economic cycles. Higher credit and lending will tend to fuel asset price inflation, which could result in a bubble. Borrowing that tends to be secured by assets as collateral is likely to accelerate as asset values rise.

Authorities in the region have implemented measures to manage capital inflows.

Given the myriad concerns about the impacts of capital inflows, authorities have tried to introduce measures to control surging inflows. These measures are usually aimed at avoiding excessive appreciation of the exchange rate, which could lead to a loss of export competitiveness, or ensuring that the domestic financial system and real economy are able to withstand the stress generated by sudden outflows.

Appropriate measures will depend on the objectives that policymakers are trying to pursue. If the aim is to maintain the competitiveness of the export industry, then allowing the exchange rate to appreciate to discourage further inflows is not an option. However, intervening in the foreign exchange market to moderate an increase in the exchange rate can also be costly. The increased supply of LCY from purchasing FCY will have to be sterilized. Otherwise, the increase in liquidity could destabilize the economy. The cost of sterilization is basically the difference between the interest rate that the monetary authorities have to offer on the securities it sells and the interest rate that the authorities receive from foreign reserves. These costs can rapidly rise so such interventions are usually seen as a short-term solution only. The lack of a well-developed government bond market could force the central bank to use short-term instruments to sterilize, which, in turn, can drive up short-term rates and attract more capital inflows that will only make open market operations more challenging.

Capital control measures can be used to limit destabilizing inflows.

In response to previous crises, authorities in the region established measures to control excessively volatile capital inflows. Since then, there has been a change in attitude among international financial institutions toward the use of capital controls. For example, the International Monetary Fund (IMF) has recently suggested that capital flow management tools may be deployed in some situations, although these controls should not be seen as a substitute for macroeconomic adjustments. The IMF also emphasized the shared responsibility of capital control management among the countries in which the capital flows originate.

Within the region, capital control measures are usually addressed at limiting capital inflows that can be destabilizing to the economy. This is consistent with the IMF view that capital controls are justified to preserve financial stability in cases where excessive borrowing could threaten the health of the domestic financial system. Capital controls are usually introduced in situations where there are distortions in the domestic economy that can result in an excessive level of foreign borrowing. In this sense, restrictions on capital inflows are a second-best solution to the problem of imperfect markets. Capital controls may also be useful to insulate an economy from foreign financial shocks, preserve monetary policy independence, and encourage more long-term capital flows. However, the evidence of success in restricting the amount of capital flows is mixed. Further, there are concerns that capital controls' effectiveness may be temporary as there are usually other methods and channels available to circumvent capital controls. While capital controls may not be effective in managing the volume of capital inflows, they can affect the composition of the inflows, for example, by encouraging more investment in financial assets with longer maturities.

Another concern about the use of capital controls is the potential for diverting flows to another country or economy, thereby passing on the financial stability risks. For this reason, there is scope for countries to coordinate their policy actions to achieve a more efficient outcome. This would likely involve the participation of both the receiving and originating countries of the capital flows. Although it may be difficult to get the cooperation of originating countries to help mitigate the risks of financial instability in receiving countries, it is important to encourage originating countries to adopt policies that would minimize the spillover effects in other countries.

Several emerging East Asian economies introduced capital control measures to slow the large amounts of capital inflows during the period of recovery following the 1997/98 Asian financial crisis. For instance, The Bank of Korea implemented a ban on financial firms buying FCY-denominated bonds sold locally, known as *kimchi* bonds, to prevent excessive short-term external debt, which was a key contributor to both the 1997/98 and 2008 financial crises. Given the high level of foreign holdings of LCY bonds in Indonesia, the government introduced a bond stabilization program that permits the use of state funds to purchase bonds in case of a massive sell-off.

Conclusion

For several of the small and open economies of emerging East Asia, managing capital inflows implies that authorities should employ an array of instruments to maintain financial stability while still allowing the smooth conduct of monetary policy. A key consideration in achieving that goal is to have well-developed and liquid government bond markets that will allow central banks to focus on their price stability objectives through open market operations. Increasing the issue size and holding more frequent auctions can also promote liquidity by having more "on the run" issues in the market. To the extent that these issues are better priced, secondary trading may be encouraged. Further, the presence of hedging instruments can also promote market activity as these instruments can lower risks. A liquid money market that ensures bondholder access to the cash market also reduces risks and promotes bond market liquidity.

Excess global liquidity will continue to present challenges for central banks in emerging East Asia as they seek to keep exchange rates flexible when it is not feasible to fully absorb a sudden surge of large-scale inflows. This could result in volatile exchange rate swings that undermine trade and investment activities. On the other hand, there are multiple instruments— from short-term capital controls to administrative tools such as capital market return taxes—that can be intermittently employed to regulate pro-cyclical capital flows. But policymakers and regulators should be aware of the limitations of such instruments. Lastly, macroprudential policies should also be pursued to avoid potential asset bubbles and maintain financial stability. Given the exogenous nature of capital flows and the growing linkages between domestic, regional, and global markets, there is a case for greater cooperation between domestic, regional, and global authorities to build financial system resilience.

While the use of capital controls can be a useful tool for policymakers in managing capital flows, the policy focus for the region should be to improve the functioning of domestic financial systems to ensure that inflows of foreign capital will be put toward productive uses. Also, strengthening macroeconomic fundamentals will make an economy more resilient and less vulnerable to outside shocks. Episodes of capital flow reversals tend to be associated with either macroeconomic imbalances or problems with the domestic financial system that could be exacerbated by a regional or global crisis. Concerns about fiscal solvency and overvaluation of exchange rates tend to be the common triggers of capital outflows. A financial system that is perceived to be overstretched or insolvent may also prompt foreign investors to flee. While ensuring that macroeconomic fundamentals and the financial system are in order will reduce the risk of capital outflows, countries may also suffer capital outflows if global risk perceptions increase such as happened in 2008. In this case, while strong macroeconomic fundamentals and a resilient financial system may not prevent capital outflows, they can help ensure that the economy will be better able to withstand the shock and respond to it.

Market Summaries

People's Republic of China

Yield Movements

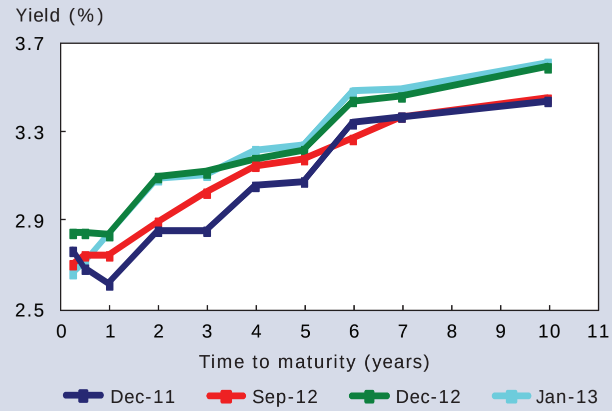
The government bond yield curve of the People's Republic of China (PRC) shifted upward from end-September to end-December, particularly at the shorter-end. Yields rose in 4Q12 between 9 basis points (bps) and 14 bps for tenors of 1-year or less. Meanwhile, yields rose 3 bps–17 bps between the 2- and 6-year tenors, and 9 bps–14 bps between the 7- and 10-year tenors **(Figure 1)**. As a result of the rise in interest rates, particularly at the shorter-end of the curve, the yield curve flattened in 4Q12

The rise in yields in 4Q12 was primarily due to a rise in inflationary expectations. Inflation accelerated to 2.5% year-on-year (y-o-y) in December from 2.0% in November. Inflation was 1.7% in October. Inflation was 2.0% in January, but was tempered by a high base due to the Lunar New Year falling in January.

Seasonal factors also contributed to the rise in yields as banks hoarded cash in anticipation of increasing customer demand at year's end. In addition, economic data suggest improvement in the PRC's economy, putting further upward pressure on yields. In 4Q12, gross domestic product (GDP) growth moderately improved to 7.9% y-o-y from 7.4% in 3Q12.

In January, rates declined at the shorter-end of the curve amid improved liquidity as demand among bank customers eased. Interest rates also declined following the central bank's announcement that it would implement a new liquidity management tool using repurchase (repo) and reverse repo agreements of less than 7 days. Interest rates fell 13 bps–18 bps in January on tenors of less than 1 year. Meanwhile, between the belly and longer-end of the curve, interest rates rose marginally between 2 bps and 4 bps. As a result, the yield curve steepened slightly, with the spread between the 2- and 10-year tenors rising to 52 bps at end-January from 49 bps at end-December.

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



LCY = local currency.
Source: Bloomberg LP.

Size and Composition

The amount of outstanding local currency (LCY) bonds in the PRC market reached CNY23.7 trillion (US$3.8 trillion) at end-December, an increase of 11.2% y-o-y and 3.0% quarter-on-quarter (q-o-q), largely driven by growth in policy bank and corporate bonds **(Table 1)**.

Government Bonds. LCY government bonds outstanding grew 8.0% y-o-y and 0.9% q-o-q in 4Q12, largely driven by the growth in policy bank bonds, which expanded 21.3% y-o-y and 3.3% q-o-q. Central bank bonds continued to act as a drag on government bond growth, falling 37.2% y-o-y and 16.2% q-o-q as a result of fewer

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

	Outstanding Amount (billion)								Growth Rates (%)						
	Sep-12		Oct-12		Nov-12		Dec-12		Sep-12		Oct-12	Nov-12	Dec-12		
	CNY	US$	CNY	US$	CNY	US$	CNY	US$	q-o-q	y-o-y	m-o-m	m-o-m	m-o-m	q-o-q	y-o-y
Total	23,046	3,667	23,263	3,730	23,462	3,768	23,747	3,811	4.6	11.2	0.9	0.9	1.2	3.0	11.2
Government	17,119	2,724	17,176	2,754	17,222	2,766	17,270	2,772	4.4	8.4	0.3	0.3	0.3	0.9	8.0
Treasury Bonds	7,915	1,259	7,980	1,279	8,017	1,288	8,074	1,296	5.5	8.8	0.8	0.5	0.7	2.0	9.3
Central Bank Bonds	1,597	254	1,564	251	1,462	235	1,338	215	(3.2)	(24.5)	(2.1)	(6.5)	(8.5)	(16.2)	(37.2)
Policy Bank Bonds	7,606	1,210	7,632	1,224	7,743	1,243	7,858	1,261	4.9	18.9	0.3	1.4	1.5	3.3	21.3
Corporate	5,927	943	6,086	976	6,240	1,002	6,477	1,040	5.0	20.2	2.7	2.5	3.8	9.3	20.8
Policy Bank Bonds															
China Development Bank	5,142	818	5,149	825	5,214	837	5,270	846	4.5	15.4	0.1	1.3	1.1	2.5	18.6
Export–Import Bank of China	1,008	160	1,026	165	1,078	173	1,112	178	8.4	29.2	1.8	5.1	3.1	10.3	33.4
Agricultural Devt. Bank of China	1,457	232	1,457	234	1,450	233	1,476	237	4.1	25.4	0.0	(0.5)	1.8	1.3	22.9

( ) = negative, LCY = local currency, m-o-m = month-on-month, q-o-q = quarter-on-quarter, 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–US$ rate is used.
4. Growth rates are calculated from LCY base and do not include currency effects.
5. The balance of outstanding commercial paper at end-December was zero as of 4Q12 based on *ChinaBond* data and CNY1.3 trillion on *Wind*.
Source: *ChinaBond* and Bloomberg LP.

sterilization activities and additional monetary easing by the People's Bank of China (PBOC). Meanwhile, treasury bonds increased 9.3% y-o-y and 2.0% q-o-q in 4Q12.

Corporate Bonds. Corporate bonds outstanding grew 20.8% y-o-y and 9.3% q-o-q in 4Q12 **(Table 2)**. Growth was driven mainly by an increase in outstanding local corporate bonds. Commercial bank bonds grew 36.9% y-o-y in 4Q12, due largely to the carryover of issuance of subordinated notes in 2Q12 as banks sought to bolster their capital bases in advance of the PRC's implementation of Basel III capital adequacy requirements. While state-owned enterprise (SOE) bonds rose a modest 11.0% y-o-y in 4Q12, local corporate bonds and medium-term notes (MTNs) expanded significantly by 66.8% y-o-y and 26.2% y-o-y, respectively, during the same period. Also in 4Q12, asset-backed securities (ABS) continued to decline, falling 19.9% y-o-y due to a lack of issuance linked to a government decision to temporarily halt new issuance in 2008. In 4Q12, however, the ABS isssuance program was resumed. On a q-o-q basis, local corporate bonds also showed the strongest growth among all types of corporate bonds in 4Q12 at 18.3%.

Overall issuance of corporate bonds was up in 4Q12 from 3Q12 levels **(Figure 2)**, with the exception of MTNs. Issuance of commercial bank bonds was strong, matching its peak level reached in 4Q11.

A relatively small number of issuers dominate the PRC's corporate bond market **(Table 3)**. At end-December, the top 30 corporate bond issuers accounted for CNY3.8 trillion worth of corporate bonds outstanding, or about 60% of the market. Among the top 30 corporate issuers, the 10 largest accounted for CNY2.5 trillion worth of bonds outstanding.

State-owned companies—defined as majority-owned by the government—continue to dominate the corporate bond market in the PRC. Among the top 30 corporate issuers at end-December, 23 were state-owned, with a total of CNY3.3 trillion worth of bonds outstanding.

Table 2: Corporate Bonds Outstanding in Key Sectors

	Outstanding Amount (CNY billion)						Growth Rates (%)					
							q-o-q					y-o-y
	3Q11	4Q11	1Q12	2Q12	3Q12	4Q12	4Q11	1Q12	2Q12	3Q12	4Q12	4Q12
Commercial Bank Bonds	755	924	1,028	1,100	1,106	1,265	22.4	11.2	7.0	0.6	14.4	36.9
State-Owned Corporate Bonds	876	894	953	992	991	993	2.1	6.6	4.1	(0.1)	0.2	11.0
Local Corporate Bonds	727	782	876	987	1,103	1,305	7.5	12.0	12.6	11.8	18.3	66.8
Asset- and Mortgage-Backed Securities	10	10	9	8	8	8	(3.5)	(9.6)	(4.3)	–	(7.4)	(19.9)
Medium-Term Notes	1,769	1,974	2,030	2,129	2,340	2,492	11.6	2.8	4.9	9.9	6.5	26.2

– = not available, ( ) = negative, q-o-q = quarter-on-quarter, y-o-y = year-on-year.
Source: *ChinaBond*.

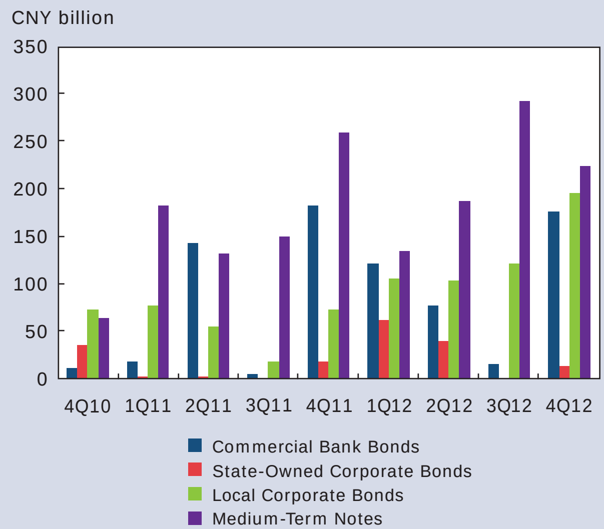
Investor Profile

Treasury Bonds. Banks remained the largest category of investors in the PRC's treasury bond market, holding a slightly larger share of these bonds at end-December 2012 (68%) than at end-December 2011 (66%) **(Figure 3a)**. The shares held by special members fell to 22% from 24% during the same period. Special members comprise the PBOC, Ministry of Finance, policy banks, China Government Securities Depository Trust and Clearing Co., and China Securities Depository and Clearing Corporation.

Policy Bank Bonds. Banks are also a significant holder of policy bank bonds **(Figure 3b)**. At end-December, banks held 85% of outstanding policy bank bonds, up slightly from 84% a year earlier. Meanwhile, insurance institutions' holdings dropped slightly to 7% from 9% during the same time period.

Corporate Bonds. Banks were also the largest holder of corporate bonds at end-December, albeit with a comparatively smaller share than their holdings of treasury bonds and policy bank bonds. Banks' share of corporate bonds fell to 43% at end-December from 49% at end-December 2011 **(Figure 4)**. The second largest holder of corporate bonds was insurance companies, with a 20% share at end-December, slightly lower than their 21% share at end-December 2011.

Figure 2: Corporate Bond Issuance in Key Sectors



Source: *ChinaBond*.

Figure 5 presents the investor profile across different bond categories. Banks were the largest holders of MTNs and policy bank bonds at end-December. Specifically, they held more than 80% of policy bank bonds outstanding. Meanwhile, insurance companies were the largest holder of commercial bank bonds.

Liquidity

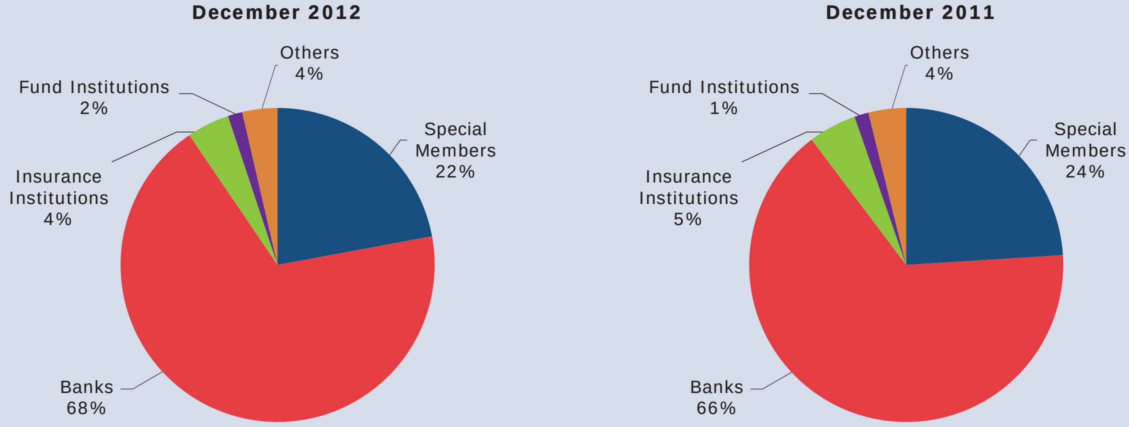
Figure 6 presents the turnover ratio for government bonds, including both spot trading and repo trading volumes. The volume of repo trading is

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

Issuers	Outstanding Amount		State-Owned	Privately Owned	Listed Company	Type of Industry
	LCY Bonds (CNY billion)	LCY Bonds (US$ billion)				
1. Ministry of Railways	742.0	119.1	Yes	No	No	Transportation
2. China National Petroleum	320.0	51.4	Yes	No	No	Energy
3. State Grid Corporation of China	309.5	49.7	Yes	No	No	Public Utilities
4. Industrial and Commercial Bank of China	230.0	36.9	Yes	No	Yes	Banking
5. Bank of China	219.9	35.3	Yes	No	Yes	Banking
6. China Construction Bank	200.0	32.1	Yes	No	Yes	Banking
7. China Petroleum & Chemical	154.7	24.8	Yes	No	Yes	Energy
8. Agricultural Bank of China	150.0	24.1	Yes	No	Yes	Banking
9. Central Huijin Investment	109.0	17.5	Yes	No	No	Diversified Financial
10. Shenhua Group	97.0	15.6	Yes	No	No	Energy
11. China Guodian	95.2	15.3	Yes	No	No	Public Utilities
12. Petrochina	87.5	14.0	Yes	No	Yes	Energy
13. China Minsheng Bank	82.3	13.2	No	Yes	Yes	Banking
14. Shanghai Pudong Development Bank	79.2	12.7	No	Yes	Yes	Banking
15. Bank of Communications	76.0	12.2	No	Yes	Yes	Banking
16. Industrial Bank	72.1	11.6	No	Yes	Yes	Banking
17. China Three Gorges Project	70.5	11.3	Yes	No	No	Public Utilities
18. China Life	68.0	10.9	Yes	No	Yes	Insurance
19. China Power Investment	61.8	9.9	Yes	No	No	Public Utilities
20. China Merchants Bank	61.7	9.9	No	Yes	Yes	Banking
21. State-Owned Capital Operation and Management Center of Beijing	58.5	9.4	Yes	No	No	Diversified Financial
22. Huaneng Power International	58.0	9.3	Yes	No	Yes	Public Utilities
23. China Southern Power Grid	54.0	8.7	Yes	No	No	Public Utilities
24. Citic Group	53.5	8.6	Yes	No	No	Diversified Financial
25. China United Network Communications	53.0	8.5	Yes	No	Yes	Telecommunications
26. China Everbright Bank	52.7	8.5	No	Yes	Yes	Banking
27. China Huaneng Group	52.2	8.4	Yes	No	No	Public Utilities
28. China Citic Bank	42.5	6.8	No	Yes	Yes	Banking
29. Shougang Group	42.0	6.7	Yes	No	No	Raw Materials
30. Metallurgical Corporation of China	39.6	6.4	Yes	No	Yes	Capital Goods
Total Top 30 LCY Corporate Issuers	**3,792.4**	**608.7**				
Total LCY Corporate Bonds	**6,477.1**	**1,039.6**				
Top 30 as % of Total LCY Corporate Bonds	**58.6%**	**58.6%**				

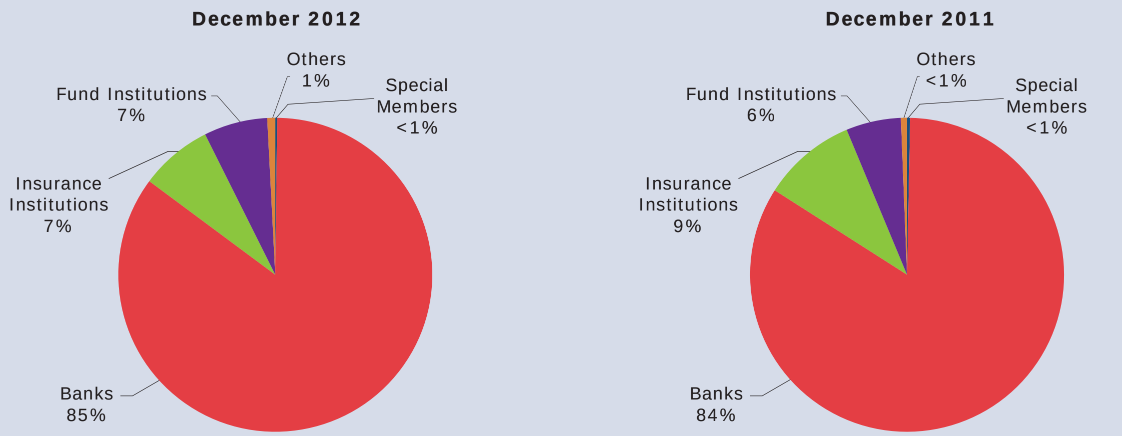
LCY = local currency.
Notes:
1. Data as of 31 December 2012.
2. State-owned firms are defined as those in which the government has more than a 50% ownership stake.
Source: *AsianBondsOnline* calculations based on *Wind* data.

Figure 3a: LCY Treasury Bonds Investor Profile



LCY = local currency.
Source: *ChinaBond*.

Figure 3b: LCY Policy Bank Bonds Investor Profile



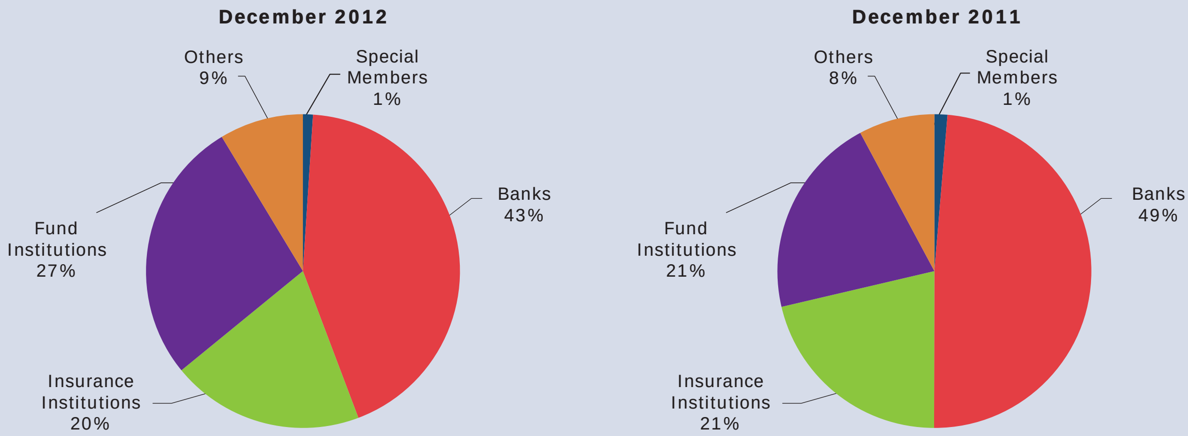
LCY = local currency.
Source: *ChinaBond*.

larger than that of spot trading in the PRC bond market, and the repo market is also the more active of the two. As of end-December, repo transactions for central bank bonds had the highest turnover rate among all government bonds at nearly 1.5 times the amount of central bank bonds outstanding. Turnover, however, for central bank bonds declined in 2012 with the lack of new issuance of central bank bonds and bills.

Interest Rate Swaps

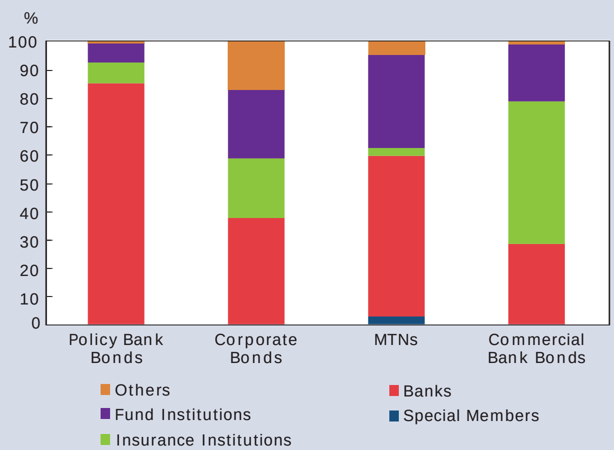
In 4Q12, the total notional amount of signed interest rate swap (IRS) agreements in the PRC reached CNY927.5 billion on 4,807 transactions **(Table 4)**. Also during the quarter, the most popular benchmark switched from the 7-day repo rate, which accounted for 31.0% of the notional amount of signed IRS agreements, to the overnight Shanghai Interbank Offered Rate (SHIBOR), which accounted for 57.1% of the notional amount signed.

Figure 4: LCY Corporate Bonds Investor Profile



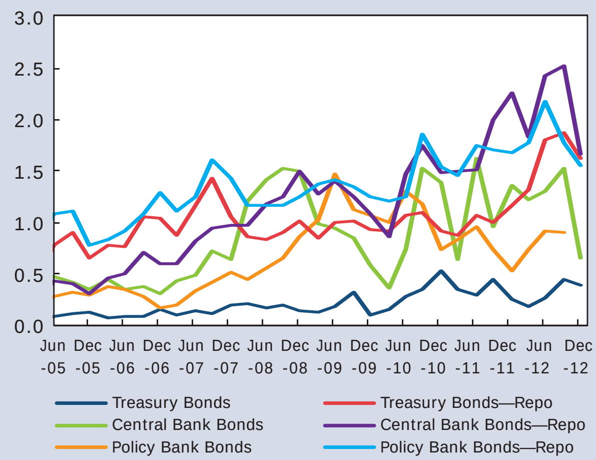
LCY = local currency.
Source: *ChinaBond*.

Figure 5: Investor Profile across Bond Categories



bps = basis points, MTNs = medium-term notes.
Note: Data as of 31 December 2012.
Source: *ChinaBond*.

Figure 6: Turnover Ratios for Government Bonds



Repo = repurchase.
Source: *ChinaBond*.

Policy, Institutional, and Regulatory Developments

The PRC to Implement Pilot Capital Monitoring System

On 5 December, the PRC announced that it would implement a pilot data system in the city of Dalian and the provinces of Liaoning, Zheijang (except Ningbo), and Shaanxi that would update the government's data collection system for capital transactions. The program will cover capital account business processed by foreign exchange regulators and banks.

The PRC Mulls Increasing QFII and RQFII Quotas

On 15 January, the Chairman of the China Securities Regulatory Commission, Guo Shuqing, announced that the PRC plans to increase the quotas for Qualified Foreign Institutional

Table 4: Notional Values of the PRC's Interest Rate Swap Market

Interest Rate Swap Benchmarks	Notional Amount (CNY billion)	% of Total Notional Amount	Number of Transactions
	3Q12		
7-Day Repo Rate	287.8	31.0	2,508
Overnight SHIBOR	529.2	57.1	1,092
3-Month SHIBOR	88.8	9.6	895
1-Year Term Deposit Rate	7.2	0.8	94
6-Month Lending Rate	0.04	0.0	4
1-Year Lending Rate	9.8	1.1	190
3-Year Lending Rate	3.8	0.4	16
5-Year Lending Rate	0.3	0.0	5
Above 5-Year Lending Rate	0.6	0.1	3
Total	**927.5**	**100.0**	**4,807**

– = not applicable, PRC = People's Republic of China, q-o-q = quarter-on-quarter, Repo = repurchase, SHIBOR = Shanghai Interbank Offered Rate, y-o-y = year on year.
Note: Data as of 31 December 2012.
Source: *AsianBondsOnline* and *ChinaMoney*.

Investors (QFII) and Renminbi Qualified Foreign Institutional Investors (RQFII). The quotas could possibly be increased tenfold in the future, he said. Guo also said that the PRC will support two-way balanced portfolio investment, which would allow non-residents to diversify existing investments in the PRC.

PBOC to Use Short-Term Liquidity Operations to Manage Money Supply

On 21 January, the PBOC announced that it will begin using short-term liquidity operations as an additional tool to manage the money supply. The main tools will be repo and reverse repo agreements with maturities of less than 7 days.

Hong Kong, China

Yield Movements

The yield curve for Hong Kong, China's Exchange Fund Bills and Notes (EFBNs) shifted downward for maturities of 3-years or less between end-September and end-December as yields at the shorter-end of the curve fell between 13 basis points (bps) and 18 bps **(Figure 1)**. Meanwhile, the yield for the 10-year maturity fell 14 bps. Yields were unchanged for all remaining tenors. The fall in yields along some parts of the curve reflected the United States (US) maintaining a relatively accommodative monetary stance.

Yields rose for all tenors between end-December and end-January. Yields rose 6 bps–8 bps for tenors of 1-year or less, with the exception of the 1-month tenor. Yields rose 9 bps–37 bps for tenors between 2 years and 7 years. Meanwhile, yields rose between 60 bps and 64 bps for tenors of 10-years or longer.

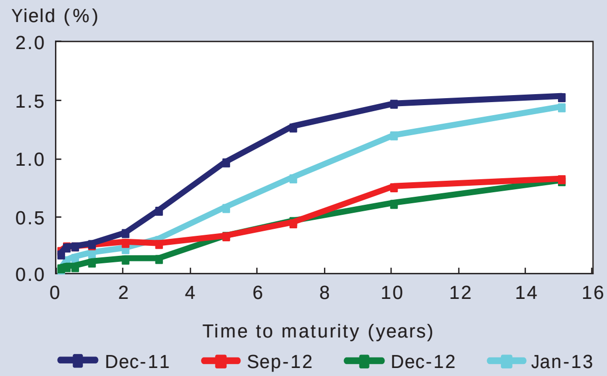
Hong Kong, China's economic performance improved in certain areas in recent months. For example, export growth was 14.4% year-on-year (y-o-y) in December and 10.5% in November, reversing October's 2.8% decline, as demand from the rest of Asia and the US improved. However, gross domestic product (GDP) growth remained weak at 1.3% in 4Q12 following 1.2% growth in 3Q12.

Inflation stabilized in December at 3.7% y-o-y, the same rate as in November. The Government of the Special Administrative Region of Hong Kong, China has stated that it expects inflationary pressures to be contained given domestic and international conditions, although it remains concerned over property prices.

Size and Composition

The size of Hong Kong, China's local currency (LCY) bond market grew 5.1% y-o-y to HKD1.4 trillion (US$178 billion) at end-December **(Table 1)**. On a quarter-on-quarter (q-o-q) basis, LCY bonds outstanding rose 0.9% in 4Q12.

Figure 1: Hong Kong, China's Benchmark Yield Curve—EFBNs



EFBN = Exchange Fund Bills and Notes.
Source: Bloomberg LP.

Total LCY government bonds outstanding rose 3.0% y-o-y and 0.5% q-o-q as of end-December. Government bonds include Exchange Fund Bills (EFBs), Exchange Fund Notes (EFNs), and bonds issued under the Institutional Bond Issuance Programme (HKSAR Bonds).

The amount of LCY government bonds outstanding at end-December reached HKD724 billion. Most of the growth in government bonds in 4Q12 could be attributed to growth in HKSAR Bonds, which expanded 39.6% y-o-y to HKD67 billion from HKD48 billion at end-December 2011. In November, HKD3 billion in 3-year HKSAR Bonds were issued. On the other hand, the stock of EFNs declined slightly by 0.9% y-o-y to HKD69 billion, while EFBs grew slightly by 0.4% y-o-y to HKD589 billion.

The amount of LCY corporate bonds outstanding rose to HKD651 billion at end-December, reflecting growth of 7.6% y-o-y and 1.3% q-o-q. The top 28 non-bank corporate issuers in Hong Kong, China accounted for 16% of total corporate bonds outstanding as of end-December **(Table 2)**. Hong Kong, China's top corporate issuer of LCY bonds remained the state-owned Hong Kong Mortgage Corporation (HKMC) with outstanding bonds valued at HKD16 billion at end-December. CLP Power Hong Kong Financing Ltd. was the next largest issuer with outstanding bonds of HKD11.7 billion. Sun Hung Kai Properties (Capital Market) Ltd. was the third largest issuer with outstanding bonds of HKD11.5 billion.

Financial firms dominated the list of the top 28 non-bank corporate issuers in 4Q12, accounting for nine of the 28 issuers. Six state-owned companies were included on the list, while 20 were privately owned. Among the companies included in Table 2, eight are listed on the Hong Kong Exchange.

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

	Outstanding Amount (billion)								Growth Rate (%)						
	Sep-12		Oct-12		Nov-12		Dec-12		Sep-12		Oct-12	Nov-12	Dec-12		
	HKD	US$	HKD	US$	HKD	US$	HKD	US$	q-o-q	y-o-y	m-o-m	m-o-m	m-o-m	q-o-q	y-o-y
Total	1,364	176	1,367	176	1,373	177	1,376	178	1.2	3.3	0.2	0.4	0.2	0.9	5.1
Government	720	93	721	93	724	93	724	93	0.0	3.3	0.1	0.4	0.04	0.5	3.0
Exchange Fund Bills	587	76	588	76	589	76	589	76	0.0	0.4	0.1	0.1	(0.0)	0.2	0.4
Exchange Fund Notes	69	9	69	9	68	9	69	9	0.0	(0.9)	0.0	(0.9)	0.4	(0.4)	(0.9)
HKSAR Bonds	64	8	64	8	67	9	67	9	0.0	50.6	0.0	4.7	0.0	4.7	39.6
Corporate	643	83	646	83	649	84	651	84	2.6	3.3	0.4	0.4	0.4	1.3	7.6

( ) = negative, HKSAR = Hong Kong Special Administrative Region, LCY = local currency, m-o-m = month-on-month, q-o-q = quarter-on-quarter, y-o-y = year-on-year.
Notes:
1. Calculated using data from national sources.
2. Bloomberg LP end-of-period LCY–US$ rates are used.
3. Growth rates are calculated from LCY base and do not include currency effects.
Source: Hong Kong Monetary Authority and Bloomberg LP.

Policy, Institutional, and Regulatory Developments

HKMA Revises Rules on CNH

On 15 January, the Hong Kong Monetary Authority (HKMA) released two new regulations making it easier for banks to hold offshore renminbi (CNH). The first one allows banks to include renminbi currency futures as part of the calculation of a bank's net open position. The second one shortens the notice period from two business days to one business day for banks seeking to tap the HKMA renminbi liquidity facility.

DBS Launches Renminbi Index

On 16 January, DBS Bank Ltd. (Hong Kong, China) launched a DBS Renminbi Index for VVinning Enterprises (DRIVE). The index measures actual usage and acceptance of the renminbi among enterprises in Hong Kong, China, and gauges sentiment for the expanded use of the renminbi as a global currency. The index is based on a survey along four dimensions: (i) actual business performance in the last 12 months and expectations for the next 12 months, (ii) past and future demand for renminbi in business operations, (iii) use of renminbi in trade settlement, and (iv) ease of access to renminbi financing. The initial index value in 4Q12 was 54.9; future updates are to be released quarterly.

Table 2: Top 28 Non-Bank Corporate Issuers in Hong Kong, China

Issuers	Outstanding Amount		State-Owned	Privately Owned	Listed Company	Type of Industry
	LCY Bonds (HKD billion)	LCY Bonds (US$ billion)				
1. Hong Kong Mortgage Corporation	15.99	2.06	Yes	No	No	Finance
2. CLP Power Hong Kong Financing Ltd.	11.73	1.51	No	Yes	No	Electric
3. Sun Hung Kai Properties (Capital Market) Ltd.	11.51	1.49	No	Yes	No	Real Estate
4. MTR Corporation (C.I.) Ltd.	6.90	0.89	Yes	No	Yes	Transportation
5. Kowloon–Canton Railway Corporation	6.30	0.81	Yes	No	No	Transportation
6. Swire Pacific MTN Financing Ltd.	5.68	0.73	No	Yes	Yes	Diversified
7. HKCG (Finance) Limited	5.60	0.72	No	Yes	No	Gas
8. The Link Finance (Cayman) 2009 Ltd.	5.29	0.68	No	Yes	No	Finance
9. Hongkong Electric Finance Ltd.	4.81	0.62	No	Yes	No	Electric
10. Wharf Finance Ltd.	3.68	0.48	No	Yes	No	Diversified
11. Wheelock Finance Ltd.	3.44	0.44	No	Yes	No	Diversified
12. Airport Authority Hong Kong	2.85	0.37	Yes	No	No	Trannsportation
13. Urban Renewal Authority	2.50	0.32	Yes	No	No	Property Development
14. Cheung Kong Bond Finance Ltd.	2.45	0.32	No	Yes	Yes	Finance
15. Hysan (MTN) Ltd.	2.43	0.31	No	Yes	No	Finance
16. Cheung Kong Finance (MTN) Ltd.	2.21	0.28	No	Yes	No	Finance
17. Yue Xiu Enterprises (Holdings) Ltd.	2.00	0.26	No	Yes	No	Diversified
18. Henderson Land MTN Ltd.	1.83	0.24	No	Yes	Yes	Finance
19. Cathay Pacific MTN Financing Ltd.	1.70	0.22	No	Yes	Yes	Airlines
20. Wharf Finance (No.1) Ltd.	1.44	0.19	No	Yes	No	Diversified
21. Dragon Drays Ltd.	1.00	0.13	No	Yes	No	Diversified
22. Swire Properties MTN Finanicing Ltd.	0.80	0.10	No	No	Yes	Diversified
23. Nan Fung Treasury Ltd.	1.21	0.16	No	Yes	No	Real Estate
24. Wharf Finance (BVI) Ltd.	0.45	0.06	No	Yes	No	Diversified
25. HLP Finance Ltd.	0.41	0.05	No	No	Yes	Real Estate
26. Bauhinia MBS Ltd.	0.26	0.03	Yes	No	No	Finance
27. Cheung Kong Infrastructure Finance (BVI) Ltd.	0.26	0.03	No	Yes	Yes	Finance
28. The Hongkong Land Notes Company Ltd.	0.20	0.03	No	Yes	No	Finance
Total Top 28 Non-Bank LCY Corporate Issuers	**104.91**	**13.54**				
Total LCY Corporate Bonds	**651.41**	**84.05**				
Top 28 as % of Total LCY Corporate Bonds	**16.1%**	**16.1%**				

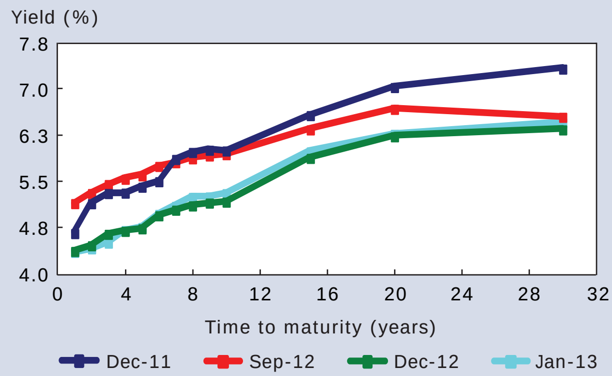
LCY = local currency.
Notes:
1. Data as of 31 December 2012.
2. Based on Central Money Markets Unit data on tradeable non-bank debt securities issued and outstanding.
3. State-owned firms are defined as those in which the government has more than a 50% ownership stake.
Source: *AsianBondsOnline* calculations based on Hong Kong Monetary Authority data.

Indonesia

Yield Movements

Local currency (LCY) government bond yields in Indonesia fell for all tenors between end-September and end-December, resulting in the entire curve shifting downward **(Figure 1)**. By end-January, however, the yield curve rose slightly above its end-December level with a steepening bias, as the decline in yields at the short-end was outpaced by rising yields from the 4-year maturity through the long-end of the curve. Specifically, yields at the shortest-end (1-year maturity) of the curve fell only 1 basis point (bp) while yields from the belly through the end of the curve rose as much as 10 bps to 14 bps. The yield spread between the 2- and 10-year maturities widened to 90 bps at end-January from a spread of 71 bps at end-December 2012.

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



LCY = local currency.
Source: Bloomberg LP.

The downward shift in Indonesia's government bond yield curve may be attributed to foreign fund inflow as well as stable inflation. Foreign fund inflows into the Indonesian bond market remained strong in 4Q12 on the back of positive macro-fundamentals and attractive yields. The United States (US) Federal Reserve's announcement in December that it would expand its asset purchase program also helped boost demand for high-yield assets such as Indonesian debt instruments.

Consumer price inflation in Indonesia eased marginally in December, leveling off at 4.30% year-on-year (y-o-y), compared with 4.32% in November and 4.61% in October. Consumer price inflation for the full-year 2012 was at 4.3%, well within Bank Indonesia's (BI) 2012 inflation target range of between 3.5% and 5.5%, and below the Ministry of Finance's annual target of 5.3%. In January, consumer price inflation rose to 4.6% y-o-y due mainly to increases in power tariffs and food prices. On a month-on-month (m-o-m) basis, consumer prices rose to 1.0% in January, from 0.5% a month earlier.

In a meeting held on 12 February, BI's Board of Governors decided to keep its benchmark interest rate steady at 5.75%. The BI rate has remained at a record-low level since February of last year. At its current level, the BI rate remains consistent with the central bank's 2013 inflation target range (3.5%–5.5%). According to BI's assessment, Indonesia's economy continued its robust performance in 2012, yet pressure on the external balance remains strong due to the weak global environment.

Economic growth in Indonesia slowed to a still-robust rate of 6.1% y-o-y in 4Q12, following annual growth of 6.2% in 3Q12. On a quarter-on-quarter (q-o-q) basis, the economy contracted 1.5% in 4Q12, after posting 3.2% growth in 3Q12. Full-year GDP growth was recorded at 6.2% y-o-y, compared with 6.5% in 2011, amid weakened export performance. Domestic consumption (5.3%) and investment (9.8%) continued to drive growth in 2012. For 2013, BI is forecasting economic growth of between 6.3% and 6.7%, while the Ministry of Finance is targeting growth of 6.8% based on its budget forecast for the year.

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

	Outstanding Amount (billion)								**Growth Rate** (%)						
	Sep-12		**Oct-12**		**Nov-12**		**Dec-12**		**Sep-12**		**Oct-12**	**Nov-12**	**Dec-12**		
	IDR	US$	IDR	US$	IDR	US$	IDR	US$	q-o-q	y-o-y	m-o-m	m-o-m	m-o-m	q-o-q	y-o-y
Total	1,054,800	110	1,080,862	112	1,090,985	113	1,090,055	111	0.4	7.4	2.5	0.9	(0.1)	3.3	9.7
Government	883,479	92	905,942	94	913,119	95	902,594	92	(0.1)	4.2	2.5	0.8	(1.2)	2.2	6.6
Central Govt. Bonds	812,796	85	834,000	87	834,551	87	820,266	84	2.7	16.7	2.6	0.1	(1.7)	0.9	13.4
Central Bank Bills	70,683	7	71,942	7	78,568	8	82,328	8	(23.9)	(53.3)	1.8	9.2	4.8	16.5	(33.2)
Corporate	171,321	18	174,920	18	177,866	18	187,461	19	3.1	27.2	2.1	1.7	5.4	9.4	27.6

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

Notes:

1. Calculated using data from national sources.
2. Bloomberg LP end-of-period LCY–US$ rates are used.
3. Growth rates are calculated from LCY base and do not include currency effects.
4. The total stock of non-tradable bonds as of end-December stood at IDR275.9 trillion.

Source: Bank Indonesia, Indonesia Debt Management Office, Indonesia Stock Exchange, and Bloomberg LP.

Size and Composition

The size of Indonesia's LCY bond market rose to IDR1,090 trillion (US$111 billion) at end-December, expanding a modest 3.3% q-o-q **(Table 1)**. On a y-o-y basis, the LCY bond market saw more rapid growth of 9.7%, with contributions to growth coming from both the government and corporate sectors of the bond market.

At end-December, outstanding LCY government bonds stood at IDR902.6 trillion for a 2.2% q-o-q increase. On a y-o-y basis, government bonds grew 6.6% in 4Q12. Growth in the government bond market was driven mainly by central government bonds, comprised of treasury bills and treasury bonds issued by the Ministry of Finance. The stock of central bank bills has declined significantly on a y-o-y basis since BI initiated measures to reduce issuance in 2010 to curb currency speculation, although central bank bills rose modestly on both q-o-q and m-o-m basis in 4Q12.

Central Government Bonds. The stock of central government bonds grew marginally in 4Q12, rising 0.9% q-o-q to IDR820.3 trillion. On a y-o-y basis, central government bonds rose 13.4%. **Table 2** provides a breakdown of central government bonds outstanding by type of bond.

In 4Q12, new issuance of treasury bills and bonds reached IDR27.1 trillion, falling 33.2% on a q-o-q basis. Issuance of treasury instruments, however, rose 6.1% in 4Q12 compared with a year earlier. Central government bond issuance normally slows down during the fourth quarter each year as the government has either fully realized its annual issuance target or has no additional need for financing. Issuance in 4Q12 consisted of treasury bills, fixed rate bonds, Islamic treasury bills, and project-based *sukuk*.

In 2013, the government plans to sell a total of IDR281.3 trillion (gross) of government bonds. Of which, about IDR57.5 trillion is being planned for issue in 1Q13. As part of its debt strategy for the year, the government will also issue US$-denominated bonds in the domestic market.

Table 2: Central Government Bonds Outstanding by Type of Bond

Government Bonds	Outstanding Amount (IDR billion)	% Share	Growth Rate (%)	
			q-o-q	y-o-y
Treasury Bills (SPN)	22,820	2.8	(19.1)	(23.7)
Fixed-Rate Bonds	576,241	70.3	0.8	21.4
Variable-Rate Bonds	122,755	15.0	(3.4)	(9.1)
Zero-Coupon Bonds	1,263	0.2	(49.7)	(49.7)
Retail Bonds	34,153	4.2	59.0	(19.9)
Islamic Treasury Bills	195	0.02	(78.5)	(85.2)
Sukuk	17,137	2.1	0.0	2.4
Retail *Sukuk*	28,989	3.5	0.0	38.5
Project-Based *Sukuk*	16,714	2.0	11.4	–
Total	**820,267**	**100.0**	**0.9**	**13.4**

– = not applicable, ( ) = negative.
Note: Data as of 31 December 2012.
Source: Indonesia Stock Exchange.

However, the government plans to prioritize LCY issuance by capping issuance in foreign currency (FCY) at a maximum of 14% of the total. The government will continue to issue in varying tenors, ranging from 3 months to 25 years, and conduct buyback and debt switches.

The government has identified FR0066, FR0063, FR0064, and FR0065 as the new benchmark series bonds this year for 5-, 10-, 15-, and 20-year maturities, respectively. Details for the new benchmark bonds series are provided in **Table 3**.

Table 3: Indonesian Government Benchmark Bonds for 2013

Bond Series	Outstanding Amount (IDR billion)	Coupon (%)	Maturity Date
1. FR0066	5,050	5.25	15-May-18
2. FR0063	10,550	5.63	15-May-23
3. FR0064	9,976	6.25	15-May-28
4. FR0065	13,850	6.63	15-May-33

Source: Indonesia Debt Management Office.

Central Bank Bills. The stock of central bank bills stood at IDR82.3 trillion at end-December, rising 16.5% q-o-q as issuance of *Sertifikat* Bank Indonesia (SBI) and *sharia'h*-compliant SBI rose 29.8% q-o-q. On a y-o-y basis, however, the stock of central bank bills dropped 33.2% in 4Q12. SBI are issued by the central bank as one of its tools for monetary operations to help contain inflation.

Corporate Bonds. The size of Indonesia's LCY corporate bond market reached IDR187.5 trillion in 4Q12, growing 9.4% q-o-q and 27.6% y-o-y. Corporate bonds, however, comprised a small share of Indonesia's LCY bond market, accounting for only 17.2% of the total.

Table 4 provides a breakdown of corporate bonds outstanding by type of bond as of end-December. Conventional corporate bonds dominated the list, accounting for 81.9% of total corporate bonds outstanding. Subordinated bonds accounted for 14.2% of the total, while *sukuk* (Islamic bond) issues by corporate entities remained small, comprising only 3.5% of corporate bonds outstanding at end-December.

At end-December, the amount of LCY bonds outstanding of the top 33 corporate bond issuers in Indonesia reached IDR150.3 trillion, representing 80.2% of total corporate bonds outstanding **(Table 5)**. The composition of the top three LCY corporate bond issuers remained the same as in 3Q12, led by state-power firm PLN with outstanding bonds valued at IDR14.2 trillion. PLN was followed by leasing company Adira Dinamika Multifinance with a total LCY bond stock amounting to IDR9.4 trillion. Telecommunications firm Indosat was the third-largest LCY bond issuer with bonds outstanding of IDR9.2 trillion.

Table 4: Corporate Bonds Outstanding by Type of Bond

Corporate Bonds	Outstanding Amount (IDR billion)	% Share	Growth Rate (%)	
			q-o-q	y-o-y
Conventional Bonds	153,617	81.9	8.3	27.0
Subordinated Bonds	26,611	14.2	17.7	32.2
Convertible Bonds	150	0.1	0.0	–
Zero-Coupon Bonds	500	0.3	0.0	–
Sukuk Ijarah	4,694	2.5	6.9	(6.8)
Sukuk Mudharabah	775	0.4	0.0	(7.6)
Sukuk Mudharabah Subordinated	1,114	0.6	0.0	–
Total	**187,461**	**100.0**	**9.4**	**27.6**

– = not applicable, ( ) = negative.
Notes:
1. Data as of 31 December 2012.
2. *Sukuk Ijarah* refers to Islamic bonds backed by a lease agreement.
3. *Sukuk Mudharabah* refers to Islamic bonds backed by a profit-sharing scheme from a business venture or partnership.
Source: Indonesia Stock Exchange.

Table 5: Top 33 Issuers of LCY Corporate Bonds in Indonesia

Issuers	Outstanding Amount		State-Owned	Privately Owned	Listed Company	Type of Industry
	LCY Bonds (IDR billion)	LCY Bonds (US$ billion)				
1. PLN	14,208	1.45	Yes	No	No	Energy
2. Adira Dinamika Multifinance	9,421	0.96	No	Yes	Yes	Finance
3. Indosat	9,150	0.93	No	Yes	Yes	Telecommunications
4. Indonesia Eximbank	9,134	0.93	Yes	No	No	Banking
5. Astra Sedaya Finance	8,635	0.88	No	Yes	No	Finance
6. Bank Pan Indonesia	8,500	0.87	No	Yes	Yes	Banking
7. Federal International Finance	7,379	0.75	No	Yes	No	Finance
8. Bank Tabungan Negara	7,150	0.73	Yes	No	Yes	Banking
9. Bank Internasional Indonesia	7,000	0.71	No	Yes	Yes	Banking
10. Bank CIMB Niaga	6,480	0.66	No	Yes	Yes	Banking
11. Jasa Marga	5,000	0.51	Yes	No	Yes	Toll Roads, Airports, and Harbors
12. Perum Pegadaian	4,664	0.48	Yes	No	No	Finance
13. Bank Tabungan Pensiunan Nasional	4,550	0.46	No	Yes	Yes	Banking
14. Bank Permata	4,250	0.43	No	Yes	Yes	Banking
15. Indofood Sukses Makmur	3,610	0.37	No	Yes	Yes	Food and Beverages
16. Bank Mandiri	3,500	0.36	Yes	No	Yes	Banking
17. Antam	3,000	0.31	Yes	No	Yes	Petroleum and Natural Gas
18. Telekomunikasi Indonesia	3,000	0.31	Yes	No	Yes	Telecommunications
19. Medco-Energi Internasional	2,987	0.30	No	Yes	Yes	Petroleum and Natural Gas
20. Sarana Multigriya Finansial	2,902	0.30	Yes	No	No	Finance
21. Bank Danamon Indonesia	2,800	0.29	No	Yes	No	Banking
22. BCA Finance	2,530	0.26	No	Yes	No	Finance
23. Agung Podomoro Land	2,400	0.25	No	Yes	Yes	Property and Real Estate
24. Bank Jabar Banten	2,400	0.25	No	Yes	Yes	Banking
25. Indomobil Finance Indonesia	2,225	0.23	No	Yes	No	Finance
26. Bank Rakyat Indonesia	2,000	0.20	Yes	No	Yes	Banking
27. Surya Artha Nusantara Finance	1,995	0.20	No	Yes	No	Finance
28. Toyota Astra Financial Services	1,905	0.19	No	Yes	No	Finance
29. AKR Corporindo	1,500	0.15	No	Yes	Yes	Wholesale Distributor of Petroleum and Basic Chemicals
30. Bank Bukopin	1,500	0.15	No	Yes	Yes	Banking
31. Bank DKI	1,500	0.15	No	Yes	No	Banking
32. Japfa	1,500	0.15	No	Yes	Yes	Animal Feed
33. Surya Semesta Internusa	1,500	0.15	No	Yes	Yes	Property and Real Estate
Total Top 33 LCY Corporate Issuers	**150,273**	**15.34**				
Total LCY Corporate Bonds	**187,461**	**19.14**				
Top 33 as % of Total LCY Corporate Bonds	**80.2%**	**80.2%**				

LCY = local currency.
Notes:
1. Data as of 31 December 2012.
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.

Corporate issuers from the banking and financial sectors dominated the list of top LCY corporate bond issuers in Indonesia. Other bond issuers were from the following sectors: energy; telecommunications; toll roads, airports, and harbors; food and beverages; petroleum and natural gas; and property and real estate. About one-third of the companies on the list were state-owned firms while 23 firms were privately-owned. The top 33 list also includes 21 firms with shares listed on the Indonesia Stock Exchange.

In 4Q12, corporate bond issuance climbed to IDR21.8 trillion, a significant hike of 118.7% q-o-q and 36.4% y-o-y. Forty bond series were issued by 20 corporate firms during the quarter, with maturities ranging from 1 year to 7 years. The new corporate bond issues in 4Q12 were all conventional bonds except for two *sukuk* issues and four subordinated bond series. Corporate bonds issued in recent months carried coupons ranging from 6.25% to 9.4%. **Table 6** lists some of the notable corporate bonds issued in 4Q12.

Bank Internasional Indonesia (BII) raised a total of IDR3 trillion through a triple-tranche bond sale in November. The proceeds from the bonds will be used to strengthen BII's capital base and boost its lending business. The bond sale comprised the following issues:

- 3-year bonds worth IDR980 billion, coupon of 7.6%;
- 5-year bonds worth IDR1.02 trillion, coupon of 8.0%; and

Table 6: Notable LCY Corporate Issuance in 4Q12

Corporate Issuers	Issued Amount (IDR billion)
Bank Internasional Indonesia	3,000
Bank Pan Indonesia	3,000
Indonesia Eximbank	2,100
Bank CIMB Niaga	2,000
Bank Permata	1,800
Astra Sedaya Finance	1,530
AKR Corporindo	1,500
Surya Semesta Internusa	1,500
Others	5,350
Total	**21,780**

LCY = local currency.
Source: Indonesia Stock Exchange.

- 7-year subordinated bonds worth IDR1 trillion, coupon of 9.25%.

Bank Pan Indonesia sold a total of IDR3 trillion worth of bonds in a dual-tranche bond sale in December. The proceeds from the bond sale will be used to boost the bank's lending business. The bond issue consisted of the following series:

- 5-year bonds worth IDR1 trillion, coupon of 8.15%; and
- 7-year subordinated bonds worth IDR2 trillion, coupon of 9.40%.

State-owned export financing company Lembaga Pembiayaan Ekspor Indonesia (Indonesia Eximbank) raised a total of IDR2.1 trillion from a dual-tranche bond sale in November. The bonds consisted of the following series:

- 370-day bonds worth IDR1.43 trillion, coupon of 6.25%; and
- 3-year bonds worth IDR666 billion, coupon of 6.50%.

Bank CIMB Niaga sold a total of IDR2 trillion in a dual-tranche bond sale in October. Proceeds from the bond sale will be used by the bank for credit expansion. The bonds were rated IdAAA by Pefindo and AAA(idn) by Fitch Ratings Indonesia. The bond sale comprised the following issues:

- 3-year bonds worth IDR600 billion, coupon of 7.35%; and
- 5-year bonds worth IDR1.4 trillion, coupon of 7.75%.

Bank Permata sold IDR1.8 trillion of 7-year subordinated bonds in December. Proceeds from the bond sale will be used to further boost the bank's capital. The bonds carry a coupon of 9.4%. The subordinated bonds were rated idAA– by Pefindo.

Investor Profile

Central Government Bonds. At end-December, banking institutions were still the biggest holder of central government bonds in Indonesia **(Figure 2)**.

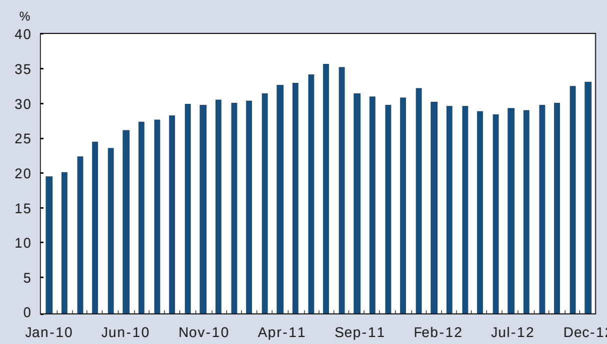
The share of central government bonds held by banking institutions in 4Q12 was almost unchanged at 36.5% from 36.6% in 4Q11. Banking institutions can be broken down into five categories: (i) state recap banks, (ii) private recap banks, (iii) non-recap banks, (iv) regional banks, and (v) *sharia'h* banks. Among these five types of banking institutions, state banks held the largest portion of central government bonds at end-December.

Foreign investors were the second-largest holder of Indonesian LCY central government bonds at end-December. The share of foreign investors in LCY central government bonds steadily increased from a share of 29.5% at end-March to 33.0% at end-December **(Figure 3)**. In absolute terms, outstanding bonds held by foreign investors climbed to IDR270.6 trillion as of end-December.

Foreign investors include among others, non-resident private banks, fund and asset management firms, insurance companies, and pension funds. Offshore financial institutions owned nearly 60% of bonds held by foreign investors at end-December **(Figure 4)**. They were followed by mutual funds with an ownership share of 25.9%. Meanwhile, pension funds accounted for 1.6% of the total and insurance companies held a share of 1.3%.

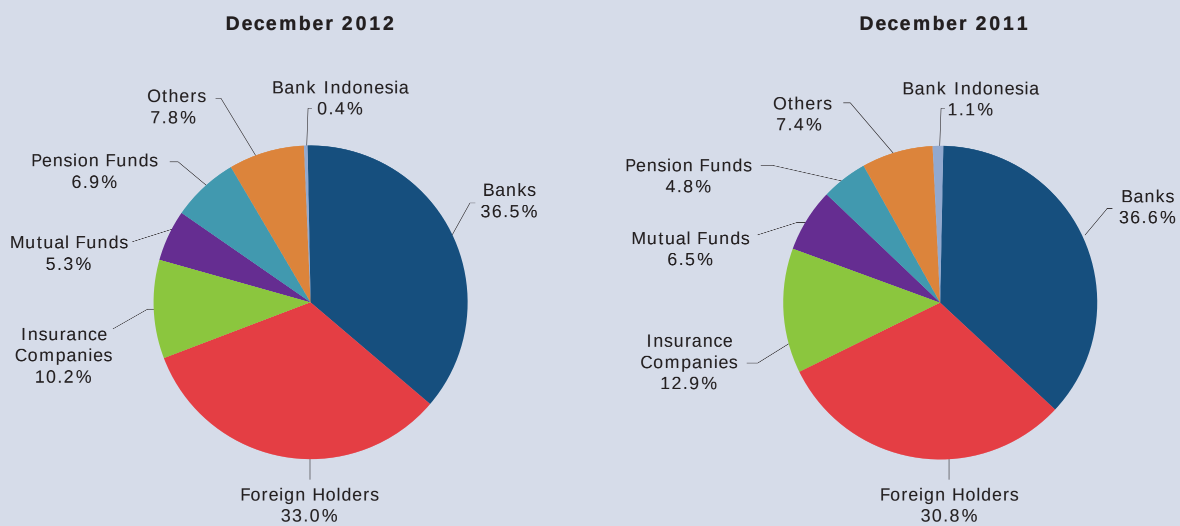
At end-December, the majority of foreign investors in Indonesia's LCY central government bonds were long-term investors. About 45% of bonds held by offshore investors were in maturities of more than 10 years **(Figure 5)** at end-December, compared with 38% at end-December 2011. In addition, foreign investors' holdings of bonds with maturities of more than 5 years and up to 10 years climbed to 28% of foreign investors' total holdings from 25%. Meanwhile, offshore holdings of short-dated tenors (bonds with maturities of less than 1 year) fell to 8% at end-December from 12% at end-December 2011.

Figure 3: Monthly Foreign Investor Share of LCY Central Government Bonds



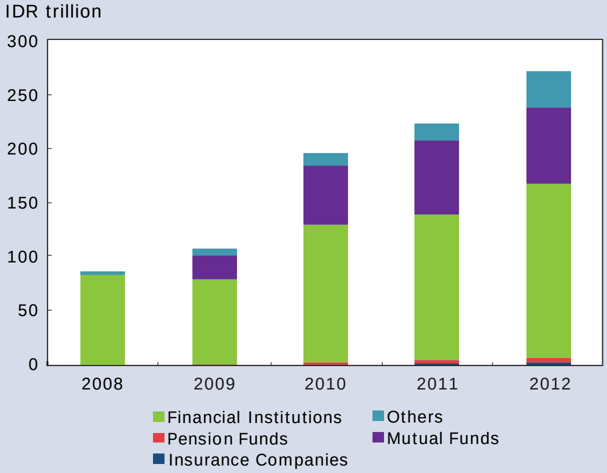
LCY = local currency.
Source: Indonesia Debt Management Office.

Figure 2: LCY Central Government Bonds Investor Profile



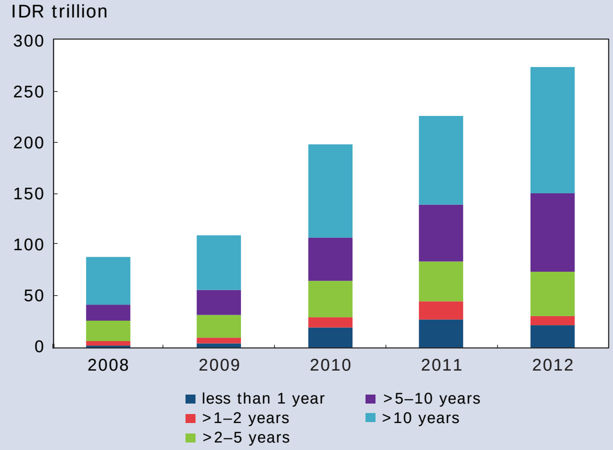
LCY = local currency.
Source: Indonesia Debt Management Office.

Figure 4: Foreign Holdings of LCY Central Government Bonds by Type of Investor



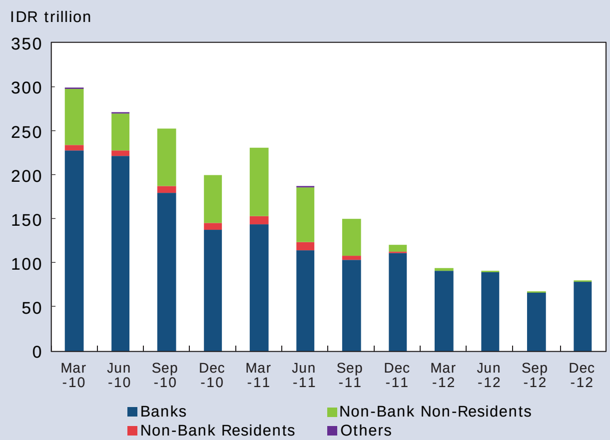
LCY = local currency.
Note: Others include corporations, individuals, security companies, foundations, and other investors not classified.
Source: Indonesia Debt Management Office.

Figure 5: Foreign Holdings of LCY Central Government Bonds by Maturity



LCY = local currency.
Source: Indonesia Debt Management Office.

Figure 6: LCY Central Bank Bills Investor Profile



LCY = local currency.
Source: Bank Indonesia.

Meanwhile, the share of insurance companies' holdings fell to 10.2% of the total in 4Q12 compared with 12.9% a year earlier. Mutual funds' holdings of government bonds remained relatively small compared with other investor classes, accounting for a share of only 5.3% at the end of 4Q12. Meanwhile, the share of bonds held by pension funds rose to 6.9% at end-December from 4.8% a year earlier.

Central Bank Bills. At end-December, central bank bills were held almost entirely by banking institutions with a share of 99.5%, compared with 92.2% at end-December 2011 **(Figure 6)**. In absolute terms, outstanding SBI held by banks stood at IDR78.5 trillion in 4Q12. Meanwhile, offshore investors held the remaining 0.5%, down from a 3.3% share at end-September. The share of SBI held by foreign investors has fallen precipitously since the central bank implemented a 6-month holding period for SBI in 2011.

Rating Changes

On 18 October, Ratings and Investment (R&I) raised Indonesia's sovereign credit rating to BBB– from BB+. The outlook on the rating was stable. R&I cited Indonesia's economic resilience amid the downturn in the global economy, conservative fiscal management, low debt burden, and stable financial system as reasons for the ratings action.

On 13 November, the Japan Credit Rating Agency (JCR) affirmed Indonesia's sovereign credit rating at BBB– with a stable outlook. JCR cited the following factors in its decision to affirm Indonesia's ratings: (i) the country's sustainable economic growth outlook, (ii) a low public debt burden, and (iii) a reinforced resilience to external shocks.

On 21 November, Fitch Ratings (Fitch) affirmed the long-term FCY and LCY issuer default ratings of Indonesia at BBB–. The outlook on the ratings was stable. Fitch also affirmed the country ceiling at BBB and the short-term FCY issuer default rating at F3. According to Fitch, the credit profile of Indonesia is supported by the country's strong and resilient economic growth, low and declining public debt ratios, high investment rate, and a broadly appropriate macroeconomic policy framework. The ratings agency opined that the pressures on Indonesia's external finances and its credit weakness are consistent with its BBB– rating.

Policy, Institutional, and Regulatory Developments

BI Announces New Capital Adequacy Ratios for Banks

In December, BI announced new capital requirements for banks as part of efforts to strengthen the banking system. Beginning in March, banks will be required to maintain a capital adequacy ratio (CAR) of between 8% and 14%, depending on their risk profile. Currently, the CAR for all banks is set at 8%. Based on the new regulation, banks with a low risk profile will continue to maintain a CAR of 8%, banks with a second-level risk profile will be required to maintain a CAR of 9%–10%, and those with a third-level risk profile will be required to maintain a ratio of 10%–11%. High-risk banks (fourth- and fifth-level risk profiles) will be required to maintain a CAR of 11%–14%. BI also set a special requirement, known as a capital equivalency maintained asset (CEMA), for foreign banks operating in Indonesia.

Bond Research Institute Established in Indonesia

In January, the Bond Research Institute (BondRI), a research institution for bonds and fixed income markets, was established in Indonesia. BondRI's mission is to produce research and analysis on bonds and fixed income to improve Indonesia's capital market competitiveness.

OJK Plans to Release Ratings on Corporate Governance

In January, Indonesia's supervisory bond agency, the Financial Services Authority (OJK), announced plans to publish ratings on the quality of corporate governance of Indonesian firms. OJK plans to provide ratings for the 50 largest listed companies this year. Among the criteria to be evaluated are how a company treats minority shareholders and the role played by its board of directors.

Indonesian Government to Hedge FCY Liabilities Against Fluctuations in Interest and Exchange Rates

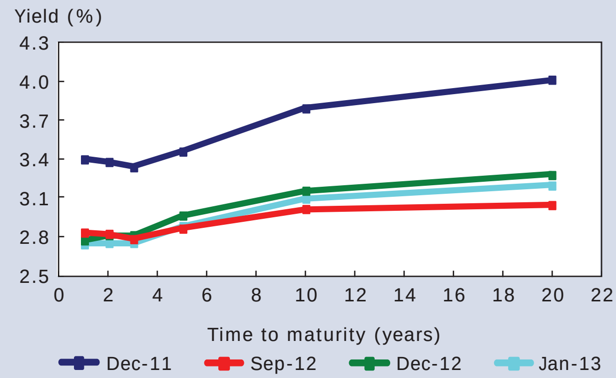
In January, the Ministry of Finance issued a regulation that would allow the government to hedge its FCY-denominated liabilities, for both bonds and international loans, against fluctuations in interest and exchange rates. The decree, however, did not indicate which specific hedging instruments it will use. The mechanism for conducting hedging transactions is still being formulated by the government. The decree requires the government counterparty for hedging transactions to have at least an A credit rating from two international rating agencies.

Republic of Korea

Yield Movements

Government bond yields in the Republic of Korea rose for most tenors between end-September and end-December **(Figure 1)**. The rise in yields covered tenors of 3 years and longer, with increases ranging from 3 basis points (bps) for the 3-year tenor to 23 bps for the 20-year tenor. In contrast, the 1-year tenor fell 6 bps and the 2-year tenor declined 1 bp. The yield hike for most tenors can be attributed to expectations of a domestic and global economic recovery. Between end-December and end-January, yields fell for all tenors. Meanwhile, the yield spread between the 2- and 10-year tenors widened 15 bps between end-September and end-December, and remained unchanged between end-December and end-January.

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



LCY = local currency.
Source: Bloomberg LP.

The Bank of Korea's Monetary Policy Committee decided on 14 February to keep the base rate—the 7-day repurchase rate—steady at 2.75%. Consumer price inflation inched up to 1.5% year-on-year (y-o-y) in January from 1.4% in December. For the full-year 2012, the inflation rate stood at 2.2%, the lowest since 2006.

Real gross domestic product (GDP) grew 0.4% quarter-on-quarter (q-o-q) and 1.5% y-o-y in 4Q12, based on advance estimates of The Bank of Korea. For the full-year 2012, the real GDP growth rate stood at 2.0%. Between 3Q12 and 4Q12, the y-o-y growth rate rose from 1.6% to 2.8% for private consumption expenditure, from 2.9% to 4.0% for total exports of goods and services, and from 1.1% to 3.1% for total imports of goods and services. In contrast, the y-o-y growth rate of gross fixed capital formation fell to −4.1% in 4Q12 from −2.3% in 3Q12.

Size and Composition

Total local currency (LCY) bonds outstanding in the Republic of Korea grew 10.5% y-o-y and 2.8% q-o-q to reach KRW1,566 trillion (US$1.5 trillion) at end-December **(Table 1)**. The outstanding size of LCY government bonds stood at KRW609 trillion, which was up 3.7% from a year earlier and 0.9% from end-September. The central government's bonds outstanding expanded 6.0% y-o-y and 0.5% q-o-q to KRW416.1 trillion, spurred by increases of 6.7% y-o-y and 0.7% q-o-q in Korea Treasury Bonds (KTBs). Meanwhile, the outstanding amount of central bank bonds—known as Monetary Stabilization Bonds (MSBs)—slipped 1.0% y-o-y but rose 0.4% q-o-q to level off at KRW163.1 trillion. Industrial finance debentures fell, albeit marginally, by 0.1% y-o-y but expanded 9.4% q-o-q to reach KRW29.9 trillion.

In 4Q12, issuance of LCY government bonds amounted to KRW71.6 trillion, up 7.6% from a year earlier and 13.1% from the previous quarter. Issuance of central bank bonds rose 5.0% y-o-y and 11.5% q-o-q to KRW43.5 trillion, while that of industrial finance debentures surged 114.0% y-o-y and 262.2% q-o-q to KRW5.9 trillion. In contrast, central government bond issues fell 0.7% y-o-y and 2.2% q-o-q to KRW22.2 trillion.

Total LCY corporate bonds outstanding expanded 15.4% y-o-y and 4.1% q-o-q to reach KRW956.7 trillion at end-December. The expansion

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

	Outstanding Amount (billion)								Growth Rate (%)						
	Sep-12		Oct-12		Nov-12		Dec-12		Sep-12		Oct-12	Nov-12	Dec-12		
	KRW	US$	KRW	US$	KRW	US$	KRW	US$	q-o-q	y-o-y	m-o-m	m-o-m	m-o-m	q-o-q	y-o-y
Total	1,522,869	1,370	1,544,160	1,416	1,565,497	1,446	1,565,704	1,471	2.1	9.6	1.4	1.4	0.01	2.8	10.5
Government	603,590	543	608,429	558	614,521	568	609,035	572	0.4	2.2	0.8	1.0	(0.9)	0.9	3.7
Central Bank Bonds	162,460	146	162,010	149	163,070	151	163,070	153	(1.3)	(4.1)	(0.3)	0.7	0.0	0.4	(1.0)
Central Government Bonds	413,848	372	417,034	382	421,570	389	416,113	391	1.3	5.8	0.8	1.1	(1.3)	0.5	6.0
Industrial Finance Debentures	27,283	25	29,385	27	29,881	28	29,852	28	(3.3)	(8.4)	7.7	1.7	(0.1)	9.4	(0.1)
Corporate	919,279	827	935,731	858	950,976	878	956,669	899	3.3	15.1	1.8	1.6	0.6	4.1	15.4

( ) = negative, LCY = local currency, m-o-m = month-on-month, q-o-q = quarter-on-quarter, y-o-y = year-on-year.
Notes:
1. Calculated using data from national sources.
2. Bloomberg LP end-of-period LCY–US$ rates are used.
3. Growth rates are calculated from LCY base and do not include currency effects.
Source: EDAILY *BondWeb* and The Bank of Korea.

stemmed from increases in private corporate bonds outstanding, which climbed 21.9% y-o-y and 5.1% q-o-q, and increases in special public bonds outstanding, which climbed 19.1% y-o-y and 4.7% q-o-q. Meanwhile, the outstanding size of financial debentures, excluding Korea Development Bank (KDB) bonds, rose 1.0% q-o-q but fell 0.6% y-o-y.

The top 30 LCY corporate bond issuers in the Republic of Korea at end-December had combined outstanding bonds of KRW593.7 trillion, accounting for 62% of total LCY corporate bonds outstanding **(Table 2)**. Korea Land & Housing Corp. remained the largest issuer of corporate bonds with a total outstanding amount of KRW57.9 trillion.

LCY corporate bond issuance in 4Q12 stood at KRW98.6 trillion, which was 3.5% higher than a year earlier and 1.9% more than in the previous quarter. The y-o-y increase was largely due to a 29.2% annual rise in issuance of special public bonds, while the q-o-q hike was bolstered by a 19.9% quarterly surge in financial debenture issues.

The largest corporate bond issues in 4Q12 included Nonghyup Bank's KRW700 billion 8-year bond offering a 3.33% coupon, Korea Land & Housing Corporation's KRW500 billion 3-year bond carrying a 3.02% coupon, and SH Corporation's KRW300 billion 1.5-year bond with a 3.08% coupon. The longest-dated LCY corporate bond issued during the quarter was Korea Land & Housing Corporation's 40-year bond worth KRW90 billion and carrying a 3.52% coupon. Among the high-yield corporate bond issues during the quarter were Dongbu Corporation's 1-year bond worth KRW42 billion with an 8.9% coupon, and Kolon Global Corporation's 2.5-year bond worth KRW100 billion with an 8.5% coupon.

Liquidity

Liquidity in LCY government bonds slipped in 4Q12 as the turnover ratio fell to 1.01 from

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

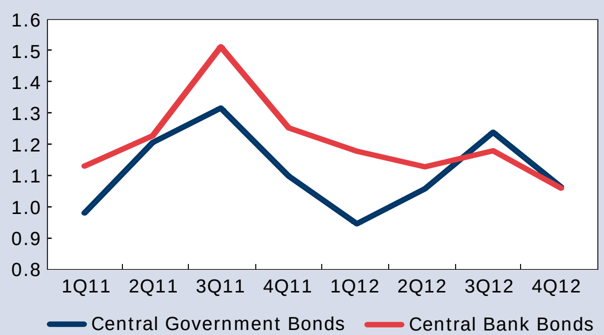
Issuers	Outstanding Amount		State-Owned	Privately Owned	Listed on		Type of Industry
	LCY Bonds (KRW billion)	LCY Bonds (US$ billion)			KOSPI	KOSDAQ	
1. Korea Land & Housing Corp.	57,871	54.4	Yes	No	No	No	Real Estate
2. Korea Housing Finance Corp.	47,414	44.5	Yes	No	No	No	Financial
3. Korea Deposit Insurance Corp.	45,200	42.5	Yes	No	No	No	Insurance
4. Korea Finance Corp.	41,270	38.8	Yes	No	No	No	Financial
5. Industrial Bank of Korea	30,115	28.3	Yes	No	Yes	No	Bank
6. KDB Daewoo Securities	29,844	28.0	Yes	No	Yes	No	Securities
7. Korea Electric Power Corp.	28,990	27.2	Yes	No	Yes	No	Utillity
8. Woori Investment and Securities	24,767	23.3	Yes	No	Yes	No	Securities
9. Korea Investment and Securities	23,499	22.1	No	Yes	No	No	Securities
10. Mirae Asset Securities	19,735	18.5	No	Yes	Yes	No	Securities
11. Korea Expressway Corp.	19,370	18.2	Yes	No	No	No	Infrastructure
12. Kookmin Bank	18,868	17.7	No	Yes	No	No	Bank
13. Tong Yang Securities	18,298	17.2	No	Yes	Yes	No	Securities
14. Shinhan Bank	18,068	17.0	No	Yes	No	No	Bank
15. Woori Bank	15,502	14.6	Yes	No	No	No	Bank
16. Small & Medium Business Corp.	15,175	14.3	Yes	No	No	No	Financial
17. Korea Rail Network Authority	14,210	13.4	Yes	No	No	No	Infrastructure
18. Korea Gas Corp.	12,795	12.0	Yes	No	Yes	No	Utility
19. Hana Bank	12,764	12.0	No	Yes	No	No	Bank
20. Hyundai Securities	12,134	11.4	No	Yes	Yes	No	Securities
21. Hana Daetoo Securities	11,856	11.1	No	Yes	No	No	Securities
22. Korea Water Resources	9,729	9.1	Yes	No	Yes	No	Utility
23. Shinhan Investment Corp.	9,455	8.9	No	Yes	No	No	Securities
24. Shinhan Card	9,116	8.6	No	Yes	No	No	Financial
25. Hyundai Capital Services	8,301	7.8	No	Yes	No	No	Securities
26. Samsung Securities	8,195	7.7	No	Yes	Yes	No	Securities
27. Standard Chartered First Bank Korea	7,930	7.5	No	Yes	No	No	Bank
28. Korea Railroad Corp.	7,860	7.4	Yes	No	No	No	Infrastructure
29. Shinhan Financial Group	7,750	7.3	No	Yes	Yes	No	Financial
30. Nonghyup Bank	7,600	7.1	Yes	No	No	No	Bank
Total Top 30 LCY Corporate Issuers	**593,680**	**557.8**					
Total LCY Corporate Bonds	**956,669**	**898.8**					
Top 30 as % of Total LCY Corporate Bonds	**62.1%**	**62.1%**					

KOSDAQ = Korean Securities Dealers Automated Quotations, KOSPI = Korea Composite Stock Price Index, LCY = local currency.
Notes:
1. Data as of 31 December 2012.
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 and EDAILY *BondWeb* data.

1.16 in 3Q12. For central government bonds, mostly KTBs, the turnover ratio dropped to 1.06 in 4Q12 from 1.24 in 3Q12. Also, the turnover ratio for central bank bonds, or MSBs, decreased to 1.06 from 1.18 in the previous quarter **(Figure 2)**.

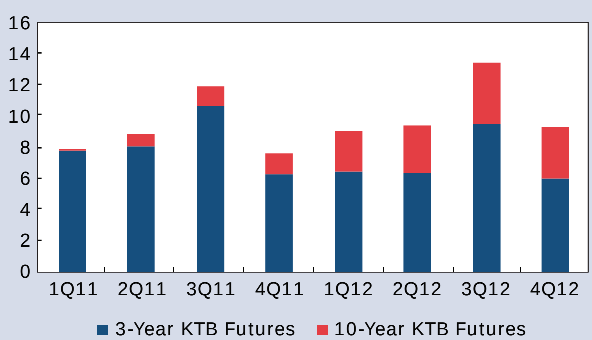
The number of KTB futures contracts traded fell to 9.3 million in 4Q12 from 13.4 million in 3Q12 due to less trading volume for both 3- and 10-year KTB futures **(Figure 3)**. The proportion of 3-year contracts traded as a share of all KTB futures contacts slipped to 65% in 4Q12 from 71% in 3Q12, while the share of 10-year KTB futures contracts climbed to 35% in 4Q12 from 29% in 3Q12.

Figure 2: Turnover Ratios for Central Government and Central Bank Bonds



Note: Central government bonds include Korea Treasury Bonds and National Housing Bonds.
Source: The Bank of Korea and EDAILY *BondWeb*.

Figure 3: Trading Volume in KTB Futures Contracts (millions of contracts)



KTB = Korea Treasury Bond.
Source: Korea Exchange.

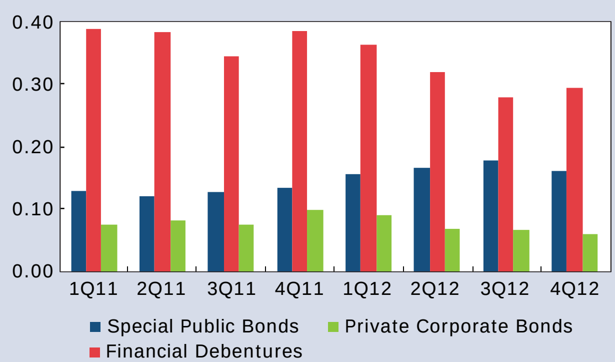
For LCY corporate bonds, the turnover ratio remained steady at 0.15 in 4Q12 for the second consecutive quarter. However, between 3Q12 and 4Q12, the turnover ratio for financial debentures inched up from 0.28 to 0.29, it fell for special public bonds from 0.18 to 0.16, and decreased slightly for private corporate bonds from 0.07 to 0.06 **(Figure 4)**.

Investor Profile

Insurance companies and pension funds were the largest investor group in LCY government bonds as of end-September, holding 25% of the total **(Figure 5)**. They were followed by the general government—consisting of the central government, local government, and social security funds—which held 23% of the total, financial companies other than banks (19%), banks (18%), foreign investors (10%), households and nonprofit organizations (5%), and non-financial companies (1%). Between end-September 2011 and end-September 2012, the share of insurance companies and pension funds climbed 2 percentage points, while the share of financial companies other than banks rose 1 percentage point. On the other hand, the shares of the general government and foreign investors dropped 1 percentage point each.

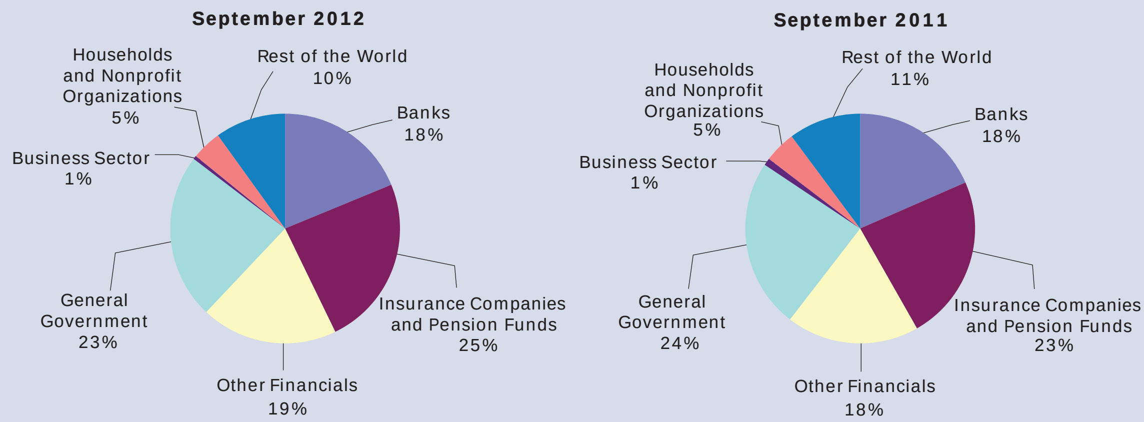
Insurance companies and pension funds were also the largest investor group in LCY corporate bonds, holding 33% of the total as of end-September

Figure 4: Turnover Ratios for Special Public Bonds, Financial Debentures, and Private Corporate Bonds



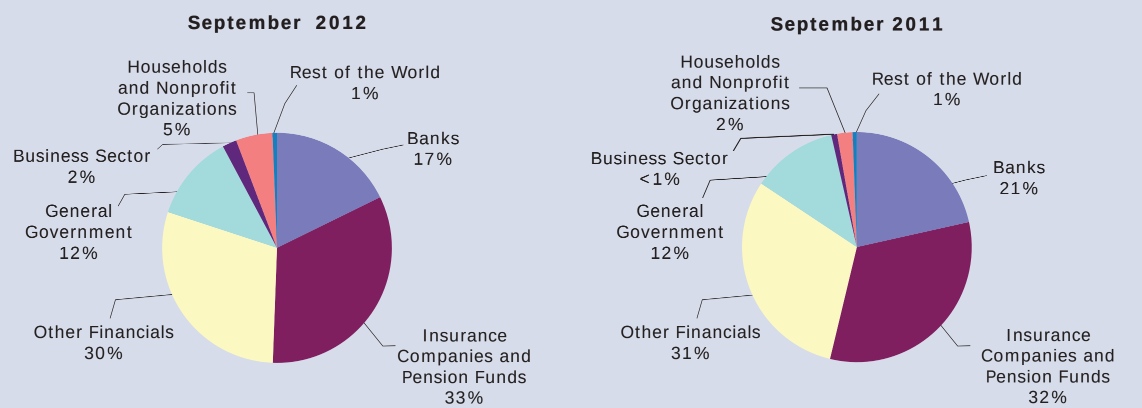
Source: EDAILY *BondWeb*.

Figure 5: LCY Government Bonds Investor Profile



LCY = local currency.
Source: *AsianBondsOnline* and The Bank of Korea.

Figure 6: LCY Corporate Bonds Investor Profile



LCY = local currency.
Source: *AsianBondsOnline* and The Bank of Korea.

(Figure 6). Financial companies other than banks were the second-largest corporate bondholders with a share of 30%, followed by banks (17%), the general government (12%), households and nonprofit organizations (5%), non-financial companies (2%), and foreign investors (1%). Compared with end-September 2011, the shares of households and nonprofit organizations, non-financial companies, and insurance companies and pension funds rose 3, 2, and 1 percentage point(s), respectively. On the other hand, the share of banks dropped 4 percentage points and the share of other financial companies fell 1 percentage point.

Policy, Institutional, and Regulatory Developments

MOSF Announces KTB Issuance Plan for 2013

The Ministry of Strategy and Finance (MOSF) announced in January its issuance plan for KTBs for 2013. MOSF reported plans to issue a total of KRW79.7 trillion worth of KTBs in 2013, with KRW57.5 trillion to be used for refinancing purposes.

FSC Releases Legislative Notice on Proposed Covered Bonds Act

The Financial Services Commission (FSC) released a legislative notice on its proposed Covered Bonds Act in October. The notice includes the definition of covered bonds and eligible issuers, the cover pool, registration of the issuance plan and cover pool, the management of the cover pool, and the preferential rights of covered bond investors. The FSC reported in its January press release that the draft bill of the Covered Bond Act was approved by the Cabinet on 29 January.

FSC Sets Implementation Plan for Basel III

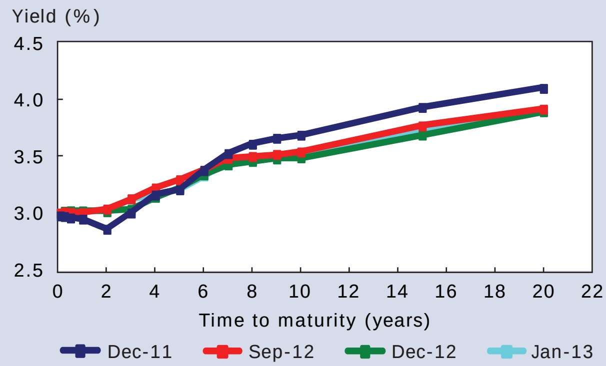
The FSC stated in December that it will set a specific timeline for domestic implementation of Basel III in the Republic of Korea, and that this will reflect global trends with respect to other countries' implementation experiences. The FSC reported that 11 countries had finalized their implementation plans for Basel III, while 15 countries, including the Republic of Korea, had drafted regulations for Basel III implementation.

Malaysia

Yield Movements

Between end-September and end-December, the local currency (LCY) government bond yield curve in Malaysia flattened as yields rose at the shorter-end and fell from the 2-year maturity through the end of the curve **(Figure 1)**. Yields rose the most for the 1-year maturity, climbing 1.5 basis points (bps). Yields from the 2-year maturity through the end of the curve fell between 2 bps and 9 bps.

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



LCY = local currency.
Source: Bloomberg LP.

Between end-December and end-January, there was not much change in the yields except for the 3-year maturity, which rose 9 bps. The yield spread between the 2- and 10-year maturities remained at 47 bps at end-January, the same level as end-December; however, it narrowed significantly compared with a spread of 82 bps at end-December 2011.

Rising yields at the shorter-end of the curve reflected expectations of higher inflation in 2013 as domestic demand remained strong. Consumer price inflation in Malaysia was relatively tame in 2012 with inflation easing to 1.2% year-on-year (y-o-y) in December from 1.3% in November and October. Between November and December, consumer price inflation remained flat. For the full-year 2012, inflation averaged 1.6% y-o-y as price indices for all main groups rose except for clothing and footwear, and communications.

Bank Negara Malaysia (BNM) decided to leave the overnight policy rate unchanged at 3.0% in its Monetary Policy Committee meeting on 31 January. BNM has kept its benchmark rate at the same level since May 2011. The central bank considers the current monetary policy to be supportive of the economy while inflation remains contained.

Malaysia's real gross domestic product (GDP) expanded 6.4% y-o-y in 4Q12 compared with 5.3% growth in 3Q12. This was largely driven by investment, which posted double-digit growth of 15.0% y-o-y, while growth in government spending and private spending slowed to 1.1% and 6.1%, respectively. All sectors recorded positive y-o-y increases in 4Q12, led by the services, manufacturing, and construction sectors. For the full-year 2012, GDP growth was recorded at 5.6% compared with 5.1% in 2011. For 2013, the government has targeted a GDP growth rate of between 4.5% and 5.5%.

Size and Composition

Total LCY bonds outstanding in Malaysia reached MYR1.0 trillion (US$327 billion) at end-December, climbing a significant 19.9% y-o-y **(Table 1)**. Both the government and corporate bond sectors contributed to the strong growth during the period. On a quarter-on-quarter (q-o-q) basis, however, the bond market grew by a more modest rate of 2.8%.

Government Bonds. At end-December, outstanding LCY government bonds stood at MYR599 billion, rising 2.2% q-o-q and 20.0% y-o-y. All three government bond instruments recorded positive y-o-y growth. Central government bonds and bills, which accounted for 73.5% of the total stock of government bonds at end-December, grew

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

	Outstanding Amount (billion)								Growth Rate (%)						
	Sep-12		Oct-12		Nov-12		Dec-12		Sep-12		Oct-12	Nov-12	Dec-12		
	MYR	US$	MYR	US$	MYR	US$	MYR	US$	q-o-q	y-o-y	m-o-m	m-o-m	m-o-m	q-o-q	y-o-y
Total	972	318	992	325	1,006	331	1,000	327	4.1	15.7	2.0	1.5	(0.6)	2.8	19.9
Government	586	192	601	197	609	200	599	196	4.8	16.1	2.5	1.3	(1.7)	2.2	20.0
Central Government Bonds and Bills	424	139	432	142	437	144	440	144	1.8	12.6	1.9	1.2	0.6	3.7	12.2
Central Bank Bills	159	52	164	54	167	55	154	50	12.0	24.5	3.1	1.8	(7.6)	(3.0)	44.6
Sukuk Perumahan Kerajaan	3	1	5	1	5	1	5	1	-	465.2	73.1	0.0	0.0	73.1	1,775.0
Corporate	386	126	391	128	397	131	401	131	2.9	15.3	1.2	1.6	1.0	3.9	19.8

– = not applicable, ( ) = negative, m-o-m = month-on-month, q-o-q = quarter-on-quarter, y-o-y = year-on-year.
Notes:
1. Calculated using data from national sources.
2. Bloomberg LP end-of-period LCY–US$ rate is used.
3. Growth rates are calculated from LCY base and do not include currency effects.
Source: Bank Negara Malaysia Fully Automated System for Issuing/Tendering (FAST) and Bloomberg LP.

12.2% y-o-y. Central bank bills rose 44.6% y-o-y but fell 3.0% q-o-q. *Sukuk Perumahan Kerajaan* (Islamic bonds issued by the government) recorded the highest growth rate at 1,775% y-o-y, although the amount of these bonds outstanding came from a very low base of only MYR0.2 billion at end-December 2011 and increased to MYR5 billion at end-December 2012.

In 4Q12, government bond issuance fell 24.8% q-o-q, as issuance volumes declined from the previous quarter for all types of government bonds. However, on a y-o-y basis, the issuance of government bonds rose a significant 23.5%.

Corporate Bonds. The size of Malaysia's LCY corporate bond market climbed to MYR401 billion (US$131 billion) at end-December, expanding 3.9% q-o-q and 19.8% y-o-y. In 4Q12, corporate bond issuance totaled MYR32.5 billion, down 21.4% compared with the previous quarter. However, on a y-o-y basis, corporate bond issuance climbed 40.2%. **Table 2** lists some notable corporate bonds issued during 4Q12.

The largest issuer during the quarter was Turus Pesawat, a special purpose company fully owned by Malaysia's Ministry of Finance. Turus Pesawat, which sold MYR3.4 billion of multi-tranche *sukuk* (Islamic bonds) in November, was established to raise funds to lend to Malaysian Airlines System (MAS) for the purpose of purchasing new planes and refinancing a MYR1.0 billion bridge loan. The bond sale comprised the following issues:

Table 2: Notable Corporate Issuance in 4Q12

Corporate Issuer	Instrument	Issued Amount (MYR billion)
Turus Pesawat Sdn Bhd.	IMTNs	3.40
Khazanah Nasional	IBONDS	2.00
Golden Assets International Finance	IMTNs	1.50
CIMB Bank	BONDS	1.50
RHB Bank	MTNs	1.30
Cagamas	IMTNs	1.04
Imtiaz Sukuk	IMTNs	1.00

BONDS = conventional corporate bonds, IBONDS = Islamic bonds, IMTNs = Islamic medium-term notes, MTNs = medium-term notes.
Source: Bank Negara Malaysia.

- 10-year *sukuk* worth MYR500 million, profit rate of 3.74%;
- 12-year *sukuk* worth MYR500 million, profit rate of 3.93%;
- 15-year *sukuk* worth MYR750 million, profit rate of 4.12%; and
- 20-year *sukuk* worth MYR1.65 billion, profit rate of 4.36%.

Government investment holding arm Khazanah Nasional sold MYR2 billion worth of zero-coupon *sukuk* in October. The *sukuk* were drawn from an unrated *Sukuk Musyarakah* Program and were issued at a discount. The bond sale comprised the following issues:

- 5-year *sukuk* worth MYR1 billion at an issue price of 83.825 and implied yield of 3.7%; and
- 15-year *sukuk* worth MYR1 billion at an issue price of 53.845 and implied yield of 4.2%.

Golden Assets International Finance, a subsidiary of Singapore-listed palm oil plantation firm Golden Agri Resources Ltd., issued MYR1.5 billion of 5-year *sukuk* bearing a profit rate of 4.35%. The bonds were part of the company's Islamic Medium-Term Note (IMTN) Program of up to MYR5 billion.

CIMB Bank issued MYR1.5 billion of 10-year Lower Tier 2 subordinated notes in November, completing its MYR5 billion issuance program. The bonds carry a coupon of 4.15%. Proceeds from the subdebt issue will be used to boost the bank's working capital requirements and for general banking business.

RHB Bank issued MYR1.3 billion worth of 10-year Lower Tier 2 notes in November. The notes, rated AA3 by RAM Ratings, carry a coupon of 4.4%. Proceeds from the issuance will be used to refinance maturing Lower Tier 2 notes.

Other notable issuances in 4Q12 included Cagamas MYR1.04 billion worth of conventional bonds and *sukuk* in several tranches in December, and Imtiaz Sukuk Bhd.'s MYR1 billion dual-tranche IMTNs in November.

As of end-December, the total bonds outstanding of the top 30 corporate bond issuers in Malaysia stood at MYR221.8 billion **(Table 3)**, accounting for 55.3% of total corporate bonds outstanding. Project Lebuhraya Usahasama Bhd. remained the largest issuer of LCY corporate bonds in Malaysia with bonds outstanding valued at MYR30.6 billion. National mortgage corporation Cagamas and government investment holding arm Khazanah followed with total bonds outstanding amounting to MYR20.2 billion and MYR17.7 billion, respectively.

Finance-related companies accounted for a third of the list of the top 30 LCY corporate bond issuers in 4Q12. Other bond issuers were from the energy, gas, and water; transport, storage, and communications; quasi-government; and construction sectors.

Investor Profile

Financial institutions remained the largest holder of Malaysian Government Securities (MGSs) and Government Investment Issues (GIIs) in Malaysia, holding a 43% share of total outstanding MGSs and GIIs at end-September **(Figure 2)**. In absolute terms, the share of financial institutions stood at MYR182 billion in 3Q12, up from MYR161 billion in the same period a year earlier.

Foreign investors were the second-largest investor group at end-September with a share of 29%. The share of foreign investors has steadily risen since June 2009. **Figure 3** shows the relationship between the MYR–US$ exchange rate and foreign holdings of MGSs and GIIs between end-March 2005 and end-September 2012. Foreign holdings' share of the total has steadily climbed as the MYR appreciated against the US$ during this period.

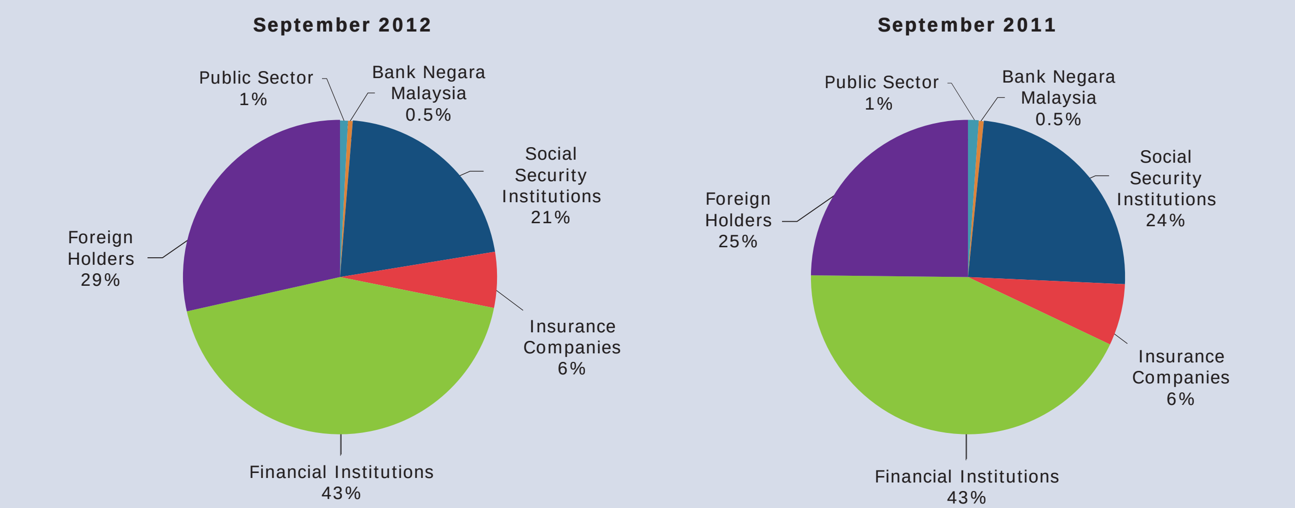
In 3Q12, the share of social security institutions fell to 21% of the total stock of MGSs and GIIs, down slightly from 24% a year earlier, while the share of insurance companies' holdings was steady at 6%.

Table 2: Top 30 Issuers of LCY Corporate Bonds in Malaysia

Issuers	Outstanding Amount (MYR billion)					State-Owned	Privately Owned	Listed Company	Type of Industry
	BONDS	IBONDS	MTNs	IMTNs	TOTAL				
1. Project Lebuhraya Usahasama Bhd.				30.6	30.6	No	Yes	No	Toll Roads and Expressway
2. Cagamas			9.1	11.1	20.2	Yes	No	No	Finance
3. Khazanah		17.7			17.7	Yes	No	No	Quasi-Govt. and Other
4. Pengurusan Aset Air Bhd.				11.3	11.3	Yes	No	No	Energy, Gas, and Water
5. Malaysian Banking Bhd.	9.7	1.5			11.2	No	Yes	Yes	Finance
6. Prasarana	1.9	4.0		4.0	9.9	Yes	No	No	Transport, Storage, and Comm.
7. Binariang GSM		3.0		6.9	9.9	No	Yes	No	Transport, Storage, and Comm.
8. CIMB Bank	8.5				8.5	No	Yes	No	Finance
9. Malakoff Corp		1.8		5.6	7.4	No	Yes	No	Energy, Gas, and Water
10. Public Bank	1.2		4.9		6.1	No	Yes	Yes	Finance
11. Senai Desaru Expressway Bhd.				5.6	5.6	No	Yes	No	Construction
12. Sarawak Energy				5.5	5.5	Yes	No	No	Energy, Gas, and Water
13. KL International Airport	1.6	3.8			5.4	Yes	No	No	Transport, Storage, and Comm.
14. AM Bank	0.5		4.7		5.2	No	Yes	No	Finance
15. Putrajaya Holdings		0.4		4.7	5.1	No	Yes	No	Property and Real Estate
16. 1Malaysia Development Bhd.				5.0	5.0	Yes	No	No	Quasi-Govt. and Other
17. Celcom Transmission				5.0	5.0	No	Yes	No	Transport, Storage, and Comm.
18. Hong Leong Bank	3.7		1.2		4.9	No	Yes	Yes	Finance
19. Manjung Island Energy Bhd.				4.9	4.9	No	Yes	No	Energy, Gas, and Water
20. RHB Bank	0.6		4.0		4.6	No	Yes	No	Finance
21. Aman Sukuk Bhd.				4.4	4.4	Yes	No	No	Finance
22. Tanjung Bin Power				4.2	4.2	No	Yes	No	Energy, Gas, and Water
23. Jimah Energy Ventures				4.2	4.2	No	Yes	No	Energy, Gas, and Water
24. Bank Pembangunan Malaysia	0.8		2.4	0.9	4.1	Yes	No	No	Finance
25. Rantau Abang Capital Bhd.				3.8	3.8	No	Yes	No	Quasi-Govt. and Other
26. Danga Capital				3.6	3.6	Yes	No	No	Finance
27. Cekap Mentari	3.5				3.5	No	Yes	No	Finance
28. Perbadanan Tabung Pendidikan Tinggi Nasional				3.5	3.5	No	Yes	No	Quasi-Govt. and Other
29. Turus Pesawat Sdn Bhd.				3.4	3.4	Yes	No	No	Quasi-Govt. and Other
30. YTL Power International			3.3		3.3	No	Yes	Yes	Energy, Gas, and Water
Total Top 30 LCY Corporate Issuers	**32.0**	**32.2**	**29.6**	**128.0**	**221.8**				
Total LCY Corporate Bonds					**401.0**				
Top 30 as % of Total LCY Corporate Bonds					**0.6%**				

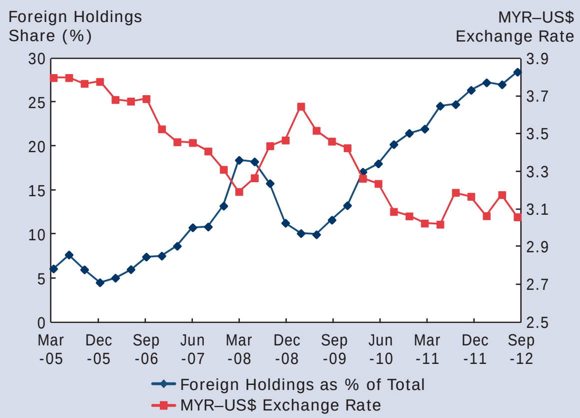
BONDS = conventional corporate bonds, IBONDS = Islamic bonds, IMTNs = Islamic medium-term notes, LCY = local currency, MTNs = medium-term notes.
Notes:
1. Data as of 31 December 2012.
2. Total outstanding amount includes commercial paper.
3. State-owned firms are defined as those in which the government has more than a 50% ownership stake.
Source: *AsianBondsOnline* calculations based on Bank Negara Malaysia Fully Automated System for Issuing/Tendering (FAST) data.

Figure 2: LCY Government Bonds Investor Profile



LCY = local currency.
Source: Bank Negara Malaysia.

Figure 3: Foreign Holdings of LCY Government Bonds vs. the MYR–US$ Exchange Rate



LCY = local currency.
Source: Bank Negara Malaysia.

Rating Changes

On 18 October, Ratings and Investment (R&I) affirmed Malaysia's foreign and domestic currency issuer rating at A and A+, respectively. The outlook on both ratings was stable. R&I cited Malaysia's solid economy, stable external balance, and the agency's low level of concern over its financing capabilities as the reasons for the ratings action.

Policy, Institutional, and Regulatory Developments

BNM Announces *Sharia'h* Standards for Mudarabah

On 22 October, BNM issued the *Sharia'h* Standard on *Mudarabah* (a partnership where one partner provides capital to the other for investment in a commercial enterprise) to all Islamic financial institutions under its purview as part of its efforts to enhance the *sharia'h*-compliant regulatory framework in Malaysia. The new *Sharia'h* Standard on *Mudarabah* will serve as a guideline for Islamic financial institutions in developing Islamic financial products and services based on the concept of *mudarabah*. The *Sharia'h* Standard on *Mudarabah* is the second in the series of *Sharia'h* Standards (formerly known as *Sharia'h* Parameters). The first series was the *Sharia'h* Standard on *Murabahah* (a contract based on the sale of an asset at cost plus mark-up).

BNM and SC Sign MOU to Strengthen Joint Regulatory Oversight

On 30 October, BNM and Securities Commission Malaysia (SC) signed a Memorandum of

Understanding (MOU) to improve their joint regulatory oversight. The MOU provides for enhanced collaboration between BNM and SC, with the aim of promoting financial sector and capital market stability. The MOU reinforces the intent to collaborate, cooperate, and share information to enable both agencies to effectively carry out their respective mandates.

SC Introduces New Capital Market Regulations

On 2 January, SC announced new capital market regulations through the Capital Markets and Services (Amendment) Act 2012 (CMSA 2012), which aims to encourage market innovation, promote market efficiency, and allow for more informed investment decisions. CMSA 2012 introduces a new approval framework that will facilitate the offering of a broader array of capital market products for the benefit of issuers, intermediaries, and investors. New regulations under CMSA 2012 include, among others, (i) guidelines for business trusts that allow for greater fundraising flexibility and provide investors with an opportunity to invest in a new asset class, (ii) revised guidelines on private debt securities and *sukuk* (Islamic bonds) that allow publicly listed companies and banks to offer bonds and *sukuk* to retail investors, and (iii) the establishment of a consolidated capital market compensation fund.

Moody's Adjusts FCY Bond and LCY Country Risk Ceilings for Malaysia

On 7 January, Moody's Investors Service (Moody's) adjusted the foreign currency (FCY) bond and LCY country risk ceilings for Malaysia. The adjustments, however, will not affect Malaysia's A3 sovereign rating. Moody's said the change in ceilings would mean that the highest rating that can be assigned to a domestic issuer in Malaysia, or to a structured finance security backed by LCY receivables, are as follows: (i) the long-term FCY bond ceiling was raised to A1 from A3, (ii) the long-term FCY deposit ceiling remained at A3, (iii) the short-term FCY bond and deposit ceilings remained unchanged at P-1, and (iv) the long-term LCY bond and deposit ceilings were lowered to A1 from Aa2. According to Moody's, the decision to readjust the country ceilings for Malaysia was based on its assessment of moratorium risks, given the country's ability and willingness to service both its public and private cross-border debt obligations.

RAM Ratings Launches Global and ASEAN Ratings Scale

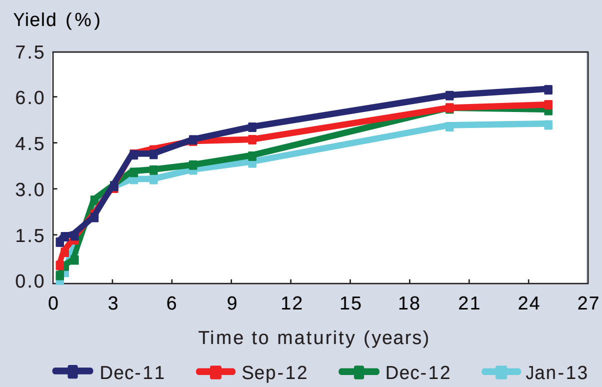
In January, RAM Ratings Services Bhd. launched its global and Association of Southeast Asian Nations (ASEAN) ratings scales. The scale will enable RAM to benchmark ratings against global and regional peers. The Credit Guarantee and Investment Facility (CGIF) was the first institution to be given a global and ASEAN rating of AAA by RAM.

Philippines

Yield Movements

Between end-September and end-December, Philippine local currency (LCY) government bond yields fell for most tenors with the exception of the 2- and 3-year tenors **(Figure 1)**. Yields for tenors of 1 year and below plunged between 32 basis points (bps) and 65 bps on the back of foreign demand driven by the strong peso. Yields on tenors between 4 years and 10 years fell 53 bps–77 bps. Yields for the 20- and 25-year tenors fell 3 bps and 19 bps, respectively. In contrast to the rest of the curve, yields rose 45 bps and 8 bps, respectively, for the 2- and 3-year tenors. The fall in yields along most of the curve was also influenced by future supply factors as the Bureau of Treasury (BTr) announced a change in the auction schedule for 1Q13. In the past, auctions for government bonds were conducted every other week. In 1Q13, auctions for treasury bills and bonds will be held once a month.

Figure 1: Philippines' Benchmark Yield Curve—LCY Government Bonds



LCY = local currency.
Source: Bloomberg LP.

Between end-December and end-January, the entire yield curve shifted downward again (except the 1-year maturity), particularly at the longer-end. Yields fell between 15 bps and 20 bps for tenors of less than 1-year. Yields fell 6 bps–30 bps between the 2- and 7-year maturities. Yields for longer tenors fell between 22 bps and 57 bps. Rates fell due to monetary policy changes implemented by Bangko Sentral ng Pilipinas (BSP) toward the end of January. While BSP elected to keep policy rates unchanged, it lowered the rate granted to special deposit accounts (SDAs). In contrast to the rest of the curve, the 1-year maturity rose 33 bps.

As a result of these movements, the yield spread between the 2- and 10-year tenors narrowed 21 bps between end-December and end-January: from 155 bps to 134 bps.

In addition to supply factors and monetary policy, yields have fallen in the Philippines due to positive economic data. Inflation in the Philippines was favorable in 2012, enabling the pursuit of expansionary fiscal and monetary policy goals. Consumer price inflation has generally been slow and steady in recent months at 2.8% year-on-year (y-o-y) in November, 2.9% in December, and 3.0% in January. Inflation for 2012 averaged 3.2%, near the lower-end of the government's 3%–5% target. For 2013, the government's inflation forecast was lowered to 3.1% from 3.9% last December 2012.

Gross domestic product (GDP) growth was also strong in the last 2 quarters of 2012. GDP expanded 6.8% y-o-y in 4Q12 and 7.2% in 3Q12. Growth in 4Q12 was driven by the services sector. For the full-year 2012, GDP grew 6.6% y-o-y. Exports were also robust toward the end of the year. Exports rose 5.5% y-o-y in November and 6.1% in October, but these increases were substantially lower than September's 22.8% growth.

The country's gross international reserves (GIR) reached US$85.8 billion at end-January. The increase in the GIR was due to the BSP's forex operations as well as income from investments abroad. The GIR balance at end-January was large enough to cover 12.3 months of imports and payments of services abroad, and was equal to 5.8 times the country's external short-term debt by residual maturity.

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

	Outstanding Amount (billion)								Growth Rate (%)						
	Sep-12		Oct-12		Nov-12		Dec-12		Sep-12		Oct-12	Nov-12	Dec-12		
	PHP	US$	PHP	US$	PHP	US$	PHP	US$	q-o-q	y-o-y	m-o-m	m-o-m	m-o-m	q-o-q	y-o-y
Total	3,801	91	3,805	92	3,837	94	4,085	100	3.7	16.1	0.1	0.8	6.5	7.5	20.5
Government	3,286	79	3,290	80	3,314	81	3,559	87	3.6	14.7	0.1	0.7	7.4	8.3	20.5
Treasury Bills	262	6	263	6	272	7	275	7	2.7	(20.6)	0.4	3.7	0.9	5.0	(6.8)
Treasury Bonds	2,900	69	2,903	71	2,928	72	3,171	77	3.8	19.8	0.1	0.9	8.3	9.3	24.5
Others	124	3	124	3	113	3	113	3	0.3	8.6	0.0	-8.8	0.0	-8.8	(1.0)
Corporate	514	12	515	13	524	13	526	13	3.9	26.1	0.1	1.7	0.5	2.3	20.7

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

Notes:

1. Calculated using data from national sources.
2. Bloomberg end-of-period LCY–US$ rates are used.
3. Growth rates are calculated from LCY base and do not include currency effects.
4. "Others" includes bonds issued by government agencies, instrumentalities, and corporations with which repayment was guaranteed by the National Government. These include issues of Power Sector Assets and Liabilities Management (PSALM), National Food Authority, and others.
5. Peso Global Bonds (PHP-denominated bonds but payable in US$) and multi-currency Retail Treasury Bonds are not included. As of 31 December 2012, the Government of the Philippines and Petron Corporation had PHP98.9 billion and PHP20.0 billion of Peso Global Bonds outstanding, respectively. The government also had PHP20.8 billion of multi-currency Retail Treasury Bonds outstanding.

Source: Philippine Bureau of the Treasury and Bloomberg LP.

The Philippines' strong economic performance has led to positive actions from several ratings agencies. In October, Moody's Investors Service (Moody's) raised the Philippines' sovereign debt rating to Ba1, one notch below investment grade. In December, Standard & Poor's (S&P) kept its Philippine debt rating unchanged at BB+, but raised its outlook to positive from stable, making it likely that the Philippines will be upgraded in 2013.

Size and Composition

The Philippine LCY bond market was growing at a robust rate of 20.5% y-o-y as of end-December, led mostly by treasury bonds **(Table 1)**. Total LCY bonds reached PHP4.1 trillion (US$100 billion) at end-December, up 7.5% from end-September's level of almost PHP3.8 trillion. Government securities accounted for the majority of bonds outstanding, totaling PHP3.6 trillion (87% of total), while corporate bonds summed to PHP526 billion.

Government Bond Market Development. Outstanding fixed income instruments issued by the Philippine government and government-controlled companies rose 20.5% y-o-y and 8.3% quarter-on-quarter (q-o-q) to close at PHP3.6 trillion at end-December. Among such instruments, treasury bonds advanced at the most rapid pace—24.5% y-o-y and 9.3% q-o-q—to stand at PHP3.2 trillion at end-December. Meanwhile, only treasury bills registered a decline in 4Q12, contracting 6.8% y-o-y to PHP275 billion. However, December's balance of outstanding treasury bills was up 5.0% on a q-o-q basis.

In terms of issuance in 4Q12, PHP52 billion worth of treasury bills were sold compared with PHP89 billion of treasury bonds.

The government has programmed LCY borrowing of PHP120 billion through its regular auction schedule in 1Q13. This will consist of PHP45 billion of treasury bills with 91-, 182-, and 364-day tenors, and the remainder in the form of treasury bonds with maturities of 7, 10, and 25 years. Also, the government has changed the frequency of its auctions in 1Q13. Auctions for treasury bills and bonds will each be held once a month for a total of six auctions. In contrast, there were 11 auctions scheduled in 4Q12.

Corporate Bond Market Development. As of end-December, total outstanding LCY corporate bonds stood at PHP526 billion (US$13 billion), driven by a growth rate of 20.7% y-o-y. Comparing 4Q12 with 3Q12, the amount of corporate bonds outstanding rose 2.3%. A total of PHP16 billion of LCY corporate bonds were sold in 4Q12. Major issuers for the quarter included (i) Ayala Corp., (ii) Ayala Land, and (iii) Banco de Oro Unibank (BDO) **(Table 2)**.

Only 47 companies are actively tapping the capital markets in the Philippines. Not surprisingly, the top 30 issuers accounted for 93.5% of the total amount of LCY corporate bonds outstanding (PHP526 billion) at end-December **(Table 3)**. Out of the top 30 bond issuers, only four companies were privately held corporations and the rest were publicly listed on the Philippine Stock Exchange (PSE). San Miguel Brewery (SMB) remained the largest corporate borrower in the country with PHP45.2 billion of outstanding debt. BDO followed SMB as the next largest borrower with PHP43 billion. Ayala Corp. was in the third spot with PHP40 billion of outstanding bonds.

The diversity of LCY corporate bond issuers in 4Q12 was comparable with that in 3Q12 **(Figure 2)**. Banks and financial services, including investment houses, remained the leading issuers of debt in 4Q12, with 33% of the total, as BSP moved toward more stringent liquidity and capital requirements. The market share of most industries remained unchanged, except for thoroughfares and tollways, which fell to 5% in 1Q12 from 6% in 3Q12, and electricity generation and distribution, which rose to 7% from 6%. Of note, firms from industries as diverse as (i) electricity generation and distribution, (ii) telecommunications, and (iii) thoroughfares and tollways continued to hold single-digit shares of total corporate bonds outstanding.

PDEx Trade Volume Trends—Government Securities. As the sole fixed income exchange in the country, the Philippine Dealing and Exchange Corporation (PDEx) captures the secondary trading of listed fixed income issues. The volume of secondary trading of government securities surged between 2005 and 2012 **(Figure 3)**. From an annual trading volume of PHP437.7 billion in 2005, trading volume increased to PHP5.04 trillion in 2012. The largest annual volume was recorded in 2010, when secondary trading reached PHP5.35 trillion. In 2005–2012, treasury bonds accounted for almost 73% of all trades in the secondary market as investors sought greater capital gains and interest income from these securities.

Investor Profile

The largest grouping of investors of government securities in 4Q12 comprised banks and financial

Table 2: Selected Issuance in 4Q12

	Issue Date	Issued Amount		Bond Type
		PHP (billion)	US$ (billion)	
Ayala Corporation	23-Nov-12	10	0.24	Senior Unsecured
PHP10 billion 5.45% due 2019				
Ayala Land	31-Oct-12	1	0.02	Senior Secured
PHP1 billion 5% due 2015				
BDO Universal Bank	15-Oct-12	5	0.12	Certificate of Deposit
PHP5 billion 5.25% due 2019				

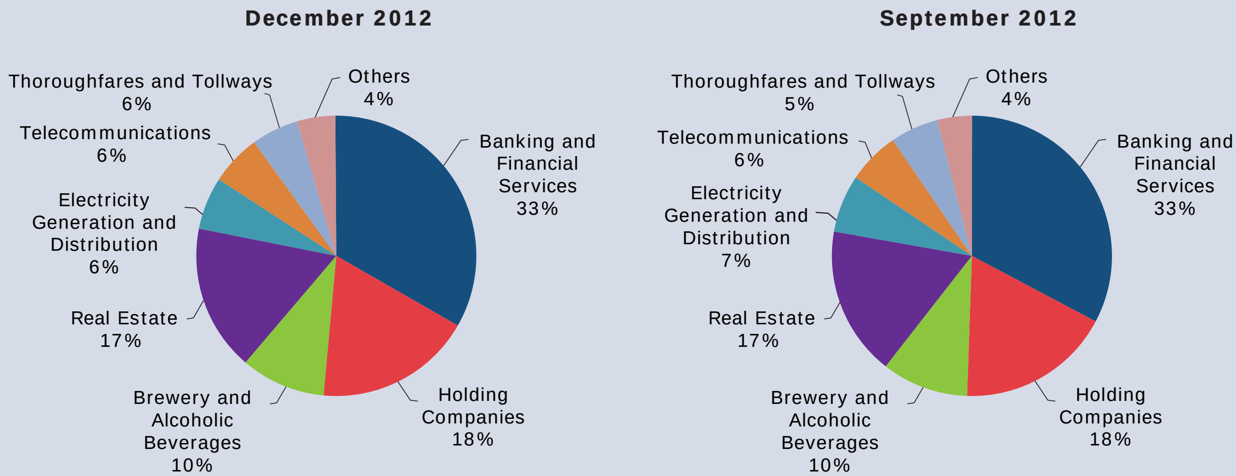
Source: Bloomberg LP.

Table 3: Top 30 Issuers of LCY Corporate Bonds in the Philippines

Issuers	Outstanding Amount		State-Owned	Privately Owned	Listed Company	Type of Industry
	LCY Bonds (PHP billion)	LCY Bonds (US$ billion)				
1. San Miguel Brewery Inc.	45.2	1.08	No	Yes	Yes	Brewery
2. BDO Unibank Inc.	43.0	1.03	No	Yes	Yes	Banking
3. Ayala Corporation	40.0	0.96	No	Yes	Yes	Diversified Operations
4. SM Investments Corporation	36.1	0.86	No	Yes	Yes	Diversified Operations
5. Ayala Land Inc.	31.2	0.75	No	Yes	Yes	Real Estate
6. Philippine National Bank	21.9	0.52	No	Yes	Yes	Banking
7. Rizal Commercial Banking Corporation	21.0	0.50	No	Yes	Yes	Banking
8. Manila Electric Company	19.4	0.46	No	Yes	Yes	Electricity Distribution
9. Philippine Long Distance Telephone Co.	17.3	0.42	No	Yes	Yes	Telecommunications
10. Maynilad Water Services	16.6	0.40	No	Yes	Yes	Water
11. SM Development Corporation	16.3	0.39	No	Yes	Yes	Real Estate
12. Filinvest Land Inc.	14.5	0.35	No	Yes	Yes	Real Estate
13. Petron Corporation	13.6	0.33	No	Yes	Yes	Oil Refining and Marketing
14. JG Summit Holdings Inc.	13.3	0.32	No	Yes	Yes	Diversified Operations
15. Security Bank Corporation	13.0	0.31	No	Yes	Yes	Banking
16. Energy Development Corporation	12.0	0.29	No	Yes	Yes	Electricity Generation
17. First Metro Investment Corporation	12.0	0.29	No	Yes	Yes	Investment Banking
18. Robinsons Land Corporation	12.0	0.29	No	Yes	Yes	Real Estate
19. MTD Manila Expressway Corporation	11.5	0.28	No	Yes	No	Transport Services
20. South Luzon Tollway Corporation	11.0	0.26	No	Yes	No	Transport Services
21. Globe Telecom Inc.	10.9	0.26	No	Yes	Yes	Telecommunications
22. Metropolitan Bank & Trust Co.	10.0	0.24	No	Yes	Yes	Banking
23. United Coconut Planters Bank	9.5	0.23	No	Yes	Yes	Banking
24. Allied Banking Corporation	8.0	0.19	No	Yes	No	Banking
25. Megaworld Corporation	6.4	0.15	No	Yes	Yes	Real Estate
26. Manila North Tollways Corporation	6.1	0.15	No	Yes	No	Public Thoroughfares
27. Bank of the Philippine Islands	5.0	0.12	No	Yes	Yes	Banking
28. China Banking Corporation	5.0	0.12	No	Yes	Yes	Banking
29. SM Prime Holdings, Inc.	5.0	0.12	No	Yes	Yes	Real Estate
30. Tanduay Distilleries Inc.	5.0	0.12	No	Yes	Yes	Alcoholic Beverages
Total Top 30 LCY Corporate Issuers	**491.9**	**11.78**				
Total LCY Corporate Bonds	**526.1**	**12.60**				
Top 30 as % of Total LCY Corporate Bonds	**93.5%**	**93.5%**				

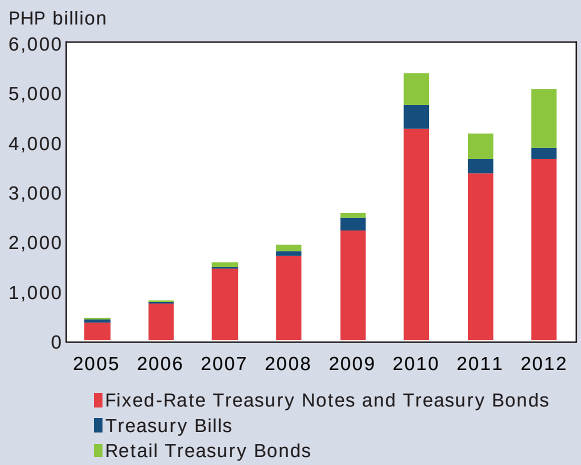
LCY = local currency.
Notes:
1. Data as of 31 December 2012.
2. Petron Corporation has PHP20 billion of global peso bonds outstanding that are not included.
3. State-owned firms are defined as those in which the government has more than a 50% ownership stake.
Source: *AsianBondsOnline* calculations based on Bloomberg data.

Figure 2: LCY Corporate Bond Issuers by Industry



LCY = local currency.
Source: Bloomberg LP.

Figure 3: PDEx Trade Volume Trends—Government Securities



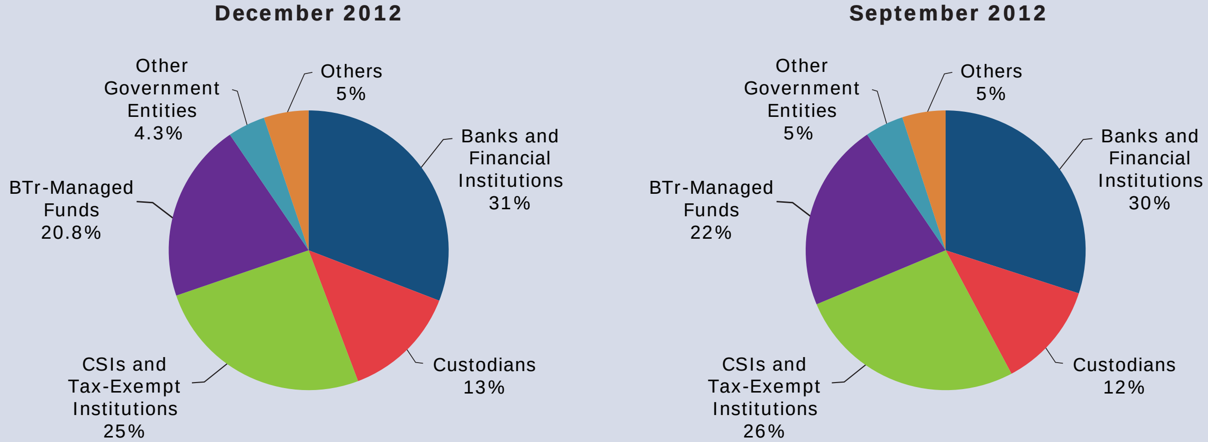
Note: PDEx reports one side of the trade only.
Source: Philippine Dealing and Exchange Corporation (PDEx).

institutions with 30.9% of the total **(Figure 4)**. This was slightly higher than its share of 30% in 3Q12. Contractual savings institutions—including the Social Security System (SSS), the Government Service Insurance System (GSIS), Pag-ibig, and life insurance companies—and tax-exempt institutions—such as trusts and other tax-exempt entities—accounted for 25.4% in 3Q12, down from 26.4% in 3Q12. Meanwhile, the share of funds being managed by the Bureau of the Treasury (BTr), which includes the Bond Sinking Fund, fell to 20.8% at end-December from 21.9% at end-June. The participation of custodians increased to 13.4% from 12.3% in the same period. Other government entities and other investors, which include individuals and private corporations, were almost unchanged between end-September and end-December at around 5.0% and 5.2%, respectively.

Rating Changes

Following Moody's upgrade on 29 October, S&P raised its outlook to positive. The rating agency announced that it may upgrade the Philippines this year and affirmed the country's BB+ rating. It said that the positive outlook was granted based on an improving political environment and the capacity of the government to pursue its reform agenda. S&P said that it may raise its rating if the country improves its revenue structure, reduces its reliance on foreign debt borrowing, and reduces its debt servicing.

Figure 4: LCY Government Bonds Investor Profile



BTr = Bureau of Treasury, CSIs = contractual savings institutions, LCY = local currency.
Note: For the purpose of this investor profile only, LCY government bonds are defined as domestic bonds, which include multi-currency (US$ and EUR) retail treasury bonds totaling almost PHP21 billion as of end-December 2012.
Source: Philippine Bureau of the Treasury.

Policy, Institutional, and Regulatory Developments

BSP Adopts Disclosure Rules for Capital Instruments

On 1 February, BSP added disclosure requirements, which are Basel III compliant, for debt instruments issued by banks. BSP has added a client suitability measure to determine whether the investor understands the risks involved in an investment. A risk disclosure statement must also be included that outlines the risks as well as the processes that would follow once thresholds are breached.

AMLA Amendments Approved

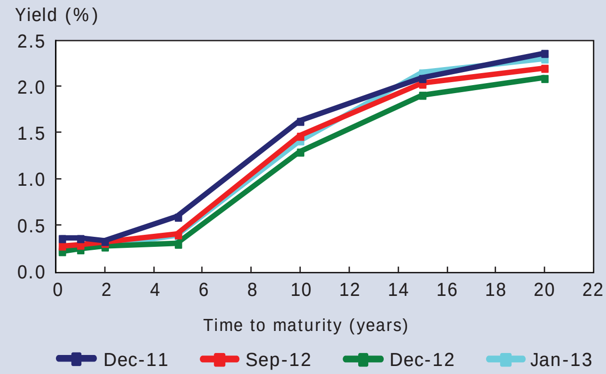
On 7 February, Congress ratified amendments to the Anti-Money Laundering Act (AMLA). The amendments include expanding the list of covered institutions required to report transactions in excess of PHP500,000 and the list of unlawful activities covered by the AMLA. The covered institutions were expanded to include companies such as forex dealers, pawnshops, remittance agents, and pre-need firms. Unlawful activities include terrorism, financing of terrorism, fraud, and bribery.

Singapore

Yield Movements

Between end-September and end-December, local currency (LCY) government bond yields in Singapore fell across all maturities, resulting in the entire curve shifting downward **(Figure 1)**. However, between end-December and end-January, yields rose across all maturities, leading the curve to steepen as yields rose more at the longer-end of the curve than at the shorter-end. Yields rose the most for the 15-year tenor, gaining 24 basis points (bps). Yields at the longest-end of the curve (20-year) rose 21 bps, while yields at the shortest-end (3-month) increased 2 bps. The yield spread between the 2- and 10-year tenors widened to 113 bps at end-January compared with a spread of 102 bps at end-December.

Figure 1: Singapore's Benchmark Yield Curve–LCY Government Bonds



LCY = local currency.
Source: Bloomberg LP.

In October 2012, the Monetary Authority of Singapore (MAS) decided to maintain the modest and gradual appreciation of the Singapore dollar nominal effective exchange rate (S$NEER) policy band. MAS also decided to keep the slope and width of the S$NEER policy band unchanged. According to MAS' assessment, the existing policy stance was appropriate for containing inflationary pressures and keeping the economy on a path toward sustainable growth.

Consumer price inflation in Singapore climbed to 4.3% year-on-year (y-o-y) in December from 3.6% in November (and 4.0% in October). This was due mainly to higher accommodations and transportation costs. Price indices for all major groups rose during the month except for communications. On a month-on-month (m-o-m) basis, consumer price inflation rose 0.7% in December. The inflation rate for full-year 2012 was recorded at 4.6%.

Based on advance estimates released by the Ministry of Trade and Industry (MTI), Singapore's economy expanded 1.1% y-o-y in 4Q12, after posting flat growth in 3Q12. In 4Q12, growth in the construction sector eased to 5.9% y-o-y from 7.7% in 3Q12, while the services sector expanded at an accelerated pace of 1.5% y-o-y compared with 0.2% in the previous quarter. The manufacturing sector contracted 1.5% y-o-y in 4Q12 after slipping 1.6% in 3Q12.

On a quarter-on-quarter (q-o-q) and seasonally adjusted annualized basis, Singapore's economy rebounded to expand 1.8% in 4Q12 after contracting 6.3% in the previous quarter. The manufacturing sector contracted 10.8% q-o-q reflecting continued weakness in electronics output. The construction sector fell 8.9% q-o-q as private sector building activities declined. Output in services rose 7.0% in 4Q12 due to a rebound in wholesale and retail trade, the finance and insurance sectors, and other service industries.

For the full-year 2012, gross domestic product (GDP) growth was 1.2%, falling short of MTI's forecast of growth of about 1.5%, as weakness in the manufacturing sector continued to weigh on the economy.

Size and Composition

The size of Singapore's LCY bond market stood at SGD295 billion (US$241 billion) at end-December on modest growth of 1.4% q-o-q **(Table 1)**. On a y-o-y basis, the bond market grew 19.4%, with growth driven by both the government and corporate sectors of the bond market.

Table 1. Size and Composition of the LCY Bond Market in Singapore

	Outstanding Amount (billion)								Growth Rate (%)						
	Sep-12		Oct-12		Nov-12		Dec-12		Sep-12		Oct-12	Nov-12	Dec-12		
	SGD	US$	SGD	US$	SGD	US$	SGD	US$	q-o-q	y-o-y	m-o-m	m-o-m	m-o-m	q-o-q	y-o-y
Total	291	237	290	238	293	240	295	241	6.5	18.1	(0.3)	1.2	0.5	1.4	19.4
Government	171	139	169	138	171	140	173	142	4.7	12.1	(1.2)	1.5	0.9	1.2	12.6
Central Govt. Bonds and Bills	144	117	141	116	143	117	143	117	0.8	6.2	(1.9)	1.0	0.0	(0.9)	3.0
Central Bank Bills	27	22	28	23	29	24	30	25	31.9	60.1	2.2	4.4	5.6	12.6	102.0
Corporate	120	98	121	99	122	100	122	100	9.1	27.8	1.0	0.7	(0.01)	1.7	30.6

( ) = negative, LCY = local currency, m-o-m = month-on-month, q-o-q = quarter-on-quarter, 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. Government bonds and bills do not include the special issue of Singapore Government Securities held by the Singapore Central Provident Fund (CPF).
3. Bloomberg LP end-of-period LCY–US$ rate is used.
4. Growth rates are calculated from LCY base and do not include currency effects.
Source: Monetary Authority of Singapore, Singapore Government Securities, and Bloomberg LP.

Government Bonds. LCY government bonds outstanding at end-December rose to SGD173 billion for a 1.2% q-o-q increase. On a y-o-y basis, government bonds grew 12.6% in 4Q12. Growth in the government bond market was largely driven by an increase in MAS bills, which have been issued since April 2011 as part of MAS' money market operations. In 4Q12, the stock of MAS bills rose 12.6% q-o-q and 102.0% y-o-y. Issuance of MAS bills was also up 5.4% q-o-q and 16.2% y-o-y in 4Q12.

The stock of Singapore Government Securities (SGSs), comprising treasury bills and bonds, fell 0.9% q-o-q. On a y-o-y basis, however, treasury instruments rose modestly by 3.0%. Issuance of SGS bills fell significantly in 4Q12, declining 13.7% q-o-q and 20.7% y-o-y. Meanwhile, issuance of SGS bonds fell a notable 64.3% q-o-q, but rose 11.1% y-o-y.

Corporate Bonds. Singapore's LCY corporate bonds outstanding stood at SGD122 billion at end-December, expanding 1.7% q-o-q and 30.6% y-o-y.

Also at end-December, the amount of LCY bonds outstanding of the top 30 corporate bond issuers in Singapore reached SGD62.3 billion, representing 51.1% of the total corporate bond market **(Table 2)**. The top LCY corporate issuer was the Housing and Development Board with outstanding bonds valued at SGD12.2 billion. It was followed by CapitaLand Ltd. with a total bond stock amounting to SGD4.9 billion. In the third spot was United Overseas Bank Ltd. with bonds outstanding of SGD4.5 billion.

Corporate issuers from the financial sector dominated the list of the top 30 LCY corporate bond issuers in Singapore. Other major bond issuers were from the utilities, industrial, commercial, real estate, telecommunications, and transportation sectors. Only four companies on the list were state-owned firms.

In 4Q12, corporate bond issuance reached SGD2.4 billion, a notable decline of 76.1% q-o-q

Table 2: Top 30 Issuers of LCY Corporate Bonds in Singapore

Issuers	Outstanding Amount		State-Owned	Privately Owned	Listed Company	Type of Industry
	LCY Bonds (SGD billion)	LCY Bonds (US$ billion)				
1. Housing and Development Board	12.2	10.0	Yes	No	No	Financial
2. CapitaLand Ltd.	4.9	4.0	No	Yes	Yes	Financial
3. United Overseas Bank Ltd.	4.5	3.7	No	Yes	Yes	Financial
4. DBS Bank Ltd.	5.0	4.1	No	Yes	Yes	Financial
5. Temasek Financial I	3.6	2.9	No	Yes	No	Financial
6. Oversea-Chinese Banking Corp.	2.7	2.2	No	Yes	Yes	Financial
7. SP PowerAssets Ltd.	2.4	2.0	No	Yes	No	Utilities
8. Public Utilities Board	2.1	1.7	Yes	No	No	Utilities
9. Land Transport Authority	2.1	1.7	Yes	No	No	Industrial
10. Olam International Ltd.	2.0	1.6	No	Yes	Yes	Consumer
11. Keppel Corp Ltd.	1.5	1.2	No	Yes	Yes	Industrial
12. Keppel Land Ltd.	1.5	1.2	No	Yes	Yes	Real Estate
13. GLL IHT Pte Ltd.	1.4	1.2	No	Yes	No	Real Estate
14. Mapletree Treasury Services	1.3	1.1	No	Yes	No	Financial
15. Overseas Union Enterprise Ltd.	1.3	1.1	No	Yes	Yes	Consumer
16. Temasek Financial III	1.3	1.1	No	Yes	No	Financial
17. Neptune Orient Lines Ltd.	1.3	1.0	No	Yes	Yes	Industrial
18. CapitaMalls Asia Treasury	1.1	0.9	No	Yes	No	Financial
19. City Developments Ltd.	1.1	0.9	No	Yes	Yes	Consumer
20. PSA Corporation Ltd.	1.0	0.8	No	Yes	No	Consumer
21. F&N Treasury Pte Ltd.	1.0	0.8	No	Yes	No	Financial
22. Hyflux Ltd.	1.0	0.8	No	Yes	Yes	Industrial
23. Singapore Post Limited	0.9	0.7	Yes	No	No	Industrial
24. Singtel Group Treasury	0.9	0.7	No	Yes	No	Telecommunications
25. Singapore Airlines	0.8	0.7	No	Yes	No	Transportation
26. Global Logistic Properties	0.8	0.6	No	Yes	Yes	Industrial
27. CapitaMall Trust	0.7	0.6	No	Yes	Yes	Financial
28. CapitaLand Treasury Ltd.	0.7	0.6	No	Yes	No	Financial
29. Joynote Limited	0.7	0.6	No	Yes	No	Financial
30. Sembcorp Financial Services	0.7	0.6	No	Yes	No	Industrial
Total Top 30 LCY Corporate Issuers	**62.3**	**51.0**				
Total LCY Corporate Bonds	**122.0**	**99.9**				
Top 30 as % of Total LCY Corporate Bonds	**51.1%**	**51.1%**				

LCY = local currency.
Notes:
1. Data as of 31 December 2012.
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 data.

and 33.3% y-o-y. A total of 11 bond series were issued by 10 companies during the quarter. Corporate bonds issued in 4Q12 carried maturities ranging from 3 years to 12 years, and coupon rates of between 4.0% and 6.0%. **Table 3** lists notable corporate bonds issued in 4Q12.

Table 3: Notable LCY Corporate Bond Issuance in 4Q12

Corporate Issuers	Issued Amount (SGD million)
Housing and Development Board	600
Olam International Ltd.	500
SMRT Capital Pte Ltd.	450
Neptune Orient Lines Ltd.	300
Overseas Union Enterprise Ltd.	200
Keppel Land Ltd.	130
Others	230
Total	**2,410**

LCY = local currency.
Source: Bloomberg LP.

Policy, Institutional, and Regulatory Developments

PBOC Appoints Clearing Bank for Renminbi in Singapore

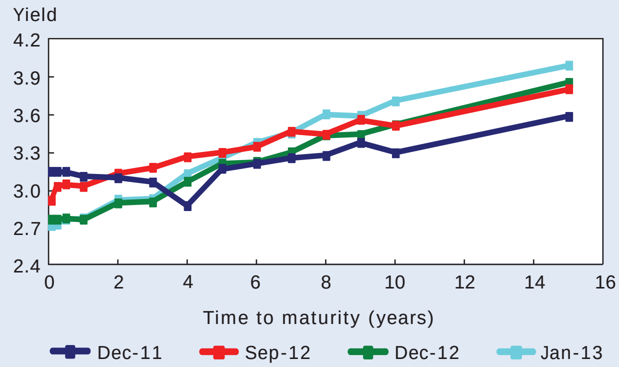
On 8 February, the People's Bank of China (PBOC) appointed the Industrial and Commercial Bank of China's (ICBC) Singapore branch as the clearing bank for renminbi in Singapore. MAS will work closely with the PBOC and ICBC in implementing clearing arrangements in Singapore. The appointment of a renminbi clearing bank in Singapore marks a milestone in financial cooperation between the PBOC and MAS, and will enable Singapore to facilitate greater use of the renminbi for trade, investment, and other economic activities in the region.

Thailand

Yield Movements

Thailand's government bond yields fell for most tenors between end-September and end-December **(Figure 1)**. The drop in yields was especially evident for tenors of less than 9 years, with yields declining most sharply—by 28 basis points (bps)—on the 3-year tenor. In contrast, yields for the 10- and 15-year tenors rose 0.4 bps and 5 bps, respectively, between end-September and end-December. Between end-December and end-January, yields rose for most tenors. Meanwhile, yield spreads between the 2- and 10-year tenors widened 24 bps between end-September and end-December, and climbed an additional 16 bps between end-December and end-January.

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



LCY = local currency.
Source: Bloomberg LP.

On 20 February, the Bank of Thailand's (BOT) Monetary Policy Committee decided to keep the policy rate—the 1-day repurchase rate—steady at 2.75% for the third consecutive committee meeting. The last time the central bank made a policy rate cut was in October.

Consumer price inflation in Thailand moderated to 3.4% year-on-year (y-o-y) in January from 3.6% in December. Food prices rose 4.3% y-o-y in January, compared with a 4.0% hike in December. On the other hand, non-food prices climbed 2.8% y-o-y in January, following a 3.4% increase in December.

Real gross domestic product (GDP) growth accelerated to 18.9% y-o-y in 4Q12 from 3.1% in 3Q12. Total exports of goods and services rose 19.0% y-o-y for the quarter, a reversal from the 2.8% contraction in the previous quarter. Imports of goods and services also rose 14.7% y-o-y in 4Q12 after posting a 1.8% decline in 3Q12. Similarly, between 3Q12 and 4Q12, the y-o-y growth rate rose from 6.0% to 12.2% for private consumption expenditure, from 10.0% to 12.1% for general government consumption expenditure, and from 15.5% to 23.5% for gross fixed capital formation. On the supply side, y-o-y growth in the non-agricultural sector accelerated to 21.3% in 4Q12 from 2.7% in 3Q12, as the manufacturing sector expanded 37.4% y-o-y in 4Q12 after a 1.1% decline in 3Q12. Meanwhile, the agricultural sector's growth eased to 0.8% y-o-y in 4Q12 from 8.3% in 3Q12.

Size and Composition

The outstanding amount of local currency (LCY) bonds in Thailand stood at THB8.5 trillion (US$279 billion) at end-December, growing 19.8% y-o-y and 4.2% quarter-on-quarter (q-o-q) **(Table 1)**. Total government bonds rose 17.7% y-o-y and 3.6% q-o-q to level off at THB6.8 trillion. The outstanding size of central bank bonds increased 18.1% y-o-y and 6.4% q-o-q to reach THB3.1 trillion, while outstanding government bonds expanded 15.1% y-o-y and 1.2% q-o-q to level off at THB3.0 trillion. The size of outstanding state-owned enterprise and other bonds climbed 29.8% y-o-y and 1.5% q-o-q to reach THB616 billion.

The outstanding amount of LCY corporate bonds increased 28.8% y-o-y and 6.7% q-o-q to

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

	Outstanding Amount (billion)								Growth Rate (%)						
	Sep-12		Oct-12		Nov-12		Dec-12		Sep-12		Oct-12	Nov-12	Dec-12		
	THB	US$	THB	US$	THB	US$	THB	US$	q-o-q	y-o-y	m-o-m	m-o-m	m-o-m	q-o-q	y-o-y
Total	8,176	265	8,175	266	8,362	272	8,520	279	1.9	14.4	(0.01)	2.3	1.9	4.2	19.8
Government	6,527	212	6,500	212	6,642	216	6,760	221	1.3	12.1	(0.4)	2.2	1.8	3.6	17.7
Government Bonds and Treasury Bills	2,987	97	2,895	94	2,949	96	3,024	99	(0.4)	6.3	(3.1)	1.9	2.5	1.2	15.1
Central Bank Bonds	2,933	95	2,988	97	3,076	100	3,120	102	(1.0)	15.7	1.9	3.0	1.4	6.4	18.1
State-Owned Enterprise and Other Bonds	607	20	618	20	617	20	616	20	26.0	26.7	1.8	(0.01)	(0.3)	1.5	29.8
Corporate	1,649	54	1,675	55	1,719	56	1,760	58	4.2	24.4	1.6	2.6	2.4	6.7	28.8

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

Notes:

1. Calculated using data from national sources.
2. Bloomberg end-of-period LCY–US$ rates are used.
3. Growth rates are calculated from LCY base and do not include currency effects.

Source: Bank of Thailand (BOT) and Bloomberg LP.

reach THB1.8 trillion at end-December. The top 30 corporate bond issuers had combined bonds outstanding of THB1.1 trillion, which accounted for 65.1% of total corporate bonds outstanding **(Table 2)**. PTT and Siam Cement remained the two largest corporate issuers in terms of total LCY bonds outstanding.

The three largest corporate bond issues in 4Q12 included Siam Cement's THB25 billion 4-year bond carrying a coupon rate of 4.15%, Bangkok Bank's THB20 billion 10-year subordinated bond with a 4.375% coupon, and Bank of Ayudhya's THB14.8 billion 10-year subordinated bond offering a 4.7% coupon. True Corporation issued a corporate bond with a relatively high coupon rate: a 4-year bond worth THB6 billion set at 6.0%. The corporate bond issue in 4Q12 with the longest tenor was MBK's 15-year bond worth THB1.5 billion.

Investor Profile

Contractual savings funds remained the largest holders of LCY government bonds in Thailand at end-December, accounting for 28% of the total, followed by insurance companies with a 23% share **(Figure 2)**. Compared with end-2011, the respective shares of the central bank, contractual savings funds, insurance companies, non-financial market mutual funds, and nonresident investors all increased, while shares fell for most other types of bond investors. The share of nonresidents or foreign investors recorded the biggest increase, rising 5 percentage points between end-2011 and end-December to reach 16%.

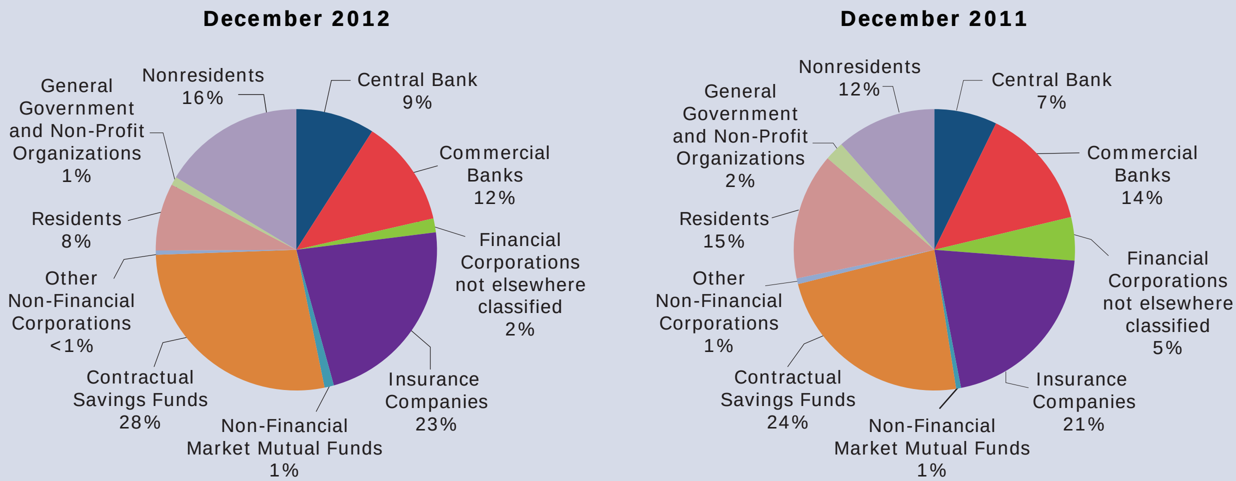
Retail investors remained the largest investor group in LCY corporate bonds, holding 51% of the total at end-June 2012 **(Figure 3)**. They were followed by other investors—such as the government, cooperatives, and foundations—with a combined 15% share, then mutual funds (9%), insurance companies (8%), contractual savings funds (7%), non-financial corporations (5%), commercial banks (4%), and other financial institutions (1%). Compared with end-June 2011, the share

Table 2: Top 30 Issuers of LCY Corporate Bonds in Thailand

Issuers	Outstanding Amount		State-Owned	Privately Owned	Listed Company	Type of Industry
	LCY Bonds (THB billion)	LCY Bonds (US$ billion)				
1. PTT	187.0	6.1	Yes	No	Yes	Energy
2. Siam Cement	126.5	4.1	Yes	No	Yes	Diversified
3. Krung Thai Bank	75.7	2.5	Yes	No	Yes	Financial
4. Siam Commercial Bank	60.0	2.0	No	Yes	Yes	Financial
5. Charoen Pokphand Foods	58.5	1.9	No	Yes	Yes	Consumer
6. Bank of Ayudhya	52.7	1.7	No	Yes	Yes	Financial
7. Kasikorn Bank	47.1	1.5	No	Yes	Yes	Financial
8. Thanachart Bank	42.6	1.4	No	Yes	No	Financial
9. Thai Airways International	34.7	1.1	Yes	No	Yes	Consumer
10. PTT Global Chemical	33.3	1.1	Yes	No	Yes	Basic Materials
11. Ayudhya Capital Auto Lease	32.1	1.0	No	Yes	No	Financial
12. PTT Exploration and Production Company	29.2	1.0	Yes	No	Yes	Energy
13. Thai Oil	27.8	0.9	Yes	No	Yes	Energy
14. TMB Bank	27.7	0.9	No	Yes	Yes	Financial
15. Banpu	25.3	0.8	No	Yes	Yes	Energy
16. Krung Thai Card	23.5	0.8	Yes	No	Yes	Financial
17. DAD SPV	22.5	0.7	Yes	No	No	Financial
18. Mitr Phol Sugar	22.2	0.7	No	Yes	No	Consumer
19. True Corporation	22.1	0.7	No	Yes	Yes	Communications
20. Indorama Ventures	21.7	0.7	No	Yes	Yes	Basic Materials
21. Toyota Leasing Thailand	20.9	0.7	No	Yes	No	Consumer
22. Bangkok Bank	20.0	0.7	No	Yes	Yes	Financial
23. IRPC	19.6	0.6	Yes	No	Yes	Energy
24. Glow Energy	19.1	0.6	No	Yes	Yes	Utilities
25. Quality Houses	18.3	0.6	No	Yes	Yes	Consumer
26. Minor International	16.4	0.5	No	Yes	Yes	Consumer
27. Bangkok Expressway	16.2	0.5	No	Yes	Yes	Consumer
28. Land & Houses	15.0	0.5	No	Yes	Yes	Consumer
29. Thanachart Capital	15.0	0.5	No	Yes	Yes	Financial
30. Tisco Bank	14.1	0.5	No	Yes	No	Financial
Total Top 30 LCY Corporate Issuers	**1,146.5**	**37.5**				
Total LCY Corporate Bonds	**1,760.5**	**57.6**				
Top 30 as % of Total LCY Corporate Bonds	**65.1%**	**65.1%**				

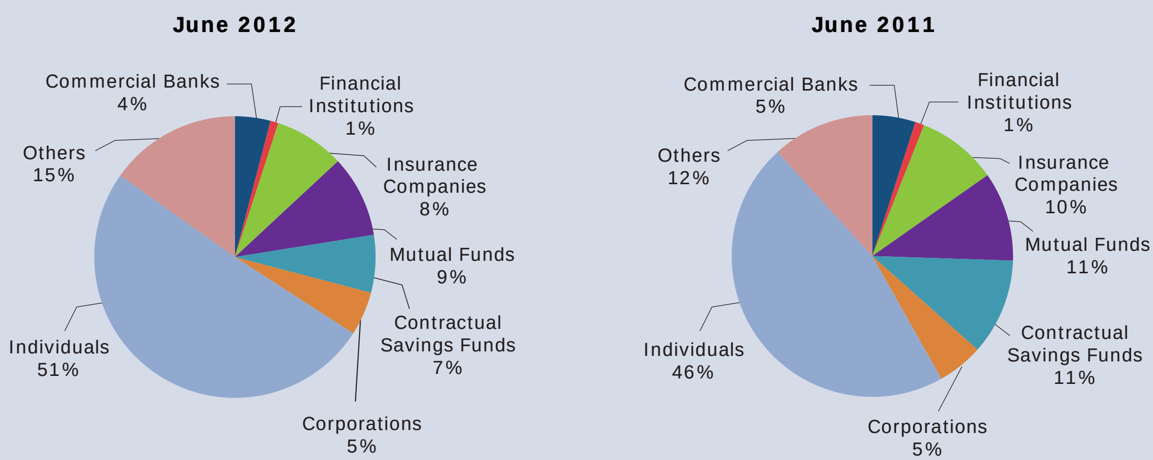
LCY = local currency.
Notes:
1. Data as of 31 December 2012.
2. State-owned firms are defined as those in which the government has more than a 50% ownership stake.
Source: *AsiaBondsOnline* calculations based on Bloomberg data.

Figure 2: LCY Government Bonds Investor Profile



LCY = local currency.
Note: Government bonds exclude central bank bonds and state-owned enterprise bonds.
Source: *AsianBondsOnline* and Bank of Thailand.

Figure 3: LCY Corporate Bonds Investor Profile



LCY = local currency.
Source: ThaiBMA.

of individual retail investors rose 5 percentage points, while the share of the combined group of government, cooperatives, and foundations rose 3 percentage points. In contrast, the respective shares of contractual savings funds, mutual funds, insurance companies, and commercial banks all fell compared with end-June 2011.

Rating Changes

In October, Rating and Investment Information (R&I) upgraded Thailand's foreign currency (FCY) issuer rating to BBB+ from BBB, and its LCY issuer rating to A– from BBB+, while affirming the country's FCY short-term debt rating at a-2.

Policy, Institutional, and Regulatory Developments

MOF Permits Eight Foreign Entities to Issue LCY Bonds in Thailand

The Ministry of Finance (MOF) has permitted eight foreign entities to sell THB-denominated bonds and debentures in Thailand, totaling THB59 billion, between 1 January and 30 September. These entities and their respective authorized bond issuance amounts are as follows: (i) Industrial Bank of Korea (THB10 billion), (ii) ING Bank (THB10 billion), (iii) Korea Eximbank (THB10 billion), (iv) Shinhan Bank (THB10 billion), (v) Woori Bank (THB10 billion), (vi) Rabobank Nederland (THB4 billion), (vii) Noble Group (THB3.5 billion), and (viii) Ministry of Finance of Lao PDR (THB1.5 billion).

BOT Announces Planned Bond Issuance Program for 2013

In December, BOT announced its planned bond issuance program for 2013. BOT noted that in 2013 it would cease issuance of 4-year fixed coupon bonds, as well as 2- and 3-year floating rate bonds. BOT will also raise the issue size per auction of its short-term bonds and slightly lower the issue size of its medium-term bonds. The central bank stated that these plans were in line with changing market conditions and would further facilitate the development of Thailand's bond market.

BOT Provides Notification on Basel III's Capital Adequacy Framework

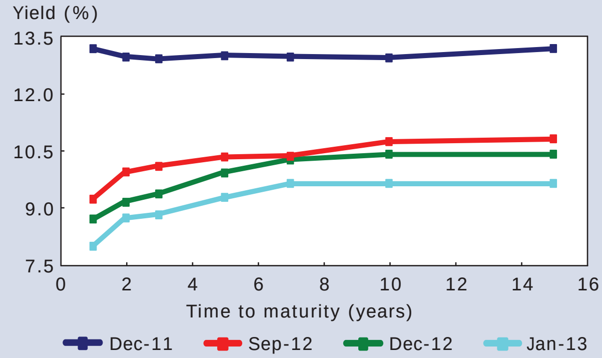
In December, BOT provided notification on Basel III's capital adequacy framework. The central bank informed Thai banks of the requirement to maintain a minimum common equity ratio of 4.5%, a Tier 1 ratio of 6.0%, and a total capital ratio of 8.5%. The notification also stipulates that branches of foreign banks are required to maintain a total capital ratio of 8.5%.

Viet Nam

Yield Movements

Government bond yields in Viet Nam shifted downward across most of the yield curve in 4Q12, while steepening from the shorter-end to the belly of the curve. Between end-September and end-December, yields fell between 9 basis points (bps) and 73 bps across all tenors **(Figure 1)**. Between end-December and end-January, yields further shifted downward across all tenors between 38 bps–70 bps. At the shorter-end, yields on 1-year government bonds fell 65 bps to 8.0%. At the longer-end, yields on 10- and 15-year government bonds both fell 70 bps to settle at the same level of 9.5%. As a result, the spread between 2- and 10-year government bonds widened to 82 bps at end-January from 115 bps at end-December.

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



LCY = local currency.
Source: Bloomberg LP.

Viet Nam's gross domestic product (GDP) expanded 5.0% year-on-year (y-o-y) in 2012, easing slightly from 5.9% in 2011 to post the slowest annual growth rate since 1999. In 4Q12, GDP expanded 5.4% y-o-y, up from a revised growth rate of 5.1% in 3Q12. Viet Nam's economy was slowed in 2012 by a fall-off in lending as banks faced rising levels of bad debt throughout the year. To encourage more rapid credit growth, the State Bank of Viet Nam (SBV) cut key interest rates six times in 2012 by a total of 600 bps.

Consumer price inflation for the full-year 2012 was 9.2%, just below the SBV's target rate of 10.0%, driven mostly by price hikes in housing and construction materials, medical services, and education. In January, consumer price inflation slightly accelerated to 7.1% y-o-y after rising 6.8% in December.

Viet Nam's industrial production index (IPI) rose 4.8% in 2012, down from the 6.8% annual growth rate posted in 2011. Mining and quarrying rose 3.5%; manufacturing, 4.5%; power and gas, 12.3%; and water supply and waste management, 8.4%. In January, the IPI rose significantly by 21.1% y-o-y but fell 3.2% month-on-month (m-o-m).

Size and Composition

As of end-December, Viet Nam's total local currency (LCY) bonds outstanding stood at VND521.9 trillion (US$25.0 billion), an increase of 42.7% y-o-y that was driven mainly by growth of 71.5% in treasury bills and bonds, and the resumption of SBV bill issuance in March 2012. However, the significant growth in the government bond sector was partially offset by a 47.6% y-o-y contraction in corporate bonds outstanding, continuing a steady decline in place since March 2011 **(Table 1)**.

Total LCY government bonds outstanding rose 54.6% y-o-y to VND499.6 trillion at end-December. Treasury bills and bonds outstanding reached VND255.0 trillion and SBV bills stood at VND58.6 trillion after the SBV resumed issuance in March 2012. Meanwhile, state-owned enterprise (SOE) bonds grew 6.6% y-o-y to VND186.0 trillion at end-December, reversing a contraction of 3.3% y-o-y at end-September. In contrast, total LCY corporate bonds outstanding contracted 47.6% y-o-y and 33.2% q-o-q to VND22.4 trillion.

In 4Q12, issuance of treasury bills and bonds and SBV bills remained active. Total new issuance of treasury bills and bonds and SBV bills amounted to VND35.6 trillion and VND58.6 trillion, respectively. Meanwhile, new issuance of SOE bonds, primarily by the Viet Nam Development Bank, amounted to VND17.6 trillion. Given the continuing tough market conditions in 2012, Vietnamese investors' risk appetite for corporate bonds remained low. Viet Nam's LCY corporate bond market was mostly inactive in 2012, with only one new issue—a VND150 billion bond issued by Lam Son Sugar, a manufacturer and trader of sugar, malt, alcoholic and non-alcoholic drinks, and other sugar-based products and animal feeds.

At the end of 2012, real estate company HAGL ranked as the largest corporate issuer with outstanding bonds of VND4.1 trillion **(Table 2)**. It marked the first time a non-bank corporate was the largest issuer of corporate bonds, reversing a history of financial institutions dominating Viet Nam's corporate bond market. Of the top 15 LCY corporate issuers at end-December, five were real estate developers and only three were financial institutions. Total LCY bonds outstanding among the 15 largest issuers comprised 94.7% of all LCY corporate bonds outstanding.

Policy, Institutional, and Regulatory Developments

SBV Cut Key Rates in December for the Sixth Time in 2012

On 24 December, the SBV cut key interest rates for the sixth time in 2012 in a continuation of its policy of monetary easing. The discount rate and the refinancing interest rate were each cut by an additional 100 bps to 7.0% and 9.0%, respectively.

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

	Outstanding Amount (billion)								**Growth Rate** (%)						
	Sep-12		**Oct-12**		**Nov-12**		**Dec-12**		**Sep-12**		**Oct-12**	**Nov-12**	**Dec-12**		
	VND	US$	VND	US$	VND	US$	VND	US$	q-o-q	y-o-y	m-o-m	m-o-m	m-o-m	q-o-q	y-o-y
Total	443,731	21	450,680	22	492,341	24	521,923	25	(2.7)	21.4	1.57	9.2	6.0	17.6	42.7
Government	410,237	20	425,581	20	468,342	22	499,560	24	(1.7)	27.0	3.74	10.0	6.7	21.8	54.6
Treasury Bonds	218,743	10	231,058	11	243,856	12	255,011	12	18.0	48.0	5.6	5.5	4.6	16.6	71.5
Central Bank Bonds	22,070	1	22,914	1	49,298	2	58,560	3	–	–	3.8	115.1	18.8	165.3	–
State-Owned Enterprise Bonds	169,424	8	171,609	8	175,188	8	185,989	9	(2.7)	(3.3)	1.3	2.1	6.2	9.8	6.6
Corporate	33,494	2	25,099	1	23,999	1	22,362	1	(12.7)	(21.4)	(25.1)	(4.4)	(6.8)	(33.2)	(47.6)

– = not applicable, ( ) = negative, LCY = local currency, m-o-m = month-on-month, 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. Growth rates are calculated from LCY base and do not include currency effects.

Source: Bloomberg LP.

Table 2: Top 15 Issuers of LCY Corporate Bonds in Viet Nam

Issuers	Outstanding Amount		State-Owned	Privately Owned	Listed Company	Type of Industry
	LCY Bonds (VND billion)	LCY Bonds (US$ billion)				
1. HAGL	4,110	0.20	No	Yes	Yes	Real Estate
2. Asia Commercial Joint Stock Bank	3,000	0.14	No	Yes	Yes	Finance
3. Techcombank	3,000	0.14	No	Yes	No	Finance
4. Vincom	3,000	0.14	No	Yes	Yes	Real Estate
5. Vinpearl	2,500	0.12	No	Yes	Yes	Resorts and Theme Parks
6. Agribank Securities	2,000	0.10	No	Yes	Yes	Finance
7. Minh Phu Seafood	700	0.03	No	Yes	Yes	Fisheries
8. Hoa Phat Group	600	0.03	No	Yes	Yes	Miscellaneous Manufacturing
9. Kinh Bac City Development	500	0.02	No	Yes	Yes	Real Estate
10. Development Investment	350	0.02	No	Yes	No	Building and Construction
11. Phu Hoang Anh	350	0.02	No	Yes	No	Real Estate
12. Binh Chanh Construction	300	0.01	No	Yes	Yes	Building and Construction
13. Saigon Telecommunication	300	0.01	No	Yes	Yes	Technology
14. Dabaco Corporation	254	0.01	No	Yes	Yes	Diversified Operations
15. Thu Duc Housing Development	209	0.01	No	Yes	Yes	Real Estate
Total Top 15 LCY Corporate Issuers	**21,173**	**1.02**				
Total LCY Corporate Bonds	**22,362**	**1.07**				
Top 15 as % of Total LCY Corporate Bonds	**94.7%**	**94.7%**				

LCY = local currency.
Notes:
1. Data as of 31 December 2012.
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 data.

Asia Bond Monitor
March 2013

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 plus the People's Republic of China; Hong Kong, China; and the Republic of Korea.

It was prepared by the Asian Development Bank's Office of Regional Economic Integration (OREI), under the purview of Chief Economist Changyong Rhee, and supervision of OREI Senior Director Ramesh Subramaniam. The production of the Asia Bond Monitor was led by Thiam Hee Ng and John Stuermer with support from the *AsianBondsOnline* team.

About the Asian Development Bank

ADB's vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to two-thirds of the world's poor: 1.7 billion people who live on less than $2 a day, with 828 million struggling on less than $1.25 a day. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

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