# *AsianBondsOnline* Annual Bond Market Liquidity Survey

## Introduction

*AsianBondsOnline* conducts an annual bond market liquidity survey to provide an overview of the state of liquidity in emerging East Asian local currency (LCY) bond markets.[6] The survey aims to provide market participants and policy makers with an updated and comprehensive view of liquidity conditions in individual markets in emerging East Asia. Participants in the survey included fixed-income dealers and brokers, portfolio managers, bond market analysts and strategists, and bond pricing agencies. The 2014 survey was undertaken through interviews and email questionnaires conducted in July–September.

The survey consisted of two sections. One section covered quantitative issues wherein market participants were asked to provide information on bid–ask spreads and transaction sizes. The second part focused on qualitative issues wherein participants were asked to rank a number of market structural issues and how development of these factors can help contribute to deepening liquidity in LCY bond markets.

Most LCY bond market participants in emerging East Asia noted an improvement in liquidity conditions this year compared with 2013. Most markets have already priced in the end of the United States (US) Federal Reserve's quantitative easing measures as economic indicators in the US point to a more stable recovery. The only question left relates to the timing of when interest rates will begin to rise; markets anticipate a rate hike in June 2015. Bond markets in emerging East Asia have also been resilient despite the slowdown in the eurozone and political concerns regarding sanctions against the Russian Federation.

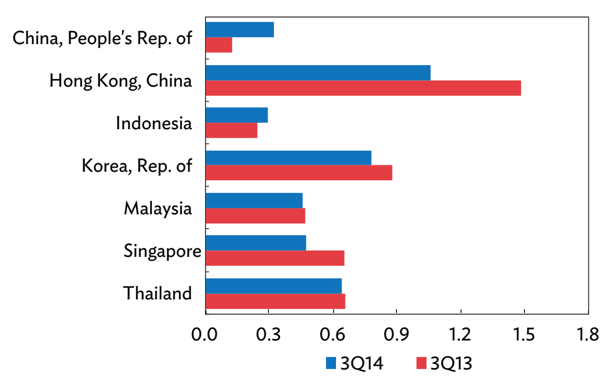
However, despite overall improvements, liquidity in corporate bond markets has lagged that of government bond markets. One reason for this relates to fungibility. The liquidity advantage of a government bond market is that it essentially comprises a single issuer. Thus, there is no issue of credit risk. In contrast, for corporate bonds, due diligence must be undertaken for each issuer. Bond liquidity, however, can also be limited if there are different bonds with different maturities. In government bond markets such as Indonesia and the Philippines, steps have been taken to improve government bond market liquidity, including debt swaps permitting larger issuance sizes of a single bond. In Singapore, the liquidity of government bonds is improved through re-openings of existing securities during government bond auctions.

## Government Bond Survey Results

There are various indicators used in gauging liquidity in bond markets, including trading volume, turnover ratio, bid–ask spread, and transaction size.

Trading volume refers to the amount of bonds traded in the secondary market. However, in cases where the size of outstanding bonds is expanding rapidly, the turnover ratio provides a better measure of trading activity and market liquidity. *AsianBondsOnline* computes the turnover ratio by dividing the trading volume for a particular quarter by the average outstanding bond size for the previous and current quarters. In 3Q14, turnover ratios for government bonds improved in the People's Republic of China (PRC) and Indonesia, and fell in all other emerging East Asian markets **(Figure 11)**.

**Figure 11: LCY Government Bond Turnover Ratios**




LCY = local currency.
Notes:
1. Turnover ratios are calculated as LCY trading volume (sales amount only) divided by average LCY value of outstanding bonds during each 3-month period.
2. 3Q14 turnover ratios for the Republic of Korea and Thailand, based on *AsianBondsOnline* estimates.

Sources: People's Republic of China (*ChinaBond*); Hong Kong, China (Hong Kong Monetary Authority); Indonesia (Indonesia Stock Exchange); Republic of Korea (EDAILY *Bondweb* and The Bank of Korea); Malaysia (Bank Negara Malaysia); Singapore (Monetary Authority of Singapore and Singapore Government Securities); and Thailand (Bank of Thailand and Thai Bond Market Association).

[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.

On the other hand, the bid–ask spread measures the cost of executing a trade. However, it is only valid for market-accepted transaction sizes and for a limited time only. In this year's survey, the average bid–ask spread for on-the-run government securities stood at 3.9 basis points (bps) **(Table 5)**. This was lower compared with the average of 5.8 bps in the previous year's survey. Bid–ask spreads narrowed in all markets in this year's survey compared with last year, as most market participants noted a much improved outlook. The initial uncertainties relating to the US Federal Reserve's tapering measures eventually dissipated. The only exception to the narrowing trend was in the Republic of Korea where bid–ask spreads remained stable at a very narrow spread.

In this year's survey, the lowest bid–ask spreads for on-the-run government bonds were recorded in the Republic of Korea (0.7 bps), followed by Malaysia (1.7 bps), Thailand (1.9 bps), and Singapore (2.3 bps). The widest bid–ask spreads were noted in Viet Nam (11.7 bps) and Indonesia (6.0 bps). The bid–ask spreads for off-the-run issues also narrowed for all emerging East Asian markets this year except the PRC.

In this year's survey, the average accepted transaction size for on-the-run government bonds reached US$5.0 million for the region as a whole. Average transaction sizes were the lowest in Indonesia and the Philippines at US$1.6 million each, followed by Thailand at US$1.9 million. The PRC had the largest on-the-run government bond transaction size at US$10.0 million. The developed financial markets of the Republic of Korea (US$9.5 million); Hong Kong, China (US$7.2 million); and Singapore (US$5.3 million) were among those with the average highest transaction sizes.

## Characteristics of Individual Government Bond Markets

### People's Republic of China

Overall, bid–ask spreads for the PRC in 2014 were lower than in 2013, showing that liquidity had improved **(Table 6)**. Liquidity in the PRC's bond market improved mostly on bullish sentiments as evidenced in the significant rise in bond prices in the first half of the year amid declining yields due largely to lower gross domestic product (GDP) growth and inflation.

While the PRC has not recently conducted any broad-based stimulus measures, the targeted easing measures taken by the People's Bank of China (PBOC), such as lowering reserve ratios for rural banks, as well as banks

**Table 5: LCY Government Bond Markets Quantitative Indicators**

| | | PRC | HKG | INO | KOR | MAL | PHI | SIN | THA | VIE | Regional |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Typical Bid–Ask Spread "On-the-Run" | Average (bps) | 3.4 | 4.6 | 6.0 | 0.7 | 1.7 | 3.3 | 2.3 | 1.9 | 11.7 | 3.9 |
| | SD | 1.5 | 3.2 | 2.6 | 0.2 | 0.8 | 2.0 | 0.5 | 0.2 | 3.0 | 3.3 |
| | CV | 0.4 | 0.7 | 0.4 | 0.3 | 0.5 | 0.6 | 0.2 | 0.1 | 0.3 | 0.8 |
| Typical Bid–Ask Spread "Off-the-Run" | Average (bps) | 7.6 | 5.6 | 9.6 | 1.1 | 4.3 | 15.5 | 3.5 | 4.0 | 12.7 | 7.1 |
| | SD | 2.2 | 3.1 | 3.2 | 0.6 | 0.8 | 10.4 | 0.7 | 0.7 | 5.0 | 4.7 |
| | CV | 0.3 | 0.5 | 0.3 | 0.5 | 0.2 | 0.7 | 0.2 | 0.2 | 0.4 | 0.7 |
| Accepted LCY Bond Transaction Size "On-the-Run" | Average (US$ million) | 10.0 | 7.2 | 1.6 | 9.5 | 4.6 | 1.6 | 5.3 | 1.9 | 3.3 | 5.0 |
| | SD | 5.5 | 1.6 | 0.7 | 0.0 | 2.6 | 0.5 | 3.4 | 1.2 | 1.0 | 3.3 |
| | CV | 0.6 | 0.2 | 0.4 | 0.0 | 0.6 | 0.3 | 0.6 | 0.6 | 0.3 | 0.7 |
| Accepted LCY Bond Transaction Size "Off-the-Run" | Average (US$ million) | 7.3 | 7.2 | 1.5 | 9.5 | 3.6 | 1.4 | 5.9 | 1.4 | 2.5 | 4.5 |
| | SD | 1.2 | 1.6 | 1.5 | 0.0 | 0.9 | 0.5 | 0.0 | 1.1 | 1.8 | 3.1 |
| | CV | 0.2 | 0.2 | 1.0 | 0.0 | 0.2 | 0.4 | 0.0 | 0.8 | 0.7 | 0.7 |

bps = basis points; CV = coefficient of variation; HKG = Hong Kong, China; INO = Indonesia; KOR = Republic of Korea; LCY = local currency; MAL = Malaysia; PHI = Philippines; PRC = People's Republic of China; SD = standard deviation; SIN = Singapore; THA = Thailand; VIE = Viet Nam.
Note: The bid–ask spreads for Indonesian treasury bonds presented above are expressed in terms of yields or basis points to make them comparable with bid–ask spreads in other Asian markets. Bid–ask spreads for government bonds are most often expressed in terms of "cents" in the Indonesian market. In our 2014 survey, the average treasury bond bid–ask spread was 46 cents.
Source: *AsianBondsOnline* 2014 LCY Bond Market Liquidity Survey.

**Table 6: LCY Government Bond Survey Results—People's Republic of China**

| | Treasury Bills | Treasury Bonds | Policy Bank Bonds |
|---|---|---|---|
| On-the-Run | | | |
| Bid–Ask Spread (bps) | 4.0 | 3.4 | 3.1 |
| Average Trading Size (CNY million) | 67.5 | 61.7 | 61.7 |
| Off-the-Run | | | |
| Bid–Ask Spread (bps) | 9.5 | 7.6 | 8.3 |
| Average Trading Size (CNY million) | 40.0 | 45.0 | 45.0 |

bps = basis points, LCY = local currency.
Source: *AsianBondsOnline* 2014 LCY Bond Market Liquidity Survey.

increased lending to the agricultural sector and small businesses, helped boost sentiment in the bond market.

Survey participants said that policy bank bonds were the most liquid in the government bond market. The survey results also showed that policy bank bonds carried the lowest bid–ask spreads. Bid–ask spreads were unchanged from the prior year for Treasury bills, but fell for Treasury bonds and policy bank bonds. Bid–ask spreads for Treasury bonds fell 0.7 bps on average, while bid–ask spreads for policy bank bonds dropped 1.8 bps.

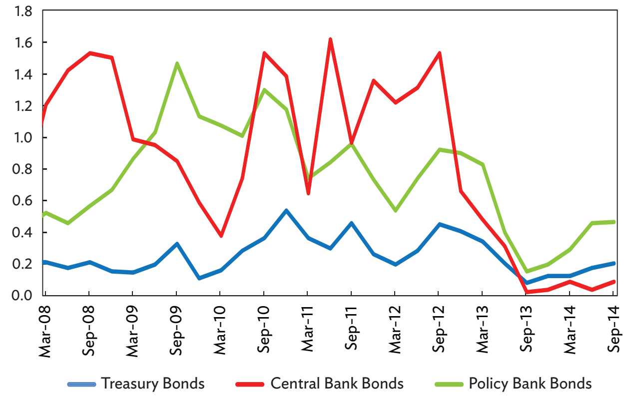
Market participants noted that Treasury bills and Treasury bonds are not as liquid as policy bank bonds due to a lack of consistent issuance owing the PRC's strong fiscal balances. Central bank bills and bonds also have become very illiquid and market participants declined to quote bid–ask spreads for these securities.

The limited trading for PBOC bills and bonds is mostly due to a lack of issuance as the PBOC has ceased issuance of central bank bills and bonds, preferring to use repurchase (repo) and reverse repo agreements to manage the money supply. As a result, the outstanding size of PBOC bills and bonds has steadily declined over the past few quarters.

Average trading sizes declined in 2014 versus 2013. The Treasury bond average trading size fell to CNY61.7 million from CNY72.0 million, and the policy bank bond average trading size fell to CNY61.7 million from CNY74.3 million.

Consistent with the fall in bond yields, trading volumes have been rising **(Figure 12)**. However, trading turnover ratios have not reached prior year levels due to a crackdown on illegal bond trades last year.

**Figure 12: Turnover Ratios for Spot Market in the People's Republic of China**




Source: *ChinaBond*.

Participants also said that the recent re-launch of government bond futures provides a means of hedging risk in the government bond market. However, banks are not allowed to trade these instruments, thereby limiting their usefulness.

## Hong Kong, China

The Hong Kong, China liquidity survey shows that Exchange Fund Bills (EFBs) are the most liquid government bond **(Table 7)**. Bid–ask spreads for Hong Kong, China's EFBs were 2–6 bps lower than spreads for Exchange Fund Notes (EFNs) and Hong Kong Special Administrative Region (HKSAR) bonds. The outstanding amount of EFBs was significantly larger than EFNs or HKSAR bonds outstanding, and secondary trading volumes and average trading sizes of EFBs were also significantly larger than for either EFNs or HKSAR bonds.

Market participants said that overall liquidity levels in Hong Kong, China's government bond market had not significantly changed this year versus last year.

Of the three government bond types, HKSAR bonds had the lowest level of liquidity. One reason is that the Hong Kong Monetary Authority (HKMA) provides a repo facility for banks to raise liquidity but collateral is limited to EFBs and EFNs. In addition, market makers find it easier to generate liquidity for EFBs and EFNs versus HKSAR bonds as they are allowed to short the former two instruments but not the latter.

**Table 7: LCY Government Bond Survey Results—Hong Kong, China**

| | Exchange Fund Bills | Exchange Fund Notes | HKSAR Bonds |
|---|---|---|---|
| On-the-Run | | | |
| Bid–Ask Spread (bps) | 2.4 | 4.6 | 7.9 |
| Average Trading Size (HKD million) | 305.0 | 56.3 | 26.5 |
| Off-the-Run | | | |
| Bid–Ask Spread (bps) | 2.6 | 5.6 | 8.8 |
| Average Trading Size (HKD million) | 362.5 | 56.3 | 13.6 |

bps = basis points, HKSAR = Hong Kong Special Administrative Region, LCY = local currency.
Source: *AsianBondsOnline* 2014 LCY Bond Market Liquidity Survey.

## Indonesia

The liquidity survey results for Indonesia indicated lower bid–ask spreads this year for Treasury bonds, while spreads were broadly unchanged for Treasury bills and *Sertifikat* Bank Indonesia (SBI). The bid–ask spreads for Treasury bills marginally rose in this year's survey, inching up to 20.0 bps from 19.1 bps in 2013, while bid–ask spreads for SBI were unchanged at 23.8 bps **(Table 8)**.

Liquidity for SBI has been weak since a holding period requirement was put in place in 2010. In August 2013, Bank Indonesia decided to reduce the holding period for SBI to 1 month from 6 months, to strengthen liquidity management and enhance efficiency of its monetary operations. Many market participants, however, remained wary of SBI and preferred to trade instruments without any holding period requirement. Banking institutions have become the dominant holder of SBI, accounting for a 98.6% share of the total market as of end-September. Meanwhile, foreign holdings of SBI declined from a high of 33.6% in March 2011 to only about 1.5% as of end-September.

The bid–ask spread for Treasury bonds narrowed to 6.0 bps in this year's survey compared with 8.6 bps a year ago. The improved liquidity conditions reflect in large part better macroeconomic fundamentals in Indonesia. However, political issues somewhat affected liquidity conditions during the run-up to the presidential election and the announcement of its results. Nonetheless, foreign investor participation remained strong and helped buttress the bond market, with the share of foreign holdings hitting record highs in recent months.

Trading volumes in Indonesia's LCY government bond market increased this year compared with last year, buoyed by positive sentiments. In 3Q14, the quarterly turnover ratio improved over the same period last year **(Figure 13)**. However, the turnover ratio slightly declined compared with the previous quarter due to the rapid rise in government bonds outstanding resulting from the need to fund a much wider budget deficit.

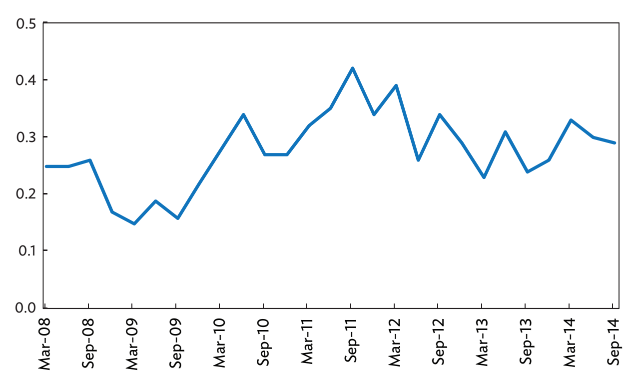
The most liquid government bond instruments were the fixed-rate benchmark bonds. These comprised FR0069, FR0070, FR0071, and FR0068, which were the assigned benchmark series for 5-year, 10-year, 15-year, and 20-year Treasury bonds in 2014. These bonds will be kept as the benchmark series for 2015. (In the past, the Debt Management Office assigned benchmark series on a yearly basis.) Among Treasury bonds, the 10-year

**Table 8: LCY Government Bond Survey Results—Indonesia**

| | Treasury Bills | Treasury Bonds | SBI |
|---|---|---|---|
| On-the-Run | | | |
| Bid–Ask Spread (bps) | 20.0 | 6.0 | 23.8 |
| Average Trading Size (IDR billion) | 33.0 | 19.6 | 10.0 |
| Off-the-Run | | | |
| Bid–Ask Spread (bps) | 35.0 | 9.6 | 35.0 |
| Average Trading Size (IDR billion) | 42.5 | 18.0 | 10.0 |

bps = basis points, LCY = local currency, SBI = *Sertifikat* Bank Indonesia.
Note: The bid–ask spreads for Indonesian Treasury bonds presented above are expressed in terms of yield or basis points to make them comparable with bid–ask spreads in other Asian markets. Bid–ask spreads for government bonds are most often expressed in terms of "cents" in the Indonesian market. In the 2014 survey, the average Treasury bond bid–ask spread was 46 cents. The Indonesian market quotes bid–ask spread for Treasury bills and SBI in terms of yield or basis points.
Source: *AsianBondsOnline* 2014 LCY Bond Market Liquidity Survey.

**Figure 13: Quarterly Government Bond Turnover Ratios in Indonesia**




Source: Indonesia Stock Exchange and *AsianBondsOnline*.

bond (FR0070) was cited as the most liquid as well as retail bond.

*Sukuk* (Islamic bonds) are highly illiquid, with the exception being retail *sukuk*, which are the most liquid among Islamic instruments. While there remains strong demand for *sukuk*, holders of *sukuk* are forced to buy and hold due to the limited supply in the market. However, the government is putting in place plans to help improve the supply of *sukuk* and enhance their liquidity.

Beginning this year, the government announced regular schedules for debt switches. The structure for debt switches has been changed to "many-to-many," which resulted in higher bids compared with previous debt switch offerings when only one destination bond series was offered. This has allowed the holders of bonds to switch more illiquid bonds into any of the four series of benchmark bonds.

Market participants also noted that the mini-master repo agreement between local banks and Bank Indonesia had helped to boost liquidity in the bond market. However, other market participants, such as foreign banks, have not entered into agreements with Bank Indonesia due to some restrictions. Meanwhile, other nonbank market participants, such as brokers and fund managers, are not yet allowed to participate in repo transactions. Most market participants are still looking forward to the finalization of the Global Master Repurchase Agreement.

Some market participants remained bullish with their outlook for Indonesia's bond market, while others noted that liquidity conditions will be tight due to uncertainty over the timing of rising interest rates in the US. In addition, Indonesian financial markets are faced with a challenging environment, partly due to domestic factors as the new government faces pressures to revise the fuel subsidy policy to help manage the current account deficit. However, such a policy change would result in higher inflation and possibly an increase in interest rates. This could trigger an outflow of foreign funds as seen in 2013.

At present, concerns over the need for increased bond issuance have eased as the government has met most of its funding requirements for the year. The benchmark rate is also widely expected to remain steady for the rest of the year as Bank Indonesia maintains a tight rein on its monetary policy. On the other hand, some market participants believed there is still room for a rate hike should the current account deficit widen more than expected.

## Republic of Korea

The 2014 survey results for the Republic of Korea reveal that central bank bonds, known as Monetary Stabilization Bonds (MSBs), and Korea Treasury Bonds (KTBs) remained the most liquid government securities as their on-the-run average bid–ask spreads were both relatively low at 0.6 bps and 0.7 bps, respectively **(Table 9)**. On-the-run KTBs and MSBs continued to have lower average bid–ask spreads than their off-the-run counterparts, while the average trading size for KTBs and MSBs were steady at KRW10 billion each.

**Table 9: LCY Government Bond Survey Results—Republic of Korea**

| | Treasury Bonds | Treasury Bills | Central Bank Bonds | Central Bank Bills |
|---|---|---|---|---|
| On-the-Run | | | | |
| Bid–Ask Spread (bps) | 0.7 | 1.0 | 0.6 | 1.5 |
| Average Trading Size (KRW billion) | 10.0 | – | 10.0 | – |
| Off-the-Run | | | | |
| Bid–Ask Spread (bps) | 1.1 | 1.0 | 0.7 | 1.5 |
| Average Trading Size (KRW billion) | 10.0 | – | 10.0 | – |

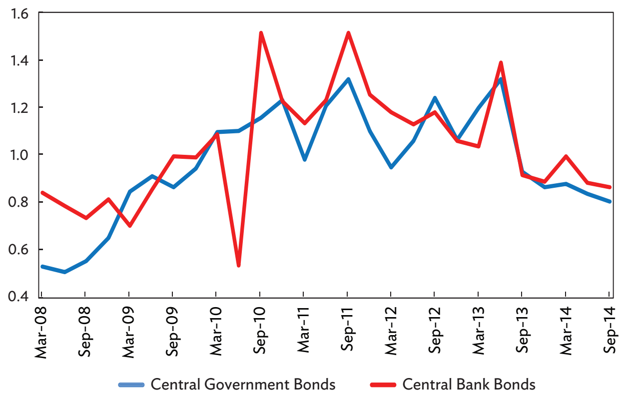
– = data not available, bps = basis points, LCY = local currency.
Source: *AsianBondsOnline* 2014 LCY Bond Market Liquidity Survey.

Some survey respondents felt the Korean LCY bond market would be relatively liquid in the second half of the year amid efforts by the government to boost the country's economic growth, while others were neutral or bearish on the bond market outlook for the remaining months of the year, partly due to low yields.

Meanwhile, 3Q14 turnover ratios in the Republic of Korea for LCY central government bonds—which include KTBs—and LCY central bank bonds stood at 0.81 and 0.86, respectively, both down from 2Q14 levels of 0.84 and 0.88, as the quarterly increases in trading volumes were eclipsed by growth in outstanding stocks on both types of bonds **(Figure 14)**.

The start of 2014 saw regulatory changes and policy developments in the KTB market. The Ministry of

**Figure 14: Quarterly Government Bond Turnover Ratios in the Republic of Korea**




Note: For the Republic of Korea, central government bonds include Treasury bonds and National Housing bonds.
Source: The Bank of Korea.

Strategy and Finance revised its regulations for the primary dealer (PD) management system in January by strengthening the role of PDs in holding KTBs and adding PD trading activity in the off-the-run KTB market as an evaluation criterion. In December 2013, the ministry announced policy measures to promote KTB market development, including maintaining the monthly issuance volume for KTBs at KRW10 trillion and optimizing the proportion of KTB issuance by tenor.

## Malaysia

Liquidity indicators offered a mixed picture of liquidity in Malaysia's LCY government bond market. Malaysia's LCY government debt instruments had tighter average bid–ask spreads compared with 2013. The average bid–ask spreads of short-term debt instruments such as Bank Negara Malaysia bills and Treasury bills narrowed to 3.0 bps each from 3.4 bps and 3.6 bps, respectively **(Table 10)**. Moreover, the bid–ask spreads of Malaysian Government Securities were down as much as 2.0 bps in the case of Government Investment Issues.

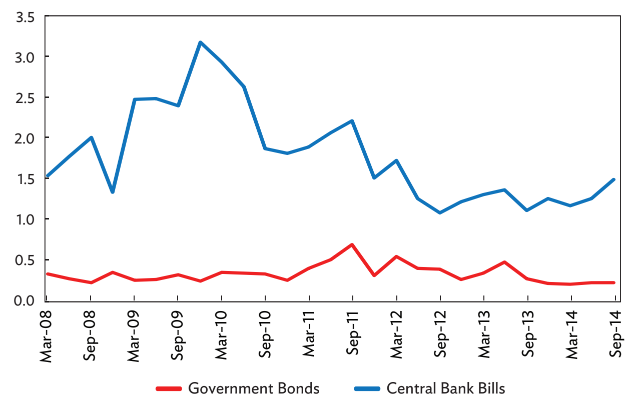
Turnover ratios on the other hand pointed to a slight decline in activity in the secondary market as the growth of government bonds outstanding outpaced growth in trading volumes. Specifically, the government bond turnover ratio declined to 0.26 in 2014 from 0.30 in the previous year **(Figure 15)**.

**Table 10: LCY Government Bond Survey Results—Malaysia**

| | MGSs | GIIs | BNM Bills | Treasury Bills |
|---|---|---|---|---|
| On-the-Run | | | | |
| Bid–Ask Spread (bps) | 1.7 | 2.5 | 3.0 | 3.0 |
| Average Trading Size (MYR million) | 10.0 | 10.0 | 10.0 | 10.0 |
| Off-the-Run | | | | |
| Bid–Ask Spread (bps) | 4.3 | 6.5 | 3.0 | 3.0 |
| Average Trading Size (MYR million) | 10.0 | 10.0 | 10.0 | 10.0 |

BNM = Bank Negara Malaysia, bps = basis points, GIIs = Government Investment Issues, LCY = local currency, MGSs = Malaysian Government Securities.
Source: *AsianBondsOnline* 2014 LCY Bond Market Liquidity Survey.

**Figure 15: Quarterly Government Bond Turnover Ratios in Malaysia**




Source: Bank Negara Malaysia.

Benchmark 10-year Malaysian Government Securities are deemed the most liquid government debt instrument based on either daily trading volumes or volume per transaction. Market participants noted that liquidity in 2014 was comparable with 2013, if not less. One participant added that 3Q14 saw a lull in activity, with trading only starting to pick up again in October. In terms of outlook over the next 6 months, survey respondents expect some volatility as the US enters a rate hike cycle in mid- to late 2015 and inflationary concerns persist.

To facilitate liquidity, participants in the government bond market deemed it necessary to promote an active futures and repo market, which is consistent with the general perception in previous surveys. Other recommendations included the timely availability of relevant data such as the amount of foreign holdings.

## Philippines

The average bid–ask spread for Philippine Treasury bonds remained at par in 2014, though down slightly from the previous year. The liquidity survey in 2013 coincided with speculation over the US Federal Reserve's tapering of its quantitative easing program. This year, market participants continued to be risk averse based on expectations of monetary tightening by the Bangko Sentral ng Pilipinas (BSP) as a result of accelerating inflation. The average bid–ask spread for on-the-run Treasury bonds narrowed slightly to 3.3 bps in 2014 from 5.4 bps in 2013 **(Table 11)**. Similarly, the average bid–ask spread for on-the-run Treasury bills fell to 7.4 bps from 20.9 bps.

**Table 11: LCY Government Bond Survey Results—Philippines**

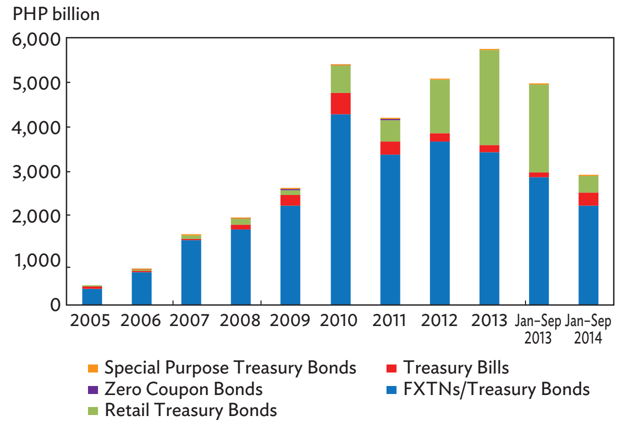
| | Treasury Bonds | Treasury Bills |
|---|---|---|
| On-the-Run | | |
| Bid–Ask Spread (bps) | 3.3 | 7.4 |
| Average Trading Size (PHP million) | 70.8 | 50.0 |
| Off-the-Run | | |
| Bid–Ask Spread (bps) | 15.5 | 13.8 |
| Average Trading Size (PHP million) | 64.3 | 50.0 |

bps = basis points, LCY = local currency.
Source: *AsianBondsOnline* 2014 LCY Bond Market Liquidity Survey.

At each of its two most recent Monetary Board meetings on 31 July and 11 September, the BSP raised key policy rates by 25 bps. Interest rates on term reverse repo, term repo, and the special deposit account facility were also increased by 25 bps each at the 11 September meeting. Inflation has remained elevated in 2014, with a year-to-date average of 4.4% through October, which is at the upper-end of the BSP's 2014 target range of 3.0%–5.0%.

Macroeconomic developments have led to sporadic trading and cautious positioning among market players. Participants in the liquidity survey noted lower trading volumes this year compared to the previous year. This is also evident in the Philippine Dealing and Exchange Corporation (PDEx) data on total trading volume for government securities, which fell 41.0% year-on-year (y-o-y) to PHP2.9 trillion in the first 9 months of the year from PHP4.9 trillion in the same period in 2013 **(Figure 16)**.

**Figure 16: PDEx Trading Volume Trends—Government Securities in the Philippines**




FXTNs = Fixed-Rate Treasury Notes.
Note: PDEx reports one side of the trade only.
Source: Philippine Dealing and Exchange Corporation (PDEx).

The majority of the participants in the survey cited the further development of the repo market as an important tool in improving liquidity in the market. The recently issued circular by the Bureau of the Treasury on non-restricted trading across tax categories is also viewed as a measure that will improve liquidity in the secondary trading of government securities by allowing tax-exempt institutions, such as the two biggest pension funds in the Philippines, to trade in the secondary market. Survey participants estimated additional trading volume of up to PHP800 billion coming from tax-exempt institutions.

## Singapore

This year's bond market liquidity survey for Singapore showed that on-the run bid–ask spreads for Singapore Government Securities (SGS) bonds fell, while bid–ask spreads for Monetary Authority of Singapore (MAS) bills rose **(Table 12)**. The bid–ask spread for SGS bills marginally rose to 3.0 bps this year from 2.9 bps a year ago.

Among government securities in Singapore, SGS bonds are the most liquid. Trading is mostly concentrated in SGS bonds as there is no longer much activity in the SGS bills market. In 3Q14, the turnover ratio for SGS bills declined to 0.11 from 0.36 a year earlier **(Figure 17)**.

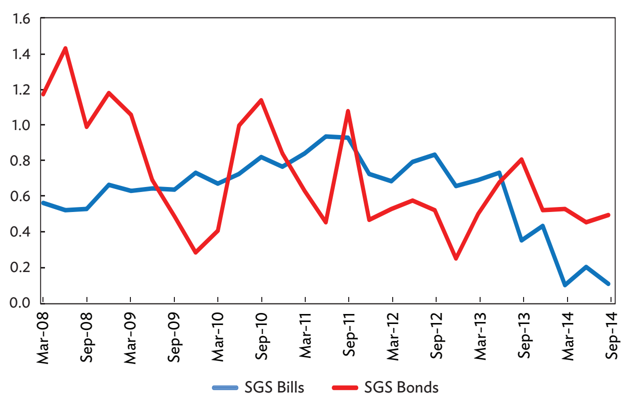
MAS limited issuance of SGS bills and shifted most of its issuance of short-term instruments to MAS bills

**Table 12: LCY Government Bond Survey Results—Singapore**

| | SGS Bonds | SGS Bills | MAS Bills |
|---|---|---|---|
| On-the-Run | | | |
| Bid–Ask Spread (bps) | 2.3 | 3.0 | 3.5 |
| Average Trading Size (SGD million) | 6.8 | 20.0 | 20.0 |
| Off-the-Run | | | |
| Bid–Ask Spread (bps) | 3.5 | 3.0 | 3.0 |
| Average Trading Size (SGD million) | 7.5 | 20.0 | 20.0 |

bps = basis points, LCY = local currency, MAS = Monetary Authority of Singapore, SGS = Singapore Government Securities.
Source: *AsianBondsOnline* 2014 LCY Bond Market Liquidity Survey.

**Figure 17: Quarterly Government Bond Turnover Ratios in Singapore**




Source: Monetary Authority of Singapore (MAS) and Singapore Government Securities (SAS).

beginning this year. Only two auctions of SGS bills had been held so far this year through September. MAS bills, on the other hand, are being issued on a weekly basis. MAS bills do not constitute part of Singapore's government debt, and thus are not covered by the debt ceiling limit for issuing SGS instruments.

Most market participants observed that liquidity conditions in Singapore were fairly stable. They expect its bond market to be relatively less affected than other markets in the region by the end of quantitative easing measures in the US. This is due mainly to the fact that yields movements of Singaporean securities widely track developments in US Treasuries. Market participants also noted that bid–ask spreads in Singapore were relatively narrow compared with other markets in emerging East Asia.

Liquidity is not a concern for investors in Singapore's government bond market. The mandatory quoting of prices from all 13 PDs increases transparency and supports liquidity in the bond market. Market participants also noted growing interest for offshore renminbi-denominated bonds in Singapore. However, it will be a gradual process for Singapore to develop as another hub for offshore renminbi bonds. Hong Kong, China is still seen as the dominant hub for offshore renminbi bonds.

## Thailand

The 2014 survey results for Thailand revealed that short-term government debt securities—those with tenors of less than 1 year—are more liquid than securities with tenors of more than 1 year. This was evident in the lower average bid–ask spreads and higher average trading sizes for Treasury bills and central bank bills than for government bonds and central bank bonds **(Table 13)**. In addition, on-the-run government debt securities continued to have lower bid–ask spreads and larger trading sizes than off-the-run instruments.

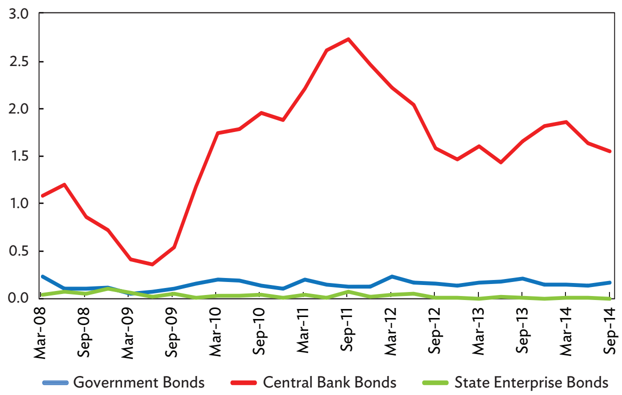
**Table 13: LCY Government Bond Survey Results—Thailand**

| | Government Bonds | Treasury Bills | BOT Bonds | BOT Bills |
|---|---|---|---|---|
| On-the-Run | | | | |
| Bid–Ask Spread (bps) | 1.9 | 1.1 | 1.6 | 1.3 |
| Average Trading Size (THB million) | 62.0 | 152.0 | 132.0 | 152.0 |
| Off-the-Run | | | | |
| Bid–Ask Spread (bps) | 4.0 | 2.0 | 3.0 | 2.4 |
| Average Trading Size (THB million) | 46.0 | 146.0 | 126.0 | 146.0 |

BOT = Bank of Thailand, bps = basis points, LCY = local currency.
Source: *AsianBondsOnline* 2014 LCY Bond Market Liquidity Survey.

Bid–ask spreads are lower and trading volumes are higher in 2014 compared with 2013 for government bonds, Treasury bills, central bank bills, and central bank bonds. However, liquidity in the Thai government bond market has exhibited erratic movements in 2014. For example, the turnover ratio for government bonds stood at 0.64 in 3Q14, down from 2Q14's 0.71 but about the same as in 1Q14. In comparison, the trading value of Thai government debt securities rose from THB4.5 trillion in 1Q14 to THB5.0 trillion in 2Q14, before falling to THB4.4 trillion in 3Q14, according to data from the Thai Bond Market Association (ThaiBMA). By type of government debt instrument, central bank bonds retained the most liquid as exhibited by its relatively high turnover ratio **(Figure 18)**.

**Figure 18: Quarterly Government Bond Turnover Ratios in Thailand**




Source: Bank of Thailand and ThaiBMA.

## Viet Nam

Liquidity in Viet Nam's government bond market improved in 2014 compared with 2013, as evidenced by narrowing bid–ask spreads, which market participants view as the best measure of liquidity. The average bid–ask spread for Treasury bonds and state-owned enterprise bonds dropped to 11.7 bps and 20.0 bps, respectively, from 21.7 bps and 25 bps **(Table 14)**. Meanwhile, the average transaction size of Treasury bonds slightly increased to VND70.0 billion from VND66.7 billion.

Survey respondents attribute the rising bond demand to three main factors: (i) weak credit growth, (ii) low inflation, and (iii) a credit rating upgrade. Lending growth stood at 3.7% at end-July, well below the 2014 target range of 12%–14%, as bad debts continue to weigh on banks' willingness to lend, forcing them to invest in safe assets rather than issuing loans. Moreover, market participants saw record-low interest rates that resulted from controlled inflation as another factor shoring up demand. Consumer price inflation eased to 3.2% y-o-y in October from 3.6% in September—the slowest pace in 5 years. Moody's upgrade of Viet Nam's credit rating to B1 in July spurred strong foreign demand which also contributed to market liquidity.

**Table 14: LCY Government Bond Survey Results—Viet Nam**

| | Treasury Bonds | SOEs |
|---|---|---|
| On-the-Run | | |
| Bid–Ask Spread (bps) | 11.7 | 20.0 |
| Average Trading Size (VND billion) | 70.0 | 298.0 |
| Off-the-Run | | |
| Bid–Ask Spread (bps) | 12.7 | 25.0 |
| Average Trading Size (VND billion) | 53.3 | 125.0 |

bps = basis points, LCY = local currency, SOEs = state-owned enterprise bonds.
Source: *AsianBondsOnline* 2014 LCY Bond Market Liquidity Survey.

Market participants expect liquidity to remain unchanged in the next 6 months, with a slight seasonal dip toward the year end, due to robust demand from banks. While it is possible that banks' lending growth may improve, market participants are convinced that recovery will be slower than expected. Moreover, the foreign exchange rate is critical and could impact the overall outlook.

Finally, new measures in the pipeline are expected to shore up LCY bond market liquidity. These include new products being developed by the Ministry of Finance and the Ha Noi Stock Exchange, including zero coupon bonds, when-issued trading, futures, and bond forwards. Survey respondents are optimistic that the government will unveil its final regulations on the issuance of government bonds, government-guaranteed bonds, and municipal bonds. Among other measures being recommended were the establishment of an independent credit rating agency; the development of a bond index, a "VNIBOR," a standard contract for outright transactions and repo transactions, a yield curve for semi-government bonds, hedging instruments for foreign investors, and a system to show real-time bond transactions.

## Qualitative Indicators for Government Bond Markets

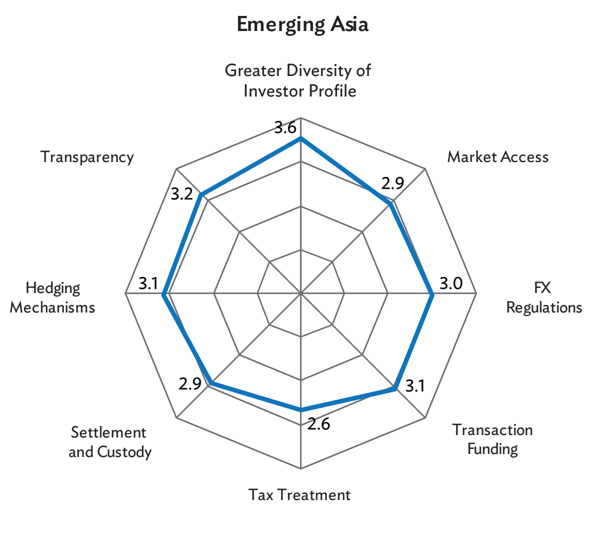
The 2014 *AsianBondsOnline* LCY Bond Market Liquidity Survey provides qualitative indicators to reflect market participants' views on the importance of selected structural issues with respect to enhancing liquidity in emerging East Asian bond markets. A brief description of each of the eight structural issues is given below.

i. **Greater Diversity of Investor Profile:** the need to widen the investor base for LCY bonds.
ii. **Market Access:** the degree of ease or difficulty for investors to enter the LCY bond market, taking into account investor registration and investment quotas.

iii. **Foreign Exchange Regulations:** the extent of liberal or restrictive foreign exchange, capital investment, and repatriation regulations.
iv. **Transaction Funding:** the need to make funding available through active and developed money markets and repo markets.
v. **Tax Treatment:** the need to reduce withholding taxes on LCY bonds.
vi. **Settlement and Custody:** the importance of straight-through-clearing processes, timely bond trade settlements, and a global custodian or accredited custodian(s).
vii. **Hedging Mechanisms:** the need to have a more active and efficient derivatives market.
viii. **Transparency:** the importance of transparency in bond market activity, available bond prices, and ratings on bonds provided by credit rating agencies.

Each of the structural issues was rated by the survey respondents based on its degree of importance, with numerical values being assigned one of four levels of importance: 1–Not Important, 2–Somewhat Important, 3–Important, and 4–Very Important.

**Figure 19: Regional Averages—LCY Government Bond Market Structural Issues**



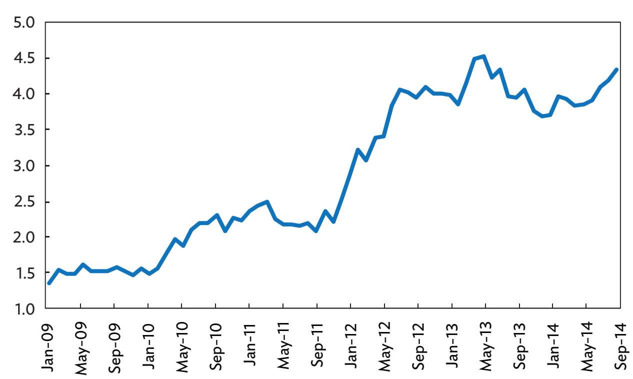

FX = foreign exchange, LCY = local currency.
Note: Emerging Asia comprises the People's Republic of China; Hong Kong, China; Indonesia; the Republic of Korea; Malaysia; the Philippines; Singapore; Thailand; and Viet Nam.
Source: *AsianBondsOnline* 2014 LCY Bond Market Liquidity Survey.

The survey results show that greater diversity of investor profile remained the most important structural issue in 2014 in terms of improving liquidity in emerging East Asian LCY government bond markets, with a regional average rating of 3.6. This was followed by transparency (3.2), hedging mechanisms and transaction funding (3.1 each), foreign exchange regulations (3.0), market access and settlement and custody (2.9 each), and tax treatment (2.6) **(Figure 19)**.

Greater investor diversity is considered the most important structural issue among all emerging East Asian economies, with its average rating ranging from 3.3 in the PRC to 3.8 in Malaysia, the Philippines, and Viet Nam. The relative importance of greater diversity of investor profile vis-à-vis other structural issues appears to derive from the existence of a few investor groups that continue to dominate emerging East Asian LCY government bond markets. For example, **Figure 20** below shows that Japanese mutual funds' investment in emerging East Asia's bond markets is only a small percentage of their total foreign bond portfolio.

In the PRC, banks held 76.2% of Treasury bonds and policy bank bonds at end-September. In Indonesia's LCY government bond market, foreign investors and domestic banks were the two largest investor groups with shares of 37.3% and 35.1%, respectively, at end-September. In the Republic of Korea, insurance companies and pension funds were the largest investor group in the LCY government bond market, accounting for 29.4% of the total at end-June,

**Figure 20: Japan Mutual Fund Holdings of Emerging East Asian Bonds as % of Total Foreign Bonds**




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: The Investment Trusts Association, Japan.

while other financial institutions held 22.3%, the general government 18.8%, and banks 18.0%. In Malaysia at end-June, LCY government bond holdings among local financial institutions, foreign investors, and domestic social security institutions accounted for 34.0%, 32.0%, and 27.3% of the total market, respectively. In the Philippines, 36.0% of the outstanding stock of LCY government securities at end-September was held by banks and other financial institutions, while 28.9% was held by contractual savings institutions and tax-exempt institutions. In Thailand, contractual savings funds held 28.6% of LCY government bonds at end-June, followed by insurance companies with a 25.0% share

Meanwhile, the structural issue rated the least important by market participants varies across emerging East Asian markets. In the PRC, the lowest rating went to foreign exchange regulations. In Hong Kong, China, tax treatment was the only structural issue to earn a ranking of "Not Important." In Indonesia, the lowest rated structural issue was settlement and custody. In the Republic of Korea, market access and transaction funding both received the lowest rating. In Malaysia, transaction funding was the lowest ranked issue, while in the Philippines it was hedging mechanisms. In Singapore, market access and tax treatment were both the lowest ranked. In Thailand, the least important issue was settlement and custody. Finally, in Viet Nam, tax treatment received the lowest rating **(Figure 21)**.

## Corporate Bond Markets

Corporate bond markets are generally less liquid than government bond markets. Corporate bonds are typically purchased by buy-and-hold investors and liquidity is generally limited to a period of 1–2 months after issuance. **Figure 22** graphs recent trends in corporate bond turnover ratios in emerging East Asia. Data are unavailable for Singapore and the Philippines.

Corporate bond market participants were asked to respond to questions similar to the ones put to government bond market participants. **Table 15** compiles responses from bond market participants with regard to average issue sizes, bid–ask spreads, and average trading sizes.

The largest average issue size for corporate bonds in the region belonged to the PRC (US$231.4 million), followed by Singapore (US$147.5 million). The large bond issues in the PRC reflect the funding demands of PRC corporates and the fact that larger firms, particularly state-owned enterprises, have an easier time issuing bonds than smaller firms. The third largest average issue size in the region was in the Philippines (US$138.1 million), where the bulk of corporate issuers tend to be blue-chip companies. At end-September, the top 31 issuers in the Philippines comprised 87.9% of the total corporate bond market.

Bid–ask spreads for newly issued corporate bonds fell in all markets this year compared with 2013. The smallest average bid–ask spread was in the Republic of Korea at 3.1 bps, followed by Thailand at 5.4 bps. The highest average bid–ask spread was in Viet Nam at 47.5 bps, reflecting the relatively high illiquidity of Viet Nam's corporate bond market. (There had been no new issuance of corporate bonds in Viet Nam in 2014 as of end-October.)

The largest average transaction size for corporate bonds was in the Republic of Korea, which is consistent with its narrow bid–ask spread. The smallest average trading sizes were found in the Philippines, Indonesia, and Singapore.

## Inter-Market Comparisons

### People's Republic of China

Participants in the PRC corporate bond market said that the most traded corporate bonds are those issued by state-owned enterprises, commercial paper, and medium-term notes. These qualitative findings are reflected in bid–ask spreads, as medium-term notes carry the lowest spreads in the PRC market **(Table 16)**. Corporate bond turnover ratios also show that medium-term notes are the most traded bonds **(Figure 23).**

The liquidity of medium-term notes and commercial paper is due to the fact that these instruments are traded in the interbank market, which is the most liquid market in the PRC.

Survey respondents also said that there are limited options for hedging credit risk in the corporate bond market. While the PRC's version of credit default swaps is available in the form of credit risk mitigation agreements

**Figure 21: Structural Issues for Individual LCY Government Bond Markets**

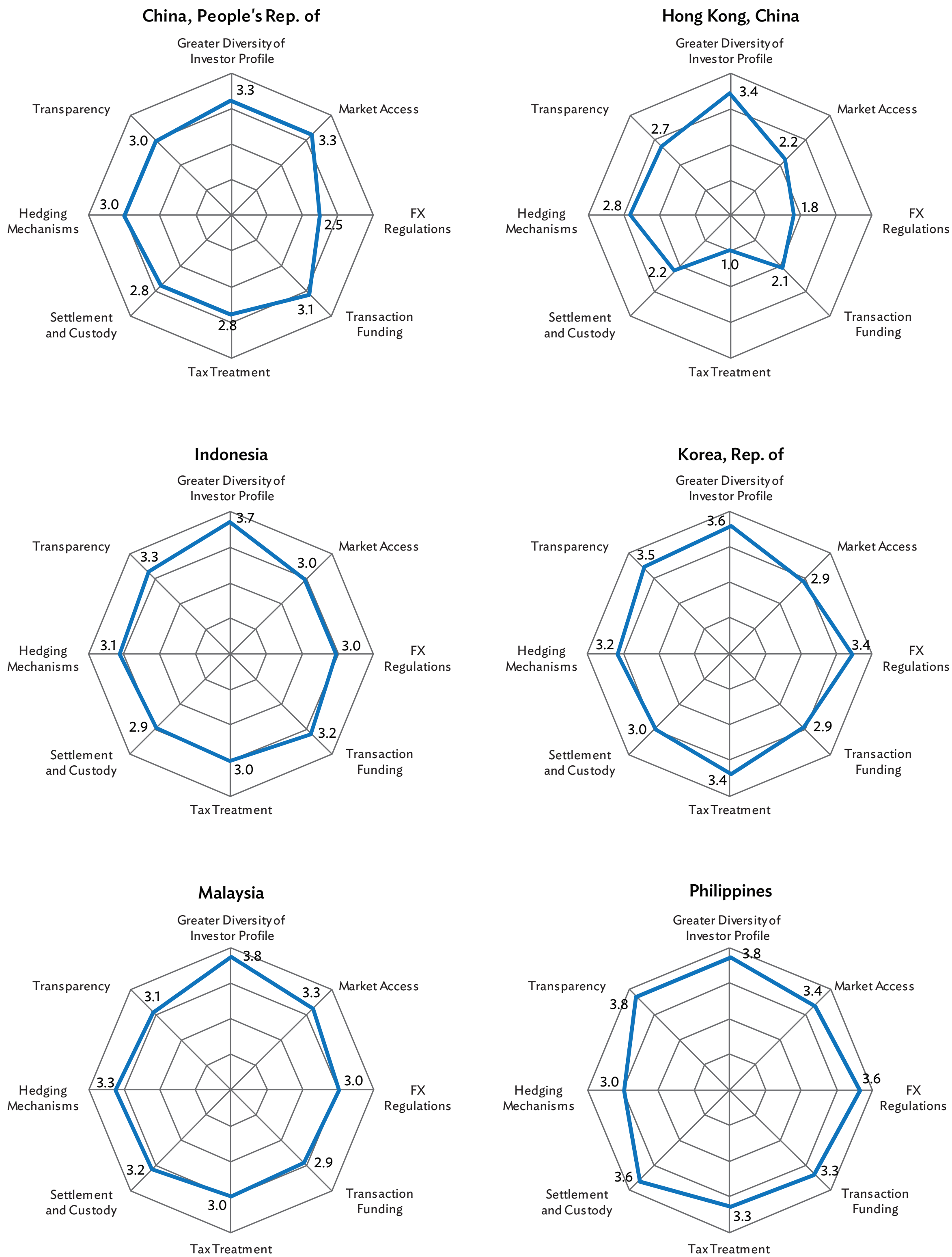



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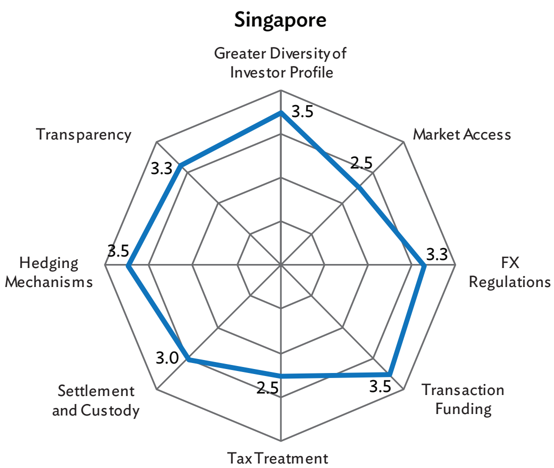
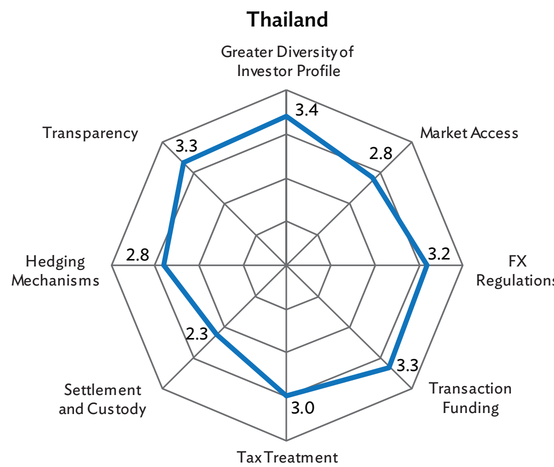
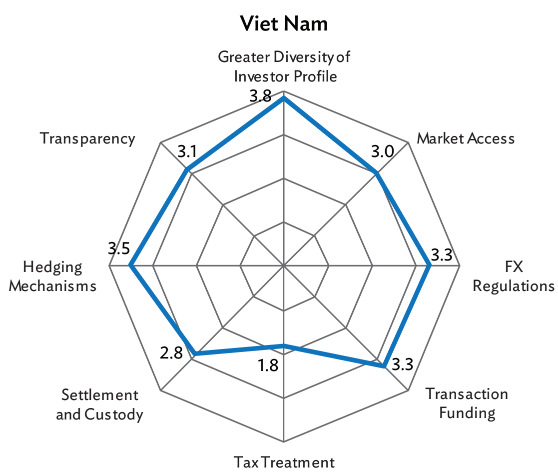
**Figure 21** *continued*

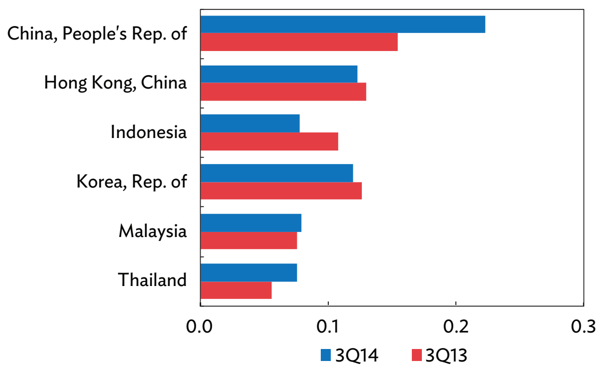


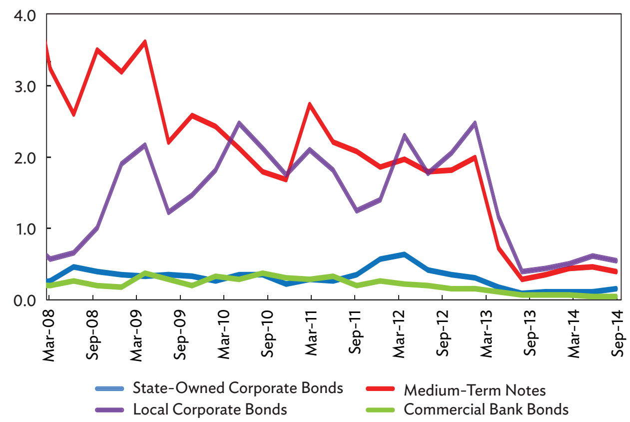

FX = foreign exchange, LCY = local currency.
Source: *AsianBondsOnline* 2014LCY Bond Market Liquidity Survey.

**Figure 22: LCY Corporate Bond Turnover Ratios**




LCY = local currency.
Note: Turnover ratios are calculated as LCY trading volume (sales amount only) divided by average LCY value of outstanding bonds during each 3-month period.
Sources: People's Republic of China (*ChinaBond*); Hong Kong, China (Hong Kong Monetary Authority); Indonesia (Indonesia Stock Exchange); Republic of Korea (EDAILY *Bondweb* and The Bank of Korea); Malaysia (Bank Negara Malaysia); and Thailand (Bank of Thailand and Thai Bond Market Association).

**Figure 23: LCY Corporate Bond Turnover Ratios in the People's Republic of China**




LCY = local currency
Source: *ChinaBond*.

**Table 15: LCY Corporate Bond Markets–Quantitative Indicators**

| | | PRC | HKG | INO | KOR | MAL | PHI | SIN | THA | VIE | Regional |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Typical Issue Size of Corporate Bonds | Average (US$ million) | 231.4 | 39.4 | 40.1 | 57.9 | 112.2 | 138.1 | 147.5 | 67.2 | 54.3 | 98.7 |
| Typical Bid–Ask Spread for New Corporate Issues | Average (bps) | 6.9 | 5.8 | 23.1 | 3.1 | 7.5 | 16.9 | 6.3 | 5.4 | 47.5 | 9.4 |
| | SD | 2.4 | 2.5 | 8.0 | 3.0 | 3.5 | 54.3 | – | 2.4 | 3.5 | 14.3 |
| | CV | 0.3 | 0.4 | 0.3 | 1.0 | 0.5 | 3.2 | – | 0.4 | 0.1 | 1.5 |
| Typical Transaction Size of LCY Corporate Bonds | Average (US$ million) | 5.5 | 2.6 | 0.5 | 9.5 | 2.3 | 0.5 | 0.2 | 1.0 | 10.0 | 3.6 |
| | SD | 2.3 | 1.4 | 0.3 | 0.0 | 1.1 | 0.7 | – | 0.5 | 10.1 | 3.9 |
| | CV | 0.4 | 0.5 | 0.6 | 0.0 | 0.5 | 1.4 | – | 0.5 | 1.0 | 1.1 |

– = not applicable, bps = basis points; CV = coefficient of variation; HKG = Hong Kong, China; INO = Indonesia; KOR = Republic of Korea; LCY = local currency; MAL = Malaysia; PHI = Philippines; PRC = People's Republic of China; SD = standard deviation; SIN = Singapore; THA = Thailand; VIE = Viet Nam.
Source: *AsianBondsOnline* 2014 LCY Bond Market Liquidity Survey.

**Table 16: LCY Corporate Bond Survey Results—People's Republic of China**

| | SOE Bonds | Local Corporate Bonds | MTNs | Commercial Bank Bonds | Commercial Paper |
|---|---|---|---|---|---|
| Average Issue Size (CNY million) | 3,416.7 | 1,196.2 | 1,420.6 | 2,544.1 | 1,444.2 |
| Bid–Ask Spread (bps) | 12.5 | 13.3 | 8.1 | 10.0 | 11.9 |
| Average Trading Size (CNY million) | 31.7 | 36.3 | 36.3 | 36.3 | 36.3 |

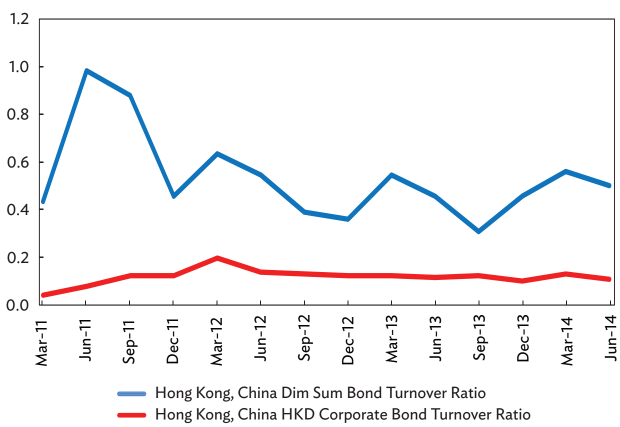
bps = basis points, LCY = local currency, MTNs = medium-term notes, SOE = state-owned enterprise.
Source: *AsianBondsOnline* 2014 LCY Bond Market Liquidity Survey.

and warrants, market participants say these are not widely used since banks must still recognize the balance sheet risk based on existing regulations

## Hong Kong, China

Survey respondents viewed Hong Kong, China's corporate bond market as very illiquid, with most investors participating on a buy-and-hold basis. There is growing interest in the dim sum bond market, with turnover ratios exceeding those found in the LCY corporate bond market **(Figure 24)**.

**Figure 24: Dim Sum Bond versus HKD Corporate Bond Turnover Ratios**




Source: Hong Kong Monetary Authority.

## Republic of Korea

The 2014 survey results show that across the three types of LCY corporate bonds in the Republic of Korea, financial debentures appear to be the most liquid instrument as shown by a relatively low average bid–ask spread when compared with special public bonds and private corporate bonds **(Table 17)**. The survey results also illustrate the average issue size for the three types of corporate bonds—with the amount being relatively smaller for financial debentures, while larger and about the same for special public bonds and private corporate bonds. The average trading size is roughly equal across all three corporate bond types.

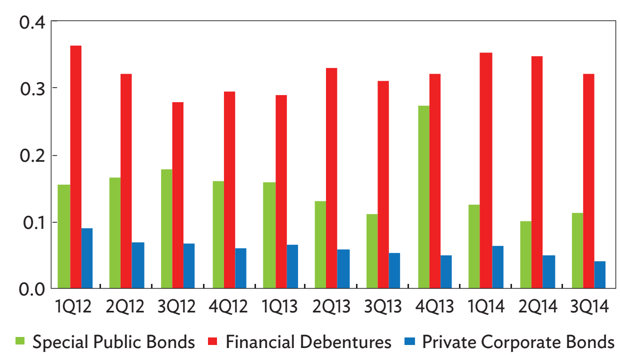
**Table 17: LCY Corporate Bond Survey Results—Republic of Korea**

| | Special Public Bonds | Financial Debentures | Private Corporate Bonds |
|---|---|---|---|
| Average Issue Size (KRW billion) | 62.2 | 42.5 | 60.1 |
| Bid–Ask Spread (bps) | 1.7 | 1.0 | 6.5 |
| Average Trading Size (KRW billion) | 10.0 | 10.0 | 10.0 |

bps = basis points, LCY = local currency.
Note: Special public bonds are bonds issued by state-owned enterprises, financial debentures are issued mostly by banks and financing companies, and private corporate bonds are issued mostly by securities companies and by private nonfinancial corporates.
Source: *AsianBondsOnline* 2014 LCY Bond Market Liquidity Survey.

Financial debentures have the highest turnover ratio, reinforcing the view that these are the most liquid corporate debt instrument. In 3Q14, the turnover ratio for financial debentures was 0.32, compared with 0.11 for special public bonds and 0.04 for private corporate bonds, per *AsianBondsOnline* estimates. However, the first 9 months of 2014 saw the turnover ratios for financial debentures and private corporate bonds steadily decline, while the turnover ratio for special public bonds exhibited erratic movements over the same period. Such trends suggest that liquidity has tightened in the Korean LCY corporate bond market in 2014 **(Figure 25)**.

**Figure 25: Turnover Ratios for Special Public Bonds, Financial Debentures, and Private Corporate Bonds in the Republic of Korea**




Source: EDAILY *BondWeb*.

## Malaysia

Malaysia's corporate LCY bond market is not small by comparison with other markets in the region yet it remains relatively illiquid according to survey respondents. New bonds are generally only traded for 1–2 weeks after issuance.

Recent data from the survey results, however, showed some signs of improvement. Average bid–ask spreads for LCY bonds decreased to 7.5 bps in 2014 from 9.2 bps in 2013, and the turnover ratio slightly improved to 0.079 from 0.075 **(Table 18)**. The higher bond turnover ratio in 2014 reflects increased trading in the secondary market relative to the average amount of bonds outstanding at the end of the previous and current quarters. Specifically, trading volume rose 13.9% y-o-y in 3Q14, while bonds outstanding expanded 8.9%.

**Table 18: LCY Corporate Bond Survey Results—Malaysia**

| | Corporate Bonds |
|---|---|
| Average Issue Size (MYR million) | 112.2 |
| Bid–Ask Spread (bps) | 7.5 |
| Average Trading Size (MYR million) | 7.5 |

bps = basis points, LCY = local currency.
Source: *AsianBondsOnline* 2014 LCY Bond Market Liquidity Survey.

In an effort to further develop the liquidity of the domestic bond market, the government has initiated several measures aimed at liberalizing Malaysia's financial sector. In June, Prime Minister Najib Razak announced the removal of mandatory credit rating requirements for new corporate issues, effective 1 January 2017. This supports the view of market participants of the need to liberalize the use of bond pricing agencies to promote price discovery and allow unrated bonds to be traded.

The new policy will help reduce issuance costs for new companies and frequent issuers, which could boost issuance volume and even diversify the profile of bond issuers. It could also bring about greater diversity among investors and traders, which survey respondents consider the most important market structure issue. Its impact on liquidity, however, will be determined by the openness of institutional investors to revise their investment mandates on minimum rating requirements. Overall, these developments should strengthen the country's capital market in support of sustainable, long-term economic growth.

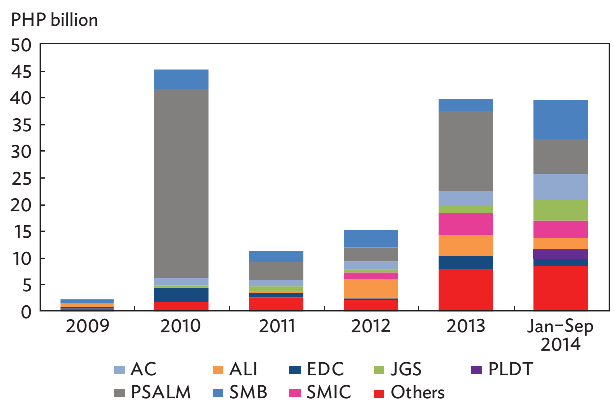
## Philippines

The average bid–ask spread for Philippine corporate bonds fell to 17 bps in 2014 from 37 bps in 2013, while the average trading size improved to PHP21.6 million from PHP9.7 million. However, liquidity in the Philippine corporate bond market is still limited since it is primarily a buy-and-hold market in which most investors hold a bond until maturity.

Trading volume data are not available for the Philippine corporate bond market as a whole. However, the Philippine Dealing and Exchange Corporation maintains a database on secondary trading of corporate bonds listed on its platform **(Figure 26)**. At the end of 3Q14, there were 31 Philippine companies that had their bonds listed with the exchange. These include bonds issued by the National Home Mortgage Finance Corporation (also known as Bahay Bonds 2) and the Power Sector Assets and Liabilities Management Corporation (PSALM). *AsianBondsOnline* classifies the issuances of these two companies under government securities, since they are government-owned or –controlled corporations.

The secondary trading volume of corporate bonds is negligible compared with that of government securities, accounting for less than 1% of total bonds (government

**Figure 26: PDEx Trading Volume Trends—Corporate Bonds in the Philippines**




AC = Ayala Corporation; ALI = Ayala Land, Inc.; EDC = Energy Development Corporation; JGS = JG Summit Holdings; PLDT = Philippine Long Distance Telephone Company; PSALM = Power Sector Assets and Liabilities Management Corp.; SMB = San Miguel Brewery, Inc.; SMIC = SM Investment Corp.
Note: PDEx reports one side of the trade only.
Source: Philippine Dealing and Exchange Corporation (PDEx).

and corporate) traded in 2014. Nevertheless, the volume of secondary trading of corporate bonds grew to PHP39 billion in the first 9 months of 2014, almost at par with trading volume for full-year 2013.

Trading volume in 2010 was centered on PSALM bonds, comprising almost 78% of total trades that year. From 2011 to 2013, the trading volume of PSALM bonds declined to levels more comparable with those of the leading private sector issuers. The three other companies with the highest trading volumes in the first 9 months of 2014 were (i) San Miguel Brewery (PHP7.2 billion), (ii) Ayala Corporation (PHP4.5 billion), and (iii) JG Summit Holdings (PHP4.0 billion).

## Singapore

The average bid–ask spread for Singaporean corporates narrowed to 6.3 bps in this year's survey compared with 21.9 bps a year ago **(Table 19)**. The average trading size also slipped to SGD1.0 million this year compared with SGD1.5 million in the previous year. Most market participants view Singapore's corporate bond market as being very illiquid, with trading dominated by buy-and hold investors, because of a lack of supply. Banks provide competitive rates for loans, and thus most corporate borrowers tend to tap loans instead of issuing bonds.

**Table 19: LCY Corporate Bond Survey Results—Singapore**

| | Corporate Bonds |
|---|---|
| Average Issue Size (SGD million) | 188.2 |
| Bid–Ask Spread (bps) | 6.3 |
| Average Trading Size (SGD million) | 1.0 |

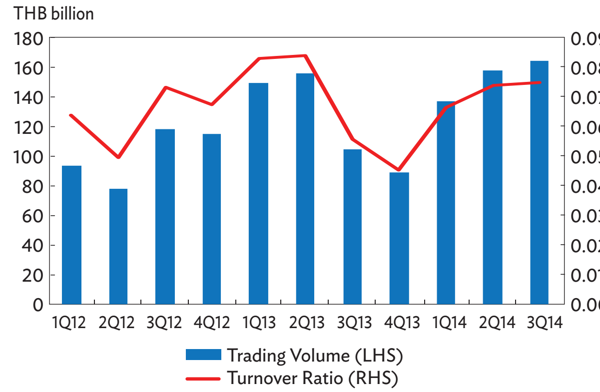
bps = basis points, LCY = local currency.
Source: *AsianBondsOnline* 2014 LCY Bond Market Liquidity Survey.

The average issue size for corporate bonds reached SGD188.2 million this year, slightly higher compared with SGD179.2 million a year ago. New corporate bonds normally have a short trading life, though this period can last up to 1 year, depending on the issuer.

## Thailand

The 2014 survey results showed that the average bid–ask spread and average trading size for Thai LCY corporate bonds were 5.4 bps and THB34.0 million, respectively.

**Figure 27: Trading Volume and Turnover Ratio for LCY Corporate Bonds**




LCY = local currency.
Source: Bank of Thailand and the Thai Bond Market Association (ThaiBMA).

In addition, the turnover ratio for Thai LCY corporate bonds, after settling at a relatively low level of 0.05 in 4Q13, rose at the beginning of the year and reached 0.07 in 3Q14 **(Figure 27)**. The trading volume of corporate bonds increased in each of the first 3 quarters of the year, climbing from THB137.1 billion in 1Q14 to THB157.9 billion in 2Q14 and to THB164.3 billion in 3Q14. These quarterly trends in turnover ratios and trading volumes for LCY corporate bonds suggest that the Thai corporate bond market's liquidity improved throughout the year.

## Viet Nam

Viet Nam's LCY corporate bond market lacks liquidity, particularly since the domestic bond market remains largely confined to government borrowers. Moreover, investors in the corporate bond market are overwhelmingly banks that tend to buy and hold securities until maturity. Survey respondents noted that some new placements of corporate bonds have been issued privately.

The average bid-ask spread of a new corporate issue in 2014 was 47.5 bps—the highest in the region—and the typical transaction size was VND212.5 billion. Survey respondents emphasized that the lack of meaningful liquidity for newly issued LCY corporate bonds resulted from the absence of clear and accurate information on the market in general.

To improve the liquidity of the LCY bond market, market participants recommended two primary measures: (i) the creation of credit rating agencies, and (ii) the improvement of transparency and disclosure requirements. More needs to be done to address investor diversity and build a framework to enable companies to seek funding from a broader range of sources.

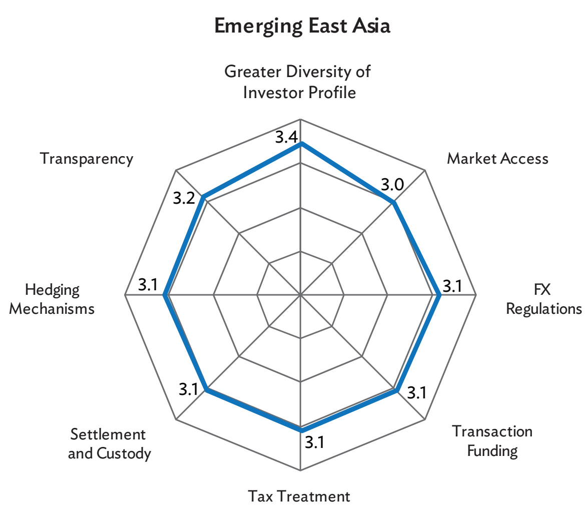
## Qualitative Indicators for Corporate Bond Markets

**Figure 28** summarizes the feedback of market participants on the structural and regulatory issues of corporate bond markets in the region. The results are similar to those from the government bond market survey, with a few notable exceptions that will be discussed below.

Similar to government bonds, participants ranked greater diversity of investors as the most important factor in increasing liquidity in the corporate bond market, albeit it received a lower average ranking of 3.4 versus 3.6 for government bonds.

One possible reason for this is that tapering by the US Federal Reserve and concerns over capital flows in the region highlighted the importance of diversity in the investor base. In emerging East Asian bond markets with substantial foreign holdings of government bonds, the foreign holdings of corporate bonds tends to be much smaller.

**Figure 28: Regional Averages—LCY Corporate Bond Market Structural Issues**




FX = foreign exchange, LCY = local currency.
Note: Emerging East Asia comprises the People's Republic of China; Hong Kong, China; Indonesia; the Republic of Korea; Malaysia; the Philippines; Singapore; Thailand; and Viet Nam.
Source: *AsianBondsOnline* 2014 LCY Bond Market Liquidity Survey.

In terms of tax treatment, participants rated it as a more important issue in corporate bond markets at 3.1 versus 2.6 for government bond markets. Liquidity is much lower in corporate bond markets as buyers tend to be buy-and-hold investors, making yield (and tax treatment) a more important factor for corporate bonds than government bonds. Also, in places with withholding taxes, such as the Philippines, the tax status of the buyer has an effect on liquidity due to how the bonds are traded. **Table 20** presents a summary of tax treatments in emerging East Asian bond markets.

Participants also rated settlement and custody higher for corporate bonds at 3.1 versus 2.9 for government bonds. In some markets, such as the Philippines, the trading and settlement system tends to be much more developed for government bonds than corporate bonds.

In terms of greater diversity of investor profile, the market that rated it the highest was Malaysia at 4.0, reflecting the fact that Malaysia has a market that is relatively open to foreign investors **(Figure 29)**. The lowest rating was given by participants in the PRC bond market, reflecting the fact that the PRC's bond market is relatively closed to foreign investors and dominated by participants in the interbank bond market. A summary of regulations on cross-border portfolio investments in emerging East Asian markets is provided in **Table 21.**

Participants in Singapore's corporate bond market rated foreign exchange regulations the most important at 4.0, reflecting its position as an international financial center. Not surprisingly, the PRC market does not consider foreign exchange regulations to be as significant an issue, giving it a rating of 2.5.

In terms of tax treatment, participants in the Philippines rated this issue at 3.4. The Philippines has the highest withholding tax rate in the region. Previous regulations prevented the trading of tax-paid bonds between institutions with different tax statuses. However, new regulations are set to take effect this year. The Philippines also rated settlement and custody very highly at 3.9 since the Philippine corporate bond market does not have a delivery-versus-payment arrangement as is the case with government bonds.

**Table 20: Tax Treatments in Emerging East Asian Markets**

| Market | Withholding Tax on Interest Income | |
|---|---|---|
| | Government | Corporate |
| China, People's Rep. of | Exempt from tax | Nonresident investors are subject to 10.0% withholding tax, which may be reduced due to tax treaties. |
| Hong Kong, China | Exempt from tax | Individuals are exempt from tax. Corporations are subject to a 16.5% profits tax. |
| Indonesia | Residents and permanent establishments are subject to 15.0% tax on bonds and 20.0% tax on *Sertifikat* Bank Indonesia. Nonresidents are subject to 20.0% tax, which is subject to reductions based on treaty. For mutual funds, the tax rate is 5%. | Residents and permanent establishments are subject to 15.0% tax. Nonresidents are subject to 20.0% tax, which is subject to reductions based on treaty. For mutual funds, the tax rate is 5%. |
| Korea, Republic of | Resident and nonresident investors are subject to 14% withholding tax. | Resident and nonresident investors are subject to 14% withholding tax. |
| Malaysia | Exempt from tax | Exempt from tax |
| Philippines | Subject to 20% tax withheld at source. Foreign corporations are subject to 30% tax on the gross amount of income derived within the Philippines. Nonresident individuals not engaged in trade or business are subject to 25% tax on the gross amount of income derived in the Philippines. | Standard rate of withholding tax on income payments from corporate bonds is 20%. |
| Singapore | Exempt from tax | Individual investors are tax exempt. Resident and nonresident institutional investors are exempt from withholding tax, subject to qualifying conditions. |
| Thailand | Individual resident investors are subject to 15% withholding tax. Institutional resident investors are subject to 1% withholding tax. Nonresident investors are exempt from tax. | Individual resident investors are subject to 15% withholding tax. Nonresident investors are subject to 15% withholding tax. |
| Viet Nam | Subject to 5% withholding tax. | Subject to 5% withholding tax. |

Source: *AsianBondsOnline*.

**Figure 29: Structural Issues for Individual LCY Corporate Bond Markets**

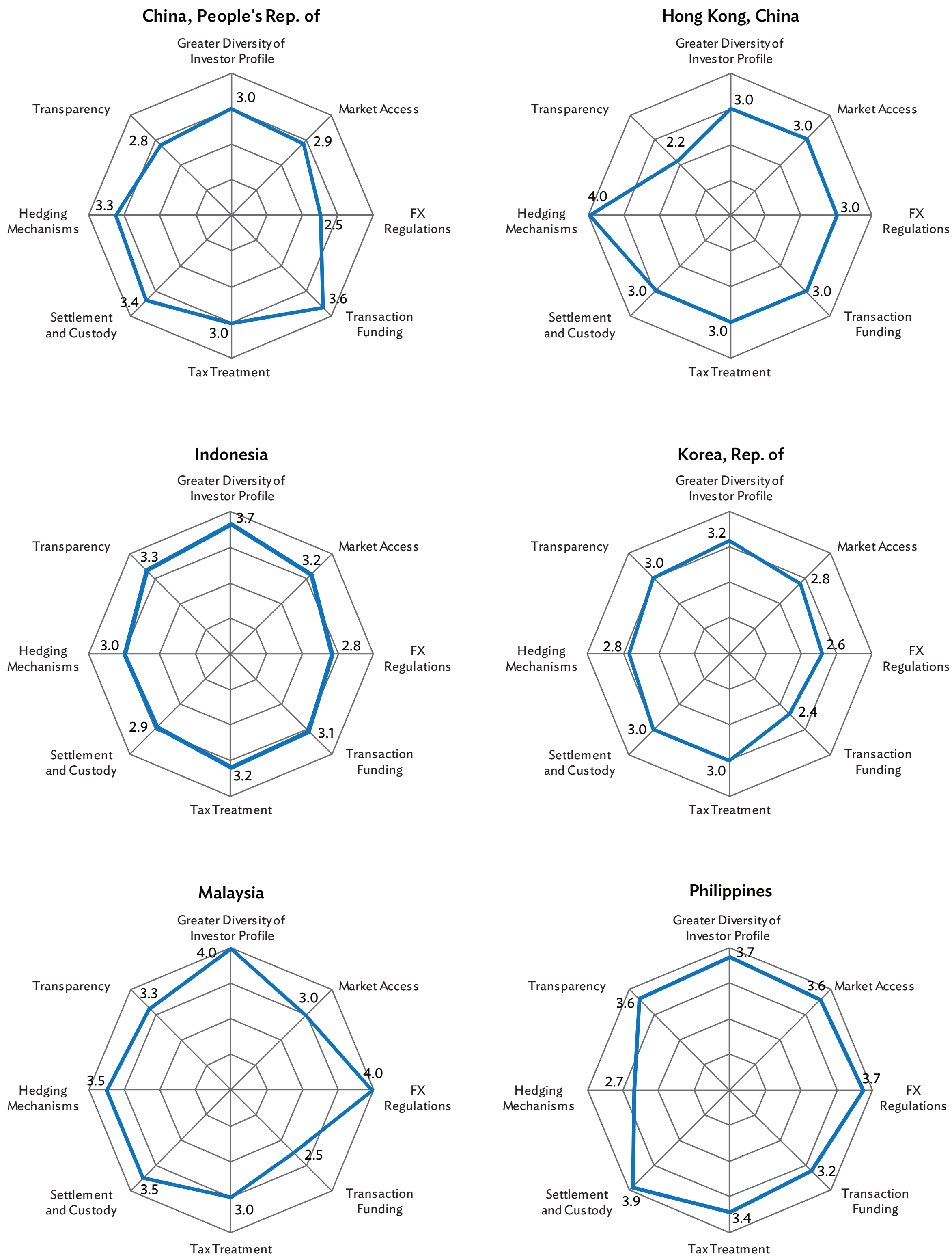



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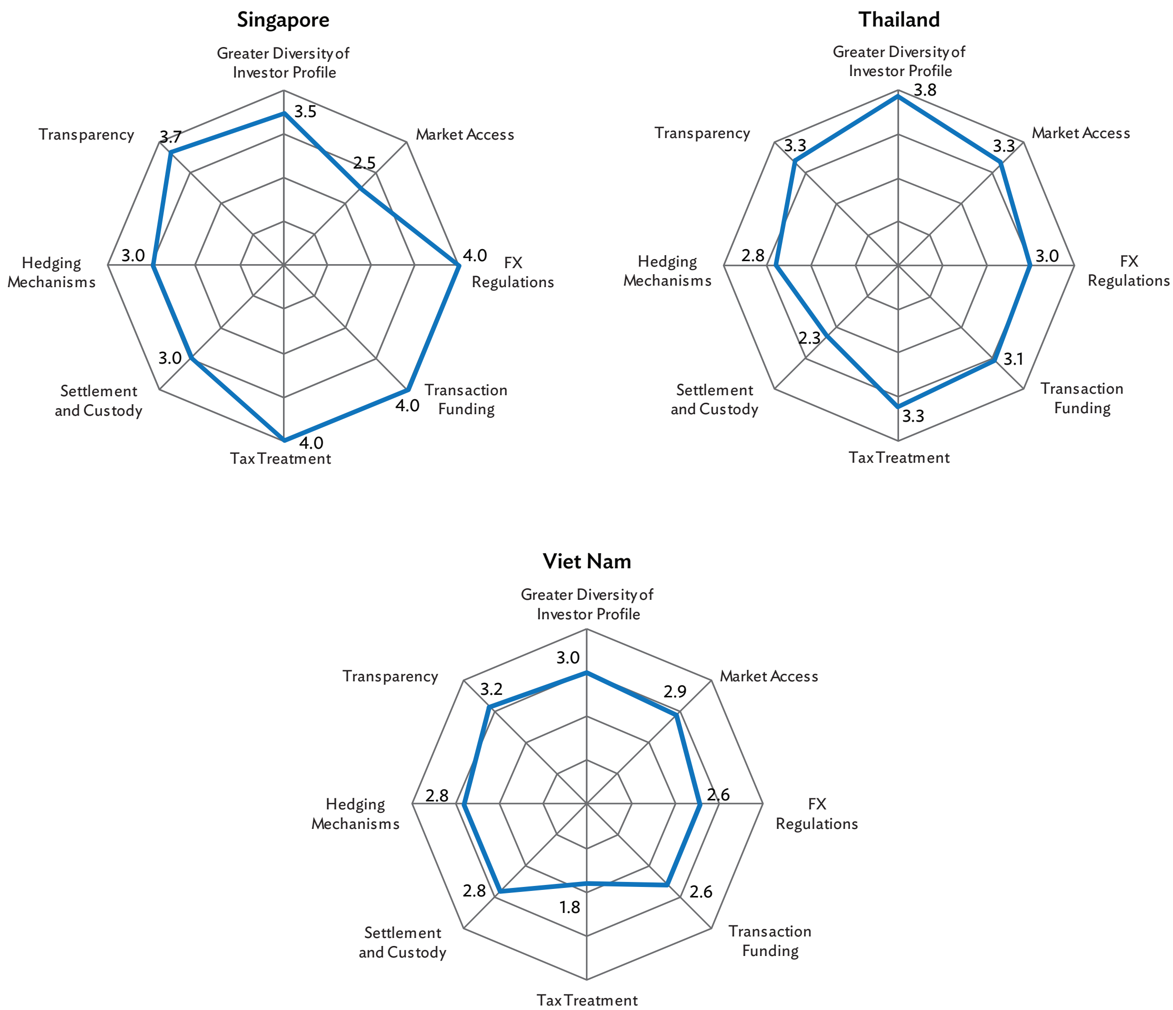
**Figure 29** *continued*




FX = foreign exchange, LCY = local currency.
Source: *AsianBondsOnline* 2014LCY Bond Market Liquidity Survey.

**Table 21: Cross-Border Portfolio Investment Regulation in Select Emerging East Asian Markets**

| Market | Capital Inflow | | | Capital Outflow | |
|---|---|---|---|---|---|
| | Money Market Instruments | Bond Market Instruments | Equity Instruments | Resident Investors | Nonresident Investors |
| China, People's Republic of | Qualified Foreign Instituional Investors (QFII) may purchase money market funds, subject to a lockup period. | Qualified Foreign Institutional Investors (QFII) are allowed to invest in exchange-traded and interbank-traded bonds subject to quotas.<br><br>Renminbi Qualified Foreign Institutional Investors (RQFII) are allowed to invest in exchange-traded and interbank-traded bonds subject to quotas. RQFIIs are currently approved in the following areas: Taipei,China; Hong Kong, China; Macau, China; United Kingdom; Singapore.<br><br>Eligible financial institutions may invest in the interbank bond market subject to limits. Eligible institutions include foreign central banks engaged in cross-border renminbi settlement; Hong Kong, China's and Macau, China's central banks; and other monetary authorities seeking renminbi to diversify financial reserves. | QFIIs are allowed to invest in A-shares subject to quotas. No single QFII may hold more than 10% of a listed company. Foreign investors may not own more than 30% of a single company. Foreign investors may also make strategic investments in A-shares of listed companies subject to certain criteria and restrictions.<br><br>Renminbi Qualified Foreign Institutional Investors (RQFII) are allowed to invest in listed equities subject to quotas. RQFIIs are allowed to fund investments using renminbi sourced abroad.<br><br>Foreign investors are not subject to restrictions in investing in B-shares of listed companies. B-shares are listed in either Hong Kong dollar or US dollar. | Qualified Domestic Institutional Investors (QDII) are allowed to buy and hold offshore securities subject to certain quotas. | QFII pension and insurance funds, mutual funds, charitable foundations, endowment funds, government investment management companies, and open-end funds have a principal lock-up of 3-months.<br><br>Other QFIIs are required to keep their investments in the People's Republic of China (PRC) for 1 year.<br><br>For RQFIIs, there is no holding period.<br><br>Repatriation of foreign exchange requires the approval of the State Administration for Foreign Exchange. |
| Hong Kong, China | There are no specific restrictions on portfolio investments and foreign investors may place funds directly in money market instruments. | Nonresidents are free to purchase debt instruments. | Nonresidents are free to purchase equity securities. Investment in banks requires Hong Kong Monetary Authority (HKMA) approval. | Residents are generally free to invest abroad. Overseas investment by institutional investors (e.g., insurance companies, banks) must be within certain limits and may require HKMA approval. | No restrictions on repatriation of capital and profits. |
| Indonesia | Foreign investors are allowed to purchase money market instruments in the secondary market. | Foreign investors are allowed to purchase debt securities without limit except for retail bonds for which they are only allowed to purchase in the secondary market. | Foreign investors are allowed to purchase shares without limit with the exception of shares in finance company joint ventures. | Pension funds are not allowed to invest in securities abroad. Certain restrictions apply to investments by mutual funds, protected mutual funds, guaranteed mutual funds, insurance and reinsurance companies with regard to investments abroad. | No restrictions apply to repatriation of capital, remittance of dividends, and profits. |

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**Table 21** *continued*

| Market | Capital Inflow | | | Capital Outflow | |
|---|---|---|---|---|---|
| | Money Market Instruments | Bond Market Instruments | Equity Instruments | Resident Investors | Nonresident Investors |
| Japan | Nonresidents are free to purchase money market securities. | Nonresidents are free to purchase debt securities. | Controls will only apply if the purchase of equity instruments is affected by inward direct investment laws. | Controls will apply to an insurance company's purchase of securities issued on a foreign financial market if it would result to FCY-denominated assets exceeding 30% of its total assets. | No restrictions on repatriation of capital, profits, dividends, and interest. |
| Korea, Republic of | Nonresidents are allowed to invest in domestic money market instruments. The sale of FCY-denominated money market instruments abroad requires notification to a designated foreign exchange bank. Sale of FCY-denominated money market instruments exceeding US$30 million or LCY-denominated money market instruments by residents abroad requires notification to the Ministry of Strategy and Finance (MOSF). | Nonresidents are allowed to buy bonds and other debt securities sold by residents, but notification to a foreign exchange bank or The Bank of Korea is required if the purchase is not made through an account exclusively for investment. | Nonresidents are freely allowed to invest in shares of local companies, but notification to a foreign exchange bank or The Bank of Korea is required if the purchase is not made through an account exclusively for investment. The purchase of listed shares issued by resident public sector utilities in the process of privatization is subject to controls. | Residents are allowed to buy bonds issued abroad, but notification to The Bank of Korea is required if the purchase is not made through an account exclusively for investment. | Proceeds from capital transactions in excess of US$500,000 or its equivalent must be repatriated within 1.5 years of the settlement date. |
| Malaysia | Nonresidents are allowed to purchase money market instruments without any restrictions. | Nonresidents are allowed to purchase bond market instruments without any restrictions. | Nonresidents are allowed to purchase equity instruments without any restrictions. | Resident with domestic borrowing may invest abroad subject to certain limits. Unit trust management companies, fund management companies, insurers and *takaful* (Islamic insurance) operators' investment abroad are subject to limits. | Nonresidents are free to repatriate funds from divestment of LCY-denominated assets or profits and dividends arising from investments. |
| Philippines | There are no restrictions on the purchase of money market instruments. | There are no restrictions on the purchase of bonds. | Foreign investors are allowed to purchase equity securities. However, there are certain limits on foreign ownership of certain industries. | A resident's investments abroad in excess of US$60 million a year requires prior regulatory approval. | There are no restrictions as long as the foreign exchange needed to service the capital repatriation of dividend, profits, and earnings is sourced from BSP AABs and/or AAB-foreign exchange corporations. |
| Singapore | No restrictions for nonresidents to purchase money market instruments. | No restrictions for nonresidents to purchase bond market instruments. | No restrictions for nonresidents to purchase equity instruments. | No restrictions on investments by residents abroad. | Nonresident financial entities must convert Singapore dollar proceeds, from Singapore dollar loans (exceeding SGD5 million), equity listings, and bond issuances into foreign currency before using such funds to finance activities outside Singapore. |

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**Table 22** *continued*

| Market | Capital Inflow | | | Capital Outflow | |
|---|---|---|---|---|---|
| | Money Market Instruments | Bond Market Instruments | Equity Instruments | Resident Investors | Nonresident Investors |
| Thailand | Nonresidents can invest in THB-denominated money market instruments. Investment of a nonresident group in THB-denominated money market instruments issued by a domestic financial institution is subject to the overall outstanding THB-denominated borrowing limit of THB10 million. | Nonresidents can invest in THB-denominated debt securities. Investment of a nonresident group in THB-denominated debt securities issued by a domestic financial institution is subject to a overall outstanding THB-denominated borrowing limit of THB10 million. | Nonresidents can invest in equities, but foreign equity participation may be limited if a company is subject to the provisions of the Foreign Business Act or other related laws. Financial institutions' foreign equity participation is limited to 25% of total shares in locally-incorporated banks, credit finance companies, and finance companies. Nonresidents can invest up to 100% of the shares of an asset management company or a securities company. For most other Thai corporations, foreign equity participation is up to 49%. | Institutional investors—the Government Pension Fund, Social Security Fund, companies listed on the Stock Exchange of Thailand (SET), insurance companies, mutual funds, provident funds, securities companies, specialized financial institutions, and Thai companies with asset size of at least THB5 billion—may invest freely in foreign securities issued abroad, up to a certain limit imposed by the directors, management, or supervisory authority of the institutional investors. | Proceeds of up to US$50,000 or its equivalent can be retained abroad, while proceeds exceeding the threshold must be repatriated on receipt and within 360 days of the transaction date. |
| Viet Nam | Foreign investors are allowed to purchase money market instruments locally. | Foreign investors are required to open a VND-denominated securities trading account to sell or purchase debt securities. | Foreign investors are required to open a VND-denominated securities trading account to sell or purchase listed securities on the stock exchange. Foreign investors are allowed to hold up to 49% of a company's current shares, except in the banking sector, which has a limit of 30%. | Residents may invest in shares and bonds abroad subject to certain limits. Institutional investors are not allowed to invest in securities issued by nonresidents. | Repatriation of profits is allowed within 60 days of the end of the fiscal year during which the investment took place. |

Sources: International Monetary Fund's Annual Report on Exchange Arrangements and Exchange Restrictions 2014, and local market sources.