ASIFMA is an independent, regional trade association with over 70 member firms comprising a diverse range of leading financial institutions from both the buy and sell side including banks, asset managers, law firms and market infrastructure service providers. Together, we harness the shared interests of the financial industry to promote the development of liquid, deep and broad capital markets in Asia. ASIFMA advocates stable, innovative and competitive Asian capital markets that are necessary to support the region’s economic growth. We drive consensus, advocate solutions and effect change around key issues through the collective strength and clarity of one industry voice. Our many initiatives include consultations with regulators and exchanges, development of uniform industry standards, advocacy for enhanced markets through policy papers, and lowering the cost of doing business in the region. Through the GFMA alliance with SIFMA in the US and AFME in Europe, ASIFMA also provides insights on global best practices and standards to benefit the region.
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2. G3 Asia ex Developed Market Asia (Japan, Australia and New Zealand)

Market Overview and Highlights of Asia (ex-Japan, Australia and New Zealand) debt issuance in Fourth Quarter 2014

Total issuance in 4Q’14 came in at USD 47.91 billion (bn) as of December 31 bringing 2014 issuance to USD 195.96bn, a new high in G3 issuance. Fourth quarter issuance is above quarter-over-quarter (qoq) from 3Q’14 (USD 40.61bn) and up 64.8% year-over-year (yoy), inclusive of high grade (HG), high yield (HY), and unrated deals.

Key highlights of the quarter (and more broadly, the whole of 2014) were as follows:

1) The deteriorating market sentiment globally towards HY (evident as early as mid-year 2014) gradually became more evident in Asia as well, as HY issuance fell on a qoq basis, as concerns about the Chinese property sector gained ground. This caution proved to be well founded as 2015 got under way. The key development that caught market participants’ attention was the possible default by a leading property developer, which had several of its projects halted and as a consequence could not repay/service some of its debt obligations in a timely fashion. This has led to a virtual shutdown of the Asian HY property market as of late January 2015. Even so, total HY issuance in 2014 closed at a record, with Chinese issuance supplemented by other countries, primarily from the India HY sector.

2) Asian G3 Basel III capital issuance of over USD 22bn (according to Dealogic) in all of 2014 was a key milestone – Structural innovations included the first AT1 perpetual issuances out of China – While BOC was first off the blocks with a USD 6.5bn AT1 bond, the three-tranche AT1 issue in USD, EUR and RMB by ICBC (totaling USD 5.75bn) in 4Q’14 also set a precedent for the first EUR-denominated perpetual bond out of Asia. In fact, with the Asian HY sector likely to take a back seat during at least the first quarter of 2015, the spotlight is likely to remain on Basel III compliant issuance out of Asia (given market perceptions of this sector as an attractive alternative to sub-investment grade bonds).

3) Yet another key development is the continued dominance of issuance out of China, which was by far the biggest issuer of Asia ex-Japan, Australia and New Zealand G3 debt for all of 2014. Besides HY and bank capital deals out of China, the HG sector also came into its own, with the USD 8.0bn transaction out of China’s e-commerce provider Alibaba setting a notable benchmark. With these developments, it is now clear that any bond fund manager looking for diversified global exposure will necessarily have to consider increasing exposure to China across a variety of sectors and ratings classes.

In terms of total return, on a quarterly basis, Asian IG debt outperformed Asian HY paper, with HY paper suffering losses in 4Q’14 (-1.53% total return), while HG gained 2.4% during the quarter due to a variety of factors – US Treasury strength accounted for virtually all of HG gains in 2014, while considerable spread widening in Asian HY paper (+72 bps for all of 2014, according to the JACI (JP Morgan Asian Credit Index)) resulted in HY underperformance. Nevertheless, the considerable positive carry on HY paper more than offset the spread widening, contributing to total HY bond returns still remaining positive for FY’14.

Going into 2015, the trend for HG outperformance has continued into January, as a) renewed strength in US Treasuries and b) the well-publicized problems at certain Chinese real estate companies and c) the general trend towards risk aversion stemming from overall macro weakness globally (for instance, Chinese GDP growth of 7.4% in 2014 was the lowest since 1990) have all combined to cause debt investors to turn increasingly cautious as 2015 gets underway.
State of the Asian leveraged loan market

Asian leveraged loan debt, excluding developed market Asia, reached USD 48.13bn in 4Q’14, a 15.8 percent decline qoq (USD 57.17bn) and a 21.0 percent decline yoy (USD 60.96bn). For the full year 2014, loan issuance reached USD 231.91bn, 7.84% below the high of USD 251.63bn reached in 2013. Leading sectors in 4Q’14 issuance were from utility & energy (USD 11.03bn), construction/building (USD 7.41bn), and telecommunications (USD 5.02bn). Sponsored loan deals ticked up slightly by percentage, representing 15.8% by dollar amount in the fourth quarter.

Key trends in Asia (ex-Japan, Australia and New Zealand) G3 & LCY bond issuance

For the fourth quarter 2014, total G3 issuance stood at USD 47.91bn, with HG transactions accounting for USD 36.47bn, HY issues accounting for a total of USD 6.41bn, and unrated issues accounting for 5.02bn. China remains the largest issuing country in the fourth quarter, accounting for a total of USD 28.42bn, or nearly 60%, of G3 issuance in 4Q’14, with USD 24.10bn and USD 1.85bn in HG and HY deals, respectively, priced from China alone. Hong Kong replaced India to be second in issuance with USD 6.80bn, followed by South Korea with USD 4.52bn in issuance.

Overall G3 debt outstanding in the region stood at USD 674.13bn, a growth of 6.3% qoq. High grade debt accounted for the bulk of total outstanding debt at USD 432.81bn (a 7.0% growth qoq), followed by HY debt at USD 148.65bn (a growth of 1.9% qoq) and NR debt at USD 92.66bn (a growth of 10.5% qoq). China (with USD 191.5bn), South Korea (with USD 121.6bn) and Hong Kong (with USD 101.2bn) were the three countries with the largest shares of G3 debt outstanding. In terms of ratings, within the HG space, deals rated A+ (USD 98.7bn) accounted for the largest share of debt outstanding, while NR deals (USD 92.7bn) and BB+ transactions (USD 60.6bn) dominated the deals outstanding in the HY space. By sector, financials with a total of USD 170.5bn accounted for approximately a quarter of outstanding G3 paper, with sovereigns (USD 154.6bn) second. Finally, deals with remaining tenors of 5 years or less (USD 283.2bn) accounted for the bulk of total Asia (ex-Japan, Australia and NZ) debt outstanding.

During 4Q’14, three sectors between them accounted for the largest share of G3 issuance by sector: finance (USD 14.62bn), computers & electronics (USD 8.00bn, and holding companies (USD 6.73bn).

In terms of ratings, within the HG space, A+ transactions accounted for the largest share of deals priced during the quarter, with USD 13.06bn in total issuance, followed by A- transactions totaling USD 5.80bn and AA- issuance with USD 4.54bn. As for HY issuance, the BB- category dominated with USD 2.10bn of issuance, followed by B- rated transactions (USD 1.44bn), then BB+ rated transactions (USD 1.40bn).

By tenor, Asia ex-Japan, Australia and NZ G3 deals with tenors of 5 years or less accounted for the bulk of issuance in 4Q’14, with a total of USD 25.59bn in short tenor issues being priced during the quarter. Of these, USD 19.58bn and USD 3.42bn were HG and HY deals, respectively, and the balance unrated.

Finally, turning to the LCY debt markets, USD 160.24bn in total LCY-denominated debt was issued in Asia (ex-Japan, Australia & NZ) in 4Q’14, a decline of 26.9% and 29.5%, respectively, from 3Q’14 (USD 219.25bn) and from 4Q’14 (USD 227.20bn). Total LCY debt outstanding at the end of 4Q’14 in Asia (ex-Japan, Australia and NZ) stood at USD 10.03tn, growing by 3.5% qoq, although HG debt outstanding declined 1.5%, while HY and non-rated debt grew 20.6% and 4.3% respectively. China continues to account for the bulk of total outstanding LCY debt at USD 5.49tn, followed by India (USD 1.46tn) and South Korea (USD 1.33tn).
2.1. G3 ex DM Asia: Total Issuance

2.2. G3 ex DM Asia: Total Outstanding

2.3. G3 ex DM Asia: HG Issuance

2.4. G3 ex DM Asia: HG Outstanding

2.5. G3 ex DM Asia: HY Issuance

2.6. G3 ex DM Asia: HY Outstanding
2.7. G3 ex DM Asia: Total Issuance by Country

2.8. G3 ex DM Asia: Total Outstanding by Country

2.9. G3 ex DM Asia: Total Issuance by Sector

2.10. G3 ex DM Asia: Total Outstanding by Sector

2.11. G3 ex DM Asia: HG Issuance by Rating

2.12. G3 ex DM Asia: HG Outstanding by Rating
2.13. G3 ex DM Asia: HY Issuance by Rating

2.14. G3 ex DM Asia: HY Outstanding by Rating

2.15. G3 ex DM Asia: Total Issuance by Tenor

2.16. G3 ex DM Asia: Outstanding by Remaining Tenor

2.17. Asia ex DM: Total Leveraged Loan Issuance

2.18. Asia ex DM: Total Leveraged Loan Issuance by Use of Proceeds
3. LCY Asia ex Developed Market Asia (Japan, Australia and New Zealand)

3.1. LCY ex DM Asia: Total Issuance

3.2. LCY ex DM Asia: Total Outstanding

3.3. LCY ex DM Asia: Issuance by Currency

3.4. LCY ex DM Asia: Issuance by Sector

3.5. LCY ex DM Asia: Outstanding by Country
4. All Asia

Total Issuance & Outstanding – G3 and LCY for Asia (including Japan, Australia and New Zealand)

Total G3 issuance in Asia (including Japan, Australia and New Zealand) stood at USD 108.27bn in the fourth quarter of 2014, a decline of 13.3% qoq (USD 124.91bn) but a growth of 3.7% yoy (USD 104.38bn). Total HG G3 issuance in Asia (including Japan, Australia and New Zealand) was USD 72.57bn in the fourth quarter of 2014, a decline of 11.3% qoq and 2.0% yoy. HY issuance was USD 6.71bn in the fourth quarter of 2014, a decline of 21.2% and 22.1%, respectively, qoq and yoy. Unrated G3 issuance in Asia was USD 28.99bn in the fourth quarter of 2014, a decline of 16.2% qoq but an increase of 33.6% yoy. For the full year 2014, total G3 issuance in Asia was USD 500.11 billion, a new high, with USD 353.18bn in HG debt, 36.03bn in HY deal, and the balance unrated. Outstanding G3 debt, including developed market Asia, stood at USD 11.94tn at the end of fourth quarter 2014, a decline of 1.2% qoq, with declines in unrated debt (USD 3.27tn, 5.0% decline) but growth in HG debt (USD 8.49tn, 0.3% growth) and HG debt (USD 192.92bn, 0.8% growth).

Finally, turning to LCY issuance, total HG issuance, including Japan, Australia, and New Zealand, stood at USD 316.68bn in the third quarter of 2014, while HY issuance and unrated issuance was USD 146.45mn and 178.23bn, respectively, over the same period.

Looking ahead, LCY issuance is likely to increasingly gain prominence as a percentage of total Asian debt issuance – LCY debt outstanding as a percentage of GDP has recorded strong growth across Asia – among the larger economies, Korea LCY debt as a percentage of GDP has grown to 123.2% of GDP from 17% in December 2000, while comparable figures for China recorded an impressive jump to 52.5% vis-à-vis 13.3%, over the same period. Among the ASEAN economies, Thailand (76.4% in September 2014 vis-à-vis 23.3% in December 2001) and Malaysia (102.3% vis-à-vis 73.3% over the same period) also recorded strong growth rates. A combination of increased USD strength, restrictions on offshore bond issuance, currency volatility and increased investor risk aversion, particularly towards HY USD-denominated bonds (on account of structural subordination among other factors), could all combine to act as a catalyst for LCY bonds to benefit at the expense of G3 and foreign currency denominated debt issuance out of Asia.

4.1. G3 All: Total Issuance

4.2. G3 All: Total Outstanding

4.3. G3 All: HG Issuance

4.4. G3 All: HG Outstanding

4.5. G3 All: HY Issuance

4.6. G3 All: HY Outstanding

Source: Dealogic

Source: Bloomberg
4.7. LCY All: Total Issuance

LCY All: Total Issuance in Asia
2006 - 2014:Q4

Source: Dealogic
5. China – Domestic

Total Issuance & Outstanding – Domestic CNY issuance

Total domestic CNY issuance stood at USD 110.27bn in the fourth quarter of 2014, a decline of 30.3% qoq (USD 158.18bn) and 28.1% yoy (USD 174.17bn). By tenor, 56.5% of fourth quarter issuance (USD 62.26bn) would mature in five years or less, followed by the 7 – 10 year bucket (USD 17.28bn). By sector, finance led issuance totals (USD 23.96bn), followed by construction (USD 23.40bn).

Outstanding domestic CNY debt stood at USD 5.34tn at the end of fourth quarter 2014, with sovereigns leading totals (USD 3.08tn), followed by financials (USD 936.18bn) and industrials (USD 513.59bn).

The Chinese LCY bond market is now the third-largest in the world, behind the US and Japan. Several factors are likely to give the domestic CNY bond market a further boost in 2015 – Among these factors, the following are key props underpinning the domestic market:

a) The de facto acceptance among global central banks (CB) of the renminbi as an international reserve currency is likely to see more CB investment in onshore CNY assets.

b) The granting of more RQFII quotas to investors in new markets, plus increased usage of existing quotas by institutional investors across the world will further buoy the domestic CNY bond market.

c) The search for yield among domestic investors on a combination of i) the slowing domestic economy and ii) the need for increased savings to meet the needs of a gradually aging Chinese workforce will spur the development of the LCY bond market in China.

d) The growth of domestic pension and mutual funds, the further development of domestic ratings agencies and the general adoption of international best practices in the domestic fund management industry are all supportive of the further growth of the local fixed income markets.

e) The securitization of progressively more domestic asset classes and further growth in existing asset classes (such as auto loan securitizations), coupled with further innovation, is yet another prop underpinning Chinese fixed income assets.

f) Market factors (primarily the general weakness in Chinese property sector bonds) have put a temporary stop to USD bond issuance by lower rated Chinese issuers. Some of these issuers could turn to the domestic bond market as an alternative source of funds, at the margin.

g) Finally, increased regulation of wealth management products and the shadow banking industry in China is likely to see Chinese investors switch some of their investments into CNY bonds, which still offer a substantial yield pick-up over bank deposits.

5.1. Domestic CNY All: Total Issuance

5.2. Domestic CNY All: Total Outstanding
5.3. Domestic CNY All: Issuance by Rating

5.4. Domestic CNY All: Outstanding by Rating

5.5. Domestic CNY All: Issuance by Tenor

5.6. Domestic CNY All: Outstanding by Remaining Tenor

5.7. Domestic CNY All: Issuance by Sector

5.8. Domestic CNY All: Outstanding by Sector

Source: Dealogic

Source: Bloomberg

Source: Bloomberg
Key trends in offshore renminbi (CNH) and the dim sum bond markets

The CNH, or “dim sum”, saw record issuance for all of 2014, even as the pace of issuance slowed on a yoy basis in the final quarter. For the fourth quarter of 2014, an equivalent of USD 10.06bn in CNH bonds were issued, an increase of 10.8% qoq but a 36.5% decline yoy. Some diversion of investor interest to Chinese equities following the inauguration of the Shanghai-Hong Kong Stock Connect program, coupled with the gradual drift upwards in “dim sum” bond yields through much of 2014, accounted for this yoy fall in issuance.

In terms of tenor, nearly three-fourths of fourth quarter 2014 issuance (USD 7.04bn) was accounted for by transactions with tenors of 5-year years or less. HG deals rated A totaling USD 567.0mn had the highest share among rated deals (5.6%). In 4Q’14, finance sector transactions totaling USD 6.20bn accounted for the largest volume of deals by sector (61.7%), followed by sovereigns, totaling USD 1.95bn (representing 19.44% of issuance).

The total of dim sum bonds outstanding stands at USD 104.42bn, an increase of 0.2% qoq. The CNH deposit base in Hong Kong has also edged up slightly, to USD 155.9bn at the end of November 2014, up from USD 152.99bn at the end of August. Continued currency volatility combined with the strength of the USD has caused CNH deposit growth to slow, as investors have adopted a “wait-and-see” approach with respect to the Chinese currency – it would appear that investors and market participants, not just in Hong Kong but in other centers as well, are looking for a clear trend of appreciation in the renminbi before committing fresh funds.

The successful launch of the Stock Connect program has seen a gradual increase in the take-up of the quota allocated for flows into Chinese equities by Hong Kong investors (The Northbound quota), with around 25% usage at present – interestingly enough, the increased usage of this allocation by Hong Kong buyers of Chinese stocks, will result in a reduction in the offshore CNH deposit base in Hong Kong as some of the liquidity is diverted into China. That said, this is a positive development, since there are now other outlets for CNH deposits to move into alternative asset classes such as Chinese equity, in addition to the now mature “dim sum” bond market.

Finally, renminbi internationalization continued at a steady pace as Australia (Sydney), Canada (Toronto) and Qatar (Doha) were designated as new offshore renminbi centers – Australia and Canada received RQFII quotas of CNY 50.0bn apiece, while Qatar received an RQFII quota of CNY 30.0bn.
6.7. CNH All: Issuance by Sector

<table>
<thead>
<tr>
<th>Sector</th>
<th>Amount (in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real Estate/Property</td>
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<tr>
<td>Metal &amp; Steel</td>
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<tr>
<td>Machinery</td>
<td>$155.8</td>
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<tr>
<td>Construction/Building</td>
<td>$81.1</td>
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<tr>
<td>Chemicals</td>
<td>$182.7</td>
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<tr>
<td>Utility &amp; Energy</td>
<td>$2,011.9</td>
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</table>

Source: Dealogic

6.8. CNH All: Outstanding by Sector

<table>
<thead>
<tr>
<th>Sector</th>
<th>Amount (in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real Estate</td>
<td>$23,011.7</td>
</tr>
<tr>
<td>Utilities</td>
<td>$59,560.5</td>
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<tr>
<td>Technology</td>
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<tr>
<td>Materials</td>
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<tr>
<td>Industrials</td>
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<tr>
<td>Government</td>
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<tr>
<td>Energy</td>
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<tr>
<td>Consumer Staples</td>
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<tr>
<td>Consumer Discretionary</td>
<td>$7,927.4</td>
</tr>
<tr>
<td>Communications</td>
<td>$5,544.6</td>
</tr>
</tbody>
</table>

Source: Bloomberg
7. Spreads, Credit & Total Return

Relative Value and returns (Asia ex-Japan, Australia & New Zealand G3)

In a trend consistent with previous quarters, Asian bonds continue to trade wider than their US and European counterparts. At the end of 4Q’14, Asian HG bonds on a composite basis were quoted at an average spread of 187.8 basis points (bps), while US and European HG bond issues were quoted at average spreads of 144 bps and 97 bps respectively. Likewise, in the HY space, Asian HY corporates were quoted at a composite spread of 533.52 bps, but US and European HY bonds were tighter at 504 bps and 409 bps respectively.

In terms of total return in the fourth quarter, Asian dollar HG debt led returns among debt classes, followed by a range of global corporate credit, while HY debt underperformed. Asian HG returned 2.4% in the fourth quarter, while HY indices lost 1.5%; however both performed positively in 2014, returning 8.8% and 5.4% respectively. Across the board, HY has tended to lag HG overall on renewed risk aversion. This flight to safety has led to a strong rally in USTs, which has tended to buoy the higher-rated bonds relative to lower-rated issues.

Looking ahead, investor risk aversion towards the HY sector (particularly China property names) should be partially offset by renewed risk appetite for selective assets, following the announcement of the long-awaited QE program just announced by the ECB. The recent trend for Asian HG bonds outperforming HY should continue, at least in the short to medium term, buoyed by the combination of still continuing US Treasury strength and the perception among investors that Asian HG issues not only offer some yield pick-up over ultra-safe G3 government debt issues, but are also a relative “safe haven” compared to HY bonds. Bank subordinated debt, particularly AT1 paper, could also find some favor among investors given that a) they offer relatively attractive yields and b) are seen by investors as a “safer” alternative to HY paper.
7.1. Global HG Corporate Spreads

Global HG Corporate Spreads

Source: BAML, JP Morgan

7.2. Global HY Corporate Spreads

Global HY Corporate Spreads

Source: BAML, JP Morgan

7.3. China Interbank AAA - BBB Corps Fixed Rate Curve

China Interbank AAA - BBB Corps Fixed Rate Curve
December 31, 2014

Source: Bloomberg

7.4. CNH HG Yield Curve

CNH HG Yield Curve

Source: Bloomberg

7.5. CNH HY Yield Curve

CNH HY Yield Curve

Source: Bloomberg

7.6. CNH NR Yield Curve

CNH NR Yield Curve

Source: Bloomberg
7.7. Global Returns, Quarter-End

7.8. Global Returns, 2014 Year to Date

7.9. Asia Upgrades / Downgrades ex DM Asia

7.10. Asia Upgrades / Downgrades, DM Asia Only

7.11. Asian Upgrades & Downgrades, Standard & Poor’s, Fourth Quarter and Full Year 2014

<table>
<thead>
<tr>
<th>Upgrades</th>
<th>Country</th>
<th>Date</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
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<td>PT Alam Sutera Realty Tbk.</td>
<td>Indonesia</td>
<td>1/7/2014</td>
<td>B+</td>
</tr>
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<td>Korea Development Bank (Republic of Korea)</td>
<td>Korea, Republic of</td>
<td>3/22/2014</td>
<td>A+</td>
</tr>
<tr>
<td>DEXUS Property Group</td>
<td>Australia</td>
<td>3/31/2014</td>
<td>A-</td>
</tr>
<tr>
<td>Hongkong Land Holdings Ltd.</td>
<td>Hong Kong</td>
<td>4/15/2014</td>
<td>A</td>
</tr>
<tr>
<td>Singapore Power Ltd.</td>
<td>Singapore</td>
<td>4/17/2014</td>
<td>AAA</td>
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<td>Sinochem Hong Kong (Group) Co. Ltd. (Sinochem Corp.)</td>
<td>Republic of the Philippines</td>
<td>5/9/2014</td>
<td>BBB+</td>
</tr>
<tr>
<td>Republic of the Philippines Development Bank of the Philippines (Republic of the Philippines)</td>
<td>Philippines</td>
<td>5/9/2014</td>
<td>BBB+</td>
</tr>
<tr>
<td>Philippine Long Distance Telephone Co.</td>
<td>Philippines</td>
<td>5/9/2014</td>
<td>BBB</td>
</tr>
<tr>
<td>Power Sector Assets &amp; Liabilities Management Corp. (Republic of the Philippines)</td>
<td>Philippines</td>
<td>5/12/2014</td>
<td>BBB+</td>
</tr>
<tr>
<td>PT Professional Telekomunikasi Indonesia</td>
<td>Indonesia</td>
<td>6/15/2014</td>
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<td>7/10/2014</td>
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<td>9/11/2014</td>
<td>BBB+</td>
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<td>12/11/2014</td>
<td>BBB-</td>
</tr>
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<td>Downgrades</td>
<td>Country</td>
<td>Date</td>
<td>Rating</td>
</tr>
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<td>---------------------------------------------------------------------------</td>
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<td>2/17/2014</td>
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<td>Australia</td>
<td>3/6/2014</td>
<td>CCC+</td>
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<tr>
<td>Ausdrill Ltd.</td>
<td>Australia</td>
<td>3/24/2014</td>
<td>BB-</td>
</tr>
<tr>
<td>GS Caltex Corp.</td>
<td>Korea, Republic of</td>
<td>3/24/2014</td>
<td>BBB+</td>
</tr>
<tr>
<td>St Barbara Ltd.</td>
<td>Australia</td>
<td>3/26/2014</td>
<td>B-</td>
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<tr>
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<td>4/29/2014</td>
<td>BB</td>
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<tr>
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<td>4/30/2014</td>
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<td>Zoomlion Heavy Industry Science and Technology Co. Ltd</td>
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<td>5/14/2014</td>
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<td>Indonesia</td>
<td>7/4/2014</td>
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<tr>
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<td>Fonterra Co-operative Group Ltd.</td>
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</tr>
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<td>BB</td>
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### 7.12. Asian Defaults, Standard & Poor's, Full Year 2014

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<tr>
<th>Defaults</th>
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<tr>
<td>Midwest Vanadium Pty.</td>
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<td>Missed Interest Payment</td>
</tr>
<tr>
<td>PT Bumi Resources Tbk</td>
<td>Indonesia</td>
<td>Missed Principal Payment</td>
</tr>
<tr>
<td>LDK Solar Co. Ltd.</td>
<td>China</td>
<td>Chapter 11</td>
</tr>
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</table>
8. Summary of the Methodologies Adopted for this Report

2. G3 Asia ex Developed Market Asia (Japan, Australia, and New Zealand)

Issuance

Bond transactions are sourced primarily from Dealogic, with supplemental information sourced from Bloomberg. Unless otherwise noted, all issuance are long-term debt. High grade transactions are defined as transactions with a Dealogic “effective” rating of equal or greater than BBB-, and may include unrated transactions based on issuer and desk notes. High yield transactions are defined as transactions with a Dealogic “effective” rating of equal or less than BB+, and may also include unrated transactions based on issuer and desk notes. Unrated deals are those deals with no effective rating from Dealogic.

“All Asia” issuance are defined as being a corporate bond issue having a Dealogic “deal nationality” as within Asia, regardless of market, including domestic. Sovereign, sub-sovereign, medium-term notes, and agencies are also included from issuance, while supranational and ABS/MBS issuers are excluded from issuance. Loans are excluded from issuance as well.

“DM”, or Developed Market Asia, include those deals with a Dealogic deal nationality from Australia, Japan, and New Zealand. “Ex DM Asia” will refer to all deals excluding those deals with a Dealogic deal nationality from Australia, Japan, and New Zealand.

G3 deals are defined a subset of deals in “All Asia” that are rank eligible, according to Dealogic’s rank eligibility guidelines, with a tranche currency in US dollar (USD), European euro (EUR), or Japanese yen (JPY). There may exist deals within “All Asia” issuance that are denominated in a G3 currency but are not rank eligible and therefore not included in G3 tables but may be included in all other non-G3 exclusive tables.

“LCY”, or local currency, are defined as a subset of deals in “All Asia” flagged by Dealogic local currency flag. G3 and LCY deals are not mutually exclusive and may overlap (e.g., in the case of Japanese JPY deals).

All issuance are denoted in USD equivalents based on exchange rates as of the issue date of the bond.

Outstanding

Outstanding figures are sourced from Bloomberg and contain all bonds from its corporate securities database, including private placements. Structured notes and debt secured by assets are excluded. All other criteria hew closely to the criteria for issuance.

All outstandings are denoted in USD equivalent based on exchange rates as of quarter-end.

Outstanding G3 deals are defined a subset of deals in “All Asia” that are rated with at least one rating by one of the four rating agencies: Fitch Ratings, Moody’s, Standard & Poor’s, or DBRS; and denominated in US dollar (USD), European euro (EUR), or Japanese yen (JPY). Deals that are not rated by one of the four rating agencies (those deals with a Bloomberg composite rating of “NA”) are excluded. The “NA” exclusion is due to overlap between rank ineligible deals and those deals with no rating; a close analysis of the data reveals that the figures for data excluding “rank ineligible” deals and the figures for data excluding data rated N.A. in Bloomberg are similar.

2.1., 2.3, 2.5., 2.7., 2.9., 2.11., 2.13., 2.15., 2.17., 2.18.

Data are sourced from Dealogic.
Issuance by country is determined by Dealogic’s deal nationality.

Issuance by tenor is determined by years of maturity at issuance.

Issuance by sector is defined by Dealogic’s General Industry Group (“GIG”) groupings and are not analogous to Bloomberg’s Sector grouping.

2.2., 2.4., 2.6., 2.8., 2.10., 2.12.

Data are sourced from Bloomberg.

Outstanding by rating are by current composite rating assigned by Bloomberg. Composite ratings by Bloomberg are the average of ratings assigned by Moody's, Standard & Poor's, Fitch Ratings, and DBRS; a minimum of two ratings must be given to a bond before a composite rating is generated. “NR” denotes a bond with a single rating assigned by the four rating agencies, whereas “NA” denotes a bond with no rating from any of the four.

Outstanding by tenor are based on current tenor as quarter-end. “Other” includes those bonds with no listed maturity date and perpetuals.

3. LCY Asia ex Developed Market Asia (Japan, Australia and New Zealand)

3.1. - 3.4.

Issuance data are sourced from Dealogic according to the criteria outlined in Section 1. Outstanding data are sourced from Bloomberg according to the criteria outlined in Section 1.

4. All Asia

4.1. – 4.9.

Issuance data are sourced from Dealogic according to the criteria outlined in Section 1. Outstanding data are sourced from Bloomberg according to the criteria outlined in Section 1.

5. Domestic CNY

Issuance

Bond transactions for CNY are sourced from Dealogic and are defined as all issued debt denominated in renminbi (CNY) and in the domestic debt markets. CNY-denominated deals issued in the euro, foreign, or international markets are excluded. There are no restrictions on deal type and will include supranationals, medium-term notes, money market notes, securitisations, and commercial paper debt. Due to the lower restrictions in CNY issuance, CNY-denominated deals outside of Section 5 and 6 are a subset of the deals contained in Section 5 and 6.

Outstanding

Bond transactions for CNY are sourced from Bloomberg and are defined as debt denominated in CNY and issued in the domestic or domestic MTN markets. CNY-denominated deals issued in the euro, foreign, or international debt markets are excluded. Deals include corporate high grade bonds, high yield bonds, medium-term notes, money market and commercial paper debt. The combination of CNH and CNY debt exclude a small minority of dual-currency deals that are non-domestic, non-dim sum debt.

All outstandings are denoted in USD equivalent based on exchange rates as of quarter-end.

5.1. – 5.8.
Issuance data are sourced from Dealogic in accordance to the criteria specified in Section 5. Outstanding data are sourced from Bloomberg in accordance to the criteria specified in Section 5.

6. CNH

Issuance

Bond transactions for CNH are sourced from Dealogic and are defined as all debt denominated in renminbi (CNY) issued and in the euro, foreign, or international debt markets. CNY-denominated deals issued in the domestic market are excluded. There are no restrictions on deal type and will include supranationals, medium-term notes, money market notes, securitisations, and commercial paper debt. Due to the lower restrictions in CNH issuance, CNH-denominated deals outside of Section 5 and 6 are a subset of the deals contained in Section 5 and 6.

All issuance are denoted in USD equivalents based on exchange rates as of the issue date of the bond.

Outstanding

Bond transactions for CNH are sourced from Bloomberg and are defined as debt denominated in CNY and issued in the euro, foreign, or international debt markets. CNY-denominated deals issued in the domestic market are excluded. Deals include corporate high grade bonds, high yield bonds, medium-term notes, money market, securitisations, and commercial paper debt. The combination of CNH and CNY debt exclude a small minority of dual-currency deals that are non-domestic, non-dim sum debt.

All outstandings are denoted in USD equivalent based on exchange rates as of quarter-end.

6.1 – 6.8.

Issuance data are sourced from Dealogic in accordance to the criteria specified in Section 4. Outstanding data are sourced from Bloomberg in accordance to the criteria specified in Section 6.

7. Spreads, Credit Quality & Total Return

7.1. – 7.2. Global Corporate Spreads

High grade and high yield US and European corporate spreads are sourced from Bank of America-Merrill Lynch (BAML) indices. Spreads are over government debt.

US high grade spreads are sourced from BAML’s US Corporate Index (C0A0) and tracks the performance of US dollar denominated investment grade corporate debt publicly issued in the US domestic market. Qualifying securities must have an investment grade rating (based on an average of Moody's, S&P and Fitch), at last 18 months to final maturity at the time of issuance, at least one year remaining term to final maturity as of the rebalancing date, a fixed coupon schedule and a minimum amount outstanding of USD 250 million. Original issue zero coupon bonds, 144a securities (with and without registration rights), and pay-in-kind securities (including toggle notes) are included in the index. Fixed-to-floating rate securities are included provided they are callable within the fixed rate period and are at least one year from the last call prior to the date the bond transitions from a fixed to a floating rate security. Contingent capital securities, including those with automatic principal write-down provisions, are included in the index provided they do not have an automatic common equity conversion, unless the conversion is activated by a regulatory authority in which case they are included. Other hybrid capital securities, such as those that potentially convert into preference shares, those with both cumulative and non-cumulative coupon deferral provisions, and those with alternative coupon satisfaction mechanisms, are also included in the index. Securities issued or marketed primarily to retail investors, equity-linked securities, securities in legal default, hybrid securitized corporates, Eurodollar bonds (USD securities not issued in the US domestic market), taxable and tax-exempt US municipal securities and DRD eligible securities are excluded from the index.
European high grade spreads are sourced from BAML’s Euro Corporate Index (ER00) and tracks the performance of EUR denominated investment grade corporate debt publicly issued in the Eurobond or Euro domestic markets. Qualifying securities must have a below investment grade rating (based on an average of Moody’s, S&P and Fitch), at least 18 months to final maturity at the time of issuance, at least one year remaining term to final maturity as of the rebalancing date, a fixed coupon schedule and a minimum amount outstanding of EUR 100 million. Original issue zero coupon bonds, "Global" securities (debt issued simultaneously in the Eurobond and euro domestic markets), 144a securities and pay-in-kind securities, including toggle notes, qualify for inclusion in the index. Callable perpetual securities qualify provided they are callable within the fixed rate period and are at least one year from the last call prior to the date the bond transitions from a fixed to a floating rate security. Contingent capital securities are included in the index provided they do not have an automatic common equity conversion feature; these securities with triggers activated by a regulatory authority, including conversions into equity, qualify for inclusion. Also qualifying for inclusion are contingent capital securities with principal write-down triggers. Hybrid capital securities qualify for the index, including those potentially converting into preference shares, those with both cumulative and non-cumulative coupon deferral provisions, and those with alternative coupon satisfaction mechanisms. Euro legacy currency, equity-linked and securities in legal default are excluded from the Index. Securities issued or marketed primarily to retail investments do not qualify for inclusion in the index.

US high yield spreads are sourced from BAML’s US High Yield Index (H0A0) and tracks the performance of US dollar denominated below investment grade corporate debt publicly issued in the US domestic market. Qualifying securities must have a below investment grade rating (based on an average of Moody’s, S&P and Fitch), at last 18 months to final maturity at the time of issuance, at least one year remaining term to final maturity as of the rebalancing date, a fixed coupon schedule and a minimum amount outstanding of $100 million. In addition, qualifying securities must have risk exposure to countries that are members of the FX-G10, Western Europe or territories of the US and Western Europe. The FX-G10 includes all Euro members, the US, Japan, the UK, Canada, Australia, New Zealand, Switzerland, Norway and Sweden. Original issue zero coupon bonds, 144a securities (with and without registration rights), and pay-in-kind securities (including toggle notes) are included in the index. Callable perpetual securities are included provided they are callable within the fixed rate period and are at least one year from the first call date. Fixed-to-floating rate securities are included provided they are callable within the fixed rate period and are at least one year from the last call prior to the date the bond transitions from a fixed to a floating rate security. Contingent capital securities, including those with automatic principal write-down provisions, are included in the index provided they do not have an automatic common equity conversion, unless the conversion is activated by a regulatory authority in which case they are included. Other hybrid capital securities, such as those that potentially convert into preference shares, those with both cumulative and non-cumulative coupon deferral provisions, and those with alternative coupon satisfaction mechanisms, are also included in the index. Securities issued or marketed primarily to retail investors, equity-linked securities, securities in legal default, hybrid securitized corporates, Eurodollar bonds (USD securities not issued in the US domestic market), taxable and tax-exempt US municipal securities and DRD eligible securities are excluded from the index.

European high yield spreads are sourced from BAML’s Euro High Yield Index (HE00) and tracks the performance of EUR denominated below investment grade corporate debt publicly issued in the eurodomestic or eurobond markets. Qualifying securities must have a below investment grade rating (based on an average of Moody’s, S&P and Fitch), at least 18 months to final maturity at the time of issuance. In addition, qualifying securities must have at least one year remaining term to final maturity, a fixed coupon schedule and a minimum amount outstanding of EUR 100 million. Original issue zero coupon bonds, “Global” securities (debt issued simultaneously in the Eurobond and euro domestic markets), 144a securities and pay-in-kind securities, including toggle notes, qualify for inclusion in the index. Callable perpetual securities qualify provided they are callable within the first call date. Fixed-to-floating securities also qualify provided they are callable within the fixed rate period and are at least one year from the last call prior to the date the bond transitions from a fixed to a floating rate security. Contingent capital securities are included in the index provided they do not have an automatic common equity conversion feature; these securities with triggers activated by a regulatory authority, including conversions into equity, qualify for inclusion. Also qualifying for
inclusion are contingent capital securities with principal write-down triggers. Hybrid capital securities qualify for the index, including those potentially converting into preference shares, those with both cumulative and non-cumulative coupon deferral provisions, and those with alternative coupon satisfaction mechanisms. Euro legacy currency, equity-linked and securities in legal default are excluded from the Index. Securities issued or marketed primarily to retail investments do not qualify for inclusion in the index.

Asian high grade and investment grade spreads are sourced from J.P. Morgan’s Asia Credit Index (JACI) and tracks the performance of USD-denominated Asian debt in the Asian ex-Japan region. Qualifying countries are those Asian region excluding Japan, including: China, Hong Kong, Indonesia, India, South Korea, Sri Lanka, Mongolia, Macao, Malaysia, the Philippines, Pakistan, Singapore, Thailand, Taiwan and Vietnam. Minimum deal sizes are $150 million and at least 12 months to final maturity at time of issuance. Fixed and floating rate instruments, and debt issued by sovereign, quasi-sovereign and corporate entities qualify for inclusion. Convertible bonds do not qualify for inclusion in the index.

7.3. China Interbank AAA Yield Curve
The curve is comprised of yuan-denominated fixed-rate corporate bonds that are traded on the China Interbank exchange. The bonds are rated AAA by local rating agencies. The values for the points on the curve are contributed by China Government Securities Depository Trust & Clearing Co Ltd (CDC).

7.4. – 7.6. China CNH Yield Curves
The securities underlying this curve are a subset of CNH data and sourced from Bloomberg; please see section 6 for more details regarding criteria. Ratings are determined by Bloomberg composite rating. Curves are fitted using Nelson-Siegel regression on mid-yield to maturity of underlying bonds.

7.7. – 7.8. Total Return (Quarter-End and YTD)
Total return data are sourced from various global bond and equity, including, but not limited to: the Bank of America-Merrill Lynch, Standard & Poor’s, J.P. Morgan, and MSCI.

7.9. – 7.11. Asian Issuer Rating Actions
European issuer upgrades and downgrades are sourced from S&P. and are a combination of both emerging market, Japan, Australia, and New Zealand rating actions. Multiple upgrades or downgrades of a single issuer are counted separately. Rating actions are inclusive of both corporate (both credit, policy, or merger-related) as well as sovereign ratings.

Due to publication timing, these data set may run on a quarter lag.

7.12. Asian Issuer Defaults
European issuer upgrades and downgrades are sourced from S&P and are a combination of both emerging market, Japan, Australia, and New Zealand defaults reported. Defaults are inclusive of both corporate (both credit, policy, or merger-related) as well as sovereign defaults.
9. Disclaimer

The information and opinion commentary in this Asia Credit Report (Report) was prepared by the leveraged finance division of the Asia Securities Industry and Financial Markets Association (ASIFMA) and the Securities Industry and Financial Markets Association (SIFMA). ASIFMA and SIFMA believe that the information in the Report, which has been obtained from multiple sources believed to be reliable, is reliable as of the date of publication. In no event, however, does either of ASIFMA and SIFMA make any representation as to the accuracy or completeness of such information. ASIFMA and SIFMA have no obligation to update, modify or amend the information in this Report or to otherwise notify readers if any information in the Report becomes outdated or inaccurate. ASIFMA and SIFMA will make every effort to include updated information as it becomes available and in subsequent reports. As information is collected from multiple sources and estimates by the individual sources may differ from one another, estimates for similar types of data could vary within the Report.

10. Credit

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Kyle Brandon, Managing Director, Director of Research
Sharon Sung, Assistant Vice President, Research