ASIFMA is an independent, regional trade association with over 80 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 Third Quarter 2016

Total issuance in 3Q’16 came in at USD 59.3 billion (bn) as of September 30, up 0.5% quarter-over-quarter (qoq) from 2Q’16 (USD 59.0bn) and up 124.1% year-over-year (yoy), inclusive of high grade (HG), high yield (HY), and unrated deals. Year to date ending September, G3 ex developed markets Asia issuance volume totaled USD 153.4bn and is on track to exceed 2015 full year volumes (USD 169.2bn). EM sovereign issuance continues to dominate G3 bond market headlines - the USD 17.5bn multi-tranche Saudi Arabia debut bond issue in the international markets dethroned the benchmark USD 16.5bn Argentina bond issue, issued in April this year, as the largest EM bond deal ever.

Within Asia ex-Japan/Australia and New Zealand, Chinese issuance dominated as usual, although Chinese offshore issuance generally stayed at the same levels as the prior quarter. HY bond issuance, both out of China and more interestingly, India, has also begun to gain traction as 2016 draws to a close. Notable firsts include a) the first Chinese green HY bond issue out of Modern Land (green bonds are an emerging theme this year – Hong Kong’s MTR Corp is the latest green bond issuer) and b) Delhi International Airport’s debut HY bond offering. The latter deal provided investors with diversification opportunities into the relatively small India HY sector, besides the standard Chinese property sector and Indonesian commodity sector issuers.

Key highlights of the quarter:

1) HG issuance (of USD 37.6bn) easily outpaced HY issuance of USD 13.8bn. HY issuance picked up significantly in the third quarter, representing nearly a quarter by dollar amount of total debt issuance in the third quarter, up significantly from the 6.3% representation in 2Q’16 and 5.6% in 3Q’15. Yet another key development, which has contributed to the resurgence in Chinese HY issuance, is the tremendous growth in the mainland Chinese investor base investing in G3/USD credits. Given the familiarity that Chinese investors have with the entire universe of Chinese issuers, this growing Chinese investor “bid” has helped underpin issuance out of China. This is also yet another reason why Local Government Financing Vehicle (LGFV) issuance from a whole range of Chinese provinces/provincial authorities (alluded to in our previous quarterly credit report) remains robust.

2) On a quarterly total return basis, Asian HY debt outperformed Asian HG paper, with HG paper reporting total returns of 2.10% in 3Q’16, compared to a 4.53% gain in HY paper. In terms of countries and sectors, the Indonesian sovereign continues to outperform on a YTD basis, delivering total returns of 19.68%; other standout sovereign gainers include Sri Lanka (+ 14.40%), Pakistan (+ 11.03%) and Mongolia (+ 10.87%). In terms of individual sectors, HY corporates (+ 11.37%), Industrials (+ 11.05%) and Oil & Gas (+ 10.95%), also delivered impressive returns (all figures YTD through 9/30/2016 – Source: JACI).

3) Looking ahead, it may tactically make sense for investors to rotate out of the outperforming HY sectors into some of the underperforming Asian LCY markets, on an unhedged basis. USD strength through much of 2016 has eroded overall Asian LCY returns – a combination of strong economic growth, falling interest rates across many Asian economies and the sense that the USD is at or near a short-term peak, may help underpin select Asian LCY credits over the next three to six months.
State of the Asian leveraged loan market

Asian leveraged loan debt, excluding developed market Asia, reached USD 74.9bn in 3Q’16, a 3.9% increase qoq (USD 72.1bn) but a 16.3% decline yoy (USD 89.5bn). Leading sectors in 3Q’16 issuance were chemicals (USD 18.4bn), construction/building (USD 8.2bn), and computers & electronics (USD 8.2bn). Leveraged loan issuance was primarily used for capital expenditures (USD 26.5bn) and acquisitions (USD 14.0bn). Sponsored loan deals rose slightly, representing 5.7% by dollar amount in the third quarter.

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

For the third quarter 2016, total G3 issuance stood at USD 59.3bn, up 0.5% qoq and 124.1% yoy. China remained the largest issuing country in the third quarter, accounting for a total of USD 31.8bn, or just over half (53.7%) of G3 issuance in 3Q’16; USD 21.8bn and USD 6.5bn in HG and HY deals, respectively, were priced from China alone. Both India and Hong Kong overtook South Korea to become the next largest issuers in the third quarter, with USD 7.0bn issued and USD 6.8bn issued, respectively, in 3Q’16.

Year to date ending September, issuance totaled USD 153.4bn, comprised of USD 114.7bn of HG issuance, 19.6bn of HY issuance, and USD 19.1bn of unrated issuance, on track to slightly exceed the prior year in volume.

Finance remained the largest sector of G3 issuance in the third quarter (USD 22.7bn), followed by real estate/property (USD 5.5bn) and metal & steel (USD 4.5bn).

In terms of ratings, within the HG space, A- transactions accounted for the largest share of deals priced during the quarter, with USD 8.1bn in total issuance, followed by A+ rated transactions totaling USD 7.2bn and BBB+ rated issuance with USD 5.0bn. Within HY issuance, the B category dominated with USD 4.0bn of issuance, followed by BB rated transactions of USD 3.0bn.

By tenor, Asia ex-Japan, Australia and NZ G3 deals with tenors of 5 years or less continued to account for the bulk of issuance in 3Q’16, with a total of USD 33.8bn in short tenor issues being priced during the quarter. Of these, USD 23.2bn were HG deals, USD 4.8bn were HY deals and the balance unrated.

Overall G3 debt outstanding in the region stood at USD 935.19bn, a growth of 13.9% qoq and 22.6% yoy. High grade debt accounted for the bulk of total outstanding debt at USD 611.49bn (a 17.6% increase qoq), followed by HY debt at USD 178.02bn (an increase of 3.1% qoq) and unrated debt at USD 145.69bn (a growth of 13.5% qoq). China (with USD 335.7bn), South Korea (with USD 123.4bn) and Hong Kong (with USD 109.2bn) remain the three countries with the largest shares of G3 debt outstanding. In terms of ratings, within the HG space, deals rated A+ (USD 91.7bn) now account for the largest share of debt outstanding, while BB+ transactions (USD 78.1bn) continued to remain the dominant rating outstanding in the HY space. By sector, financials with a total of USD 240.8bn accounted for a little more than a quarter of outstanding G3 paper, followed by sovereigns (USD 214.3bn). Finally, deals with remaining tenors of 5 years or less (USD 497.4bn) accounted for the bulk of total Asia (ex-Japan, Australia and NZ) debt outstanding.

Finally, turning to the LCY debt markets, USD 219.7bn in total LCY-denominated debt was issued in Asia (ex-Japan, Australia & NZ) in 3Q’16, an increase of 3.3% qoq (USD 212.6bn) and an increase of 9.7% yoy (USD 200.3bn). Year to date ending September, issuance volumes are $698.5bn, and similar to G3 issuance, on track to outpace 2015 issuance (USD 736.2bn).

Total LCY debt outstanding at the end of 3Q’16 in Asia (ex-Japan, Australia and NZ) stood at USD 14.2tn, rising by 4.5% qoq, with HG debt outstanding declining 4.3% while HY and non-rated debt rose 3.8% and 5.7% qoq, respectively, qoq. China also continued to account for the bulk of total outstanding LCY debt at USD 9.24tn, followed by India (USD 1.69tn) and South Korea (USD 1.42tn), although growth in the local currency market qoq remains largely from China.
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
2.13. G3 ex DM Asia: HY Issuance by Rating

G3 ex DM Asia: HY Issuance by Rating
2016:Q3

2.14. G3 ex DM Asia: HY Outstanding by Rating

G3 ex DM Asia: HY Outstanding by Rating
2016:Q3

2.15. G3 ex DM Asia: Total Issuance by Tenor

G3 ex DM Asia: Total Issuance by Tenor
2016:Q3

2.16. G3 ex DM Asia: Outstanding by Remaining Tenor

G3 ex DM Asia: Outstanding by Remaining Tenor
2016:Q3

2.17. Asia ex DM: Total Leveraged Loan Issuance

Asia ex DM: Leveraged Loan Issuance
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2.18. Asia ex DM: Total Leveraged Loan Issuance by Use of Proceeds

Asia ex DM: Leveraged Loan Issuance by Use of Proceeds
2016:Q3

Source: Dealogic

Source: Bloomberg
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 177.4bn in the third quarter of 2016, a growth of 23.1% qoq and nearly double yoy. In 3Q’16, total HG G3 issuance in Asia was USD 125.4bn, a growth of 21.7% qoq and 127.0% yoy; HY issuance was USD 20.9bn, an increase of 193.3% qoq and 253.3% yoy; and unrated issuance was USD 31.1bn, a decline of 8.3% qoq and 10.4% yoy. Year to date ending September, G3 issuance has reached USD 425.8bn and is on pace to exceed 2014 volumes (USD 440.8bn).

Outstanding G3 debt, including developed market Asia, stood at USD 11.65tn at the end of the third quarter 2016, a decline of 3.8% qoq, with growth in HG debt (USD 9.8tn, a 2.1% growth) but declines in HY debt (USD 222.7bn, a 0.3% decline) and unrated debt (USD 1.6tn, a 28.9% decline).

Finally, turning to LCY debt issuance, total issuance, including Japan, Australia, and New Zealand, stood at USD 572.3 billion, an increase of 2.5% qoq and an increase of 15.5% yoy, comprised of USD 362.5bn in HG issuance, USD 13.3 billion in HY issuance and USD 196.5 billion in unrated issuance.

LCY debt markets in the region continue to face several headwinds as 2016 draws to a close – Apart from a number of defaults on the part of mainland Chinese issuers, yet another market that has seen defaults and restructurings spike sharply is Singapore – on a combination of weakness in the oil, shipping and housing sectors, which has also weighed on overall economic growth in that regional financial center. This has in turn led to demands for greater investor protections, in the form of tighter covenants and more streamlined market practice with respect to cross-defaults and acceleration in payments.

Even apart from overall economic weakness in certain sectors weighing on the outlook for individual credits, yet another factor (alluded to above) is overall USD strength during the second half of 2016, which has weighed on total LCY debt market returns (for unhedged investors). LCY returns in 3Q’16 (as measured by the JP Morgan Government Bond Index (EM Global – GBI-EM) stood at only 1.8%, even though overall YTD performance remains strong (+ 17.2%), buoyed by USD weakness in the first half. Even so, over an extended period, the GBI-EM has turned in an underwhelming performance over the 2011-15 period, returning negative 4.0% (annualized). Again, USD strength has undermined returns, even though EM government bond yields overall have consistently tightened over the years. Despite the tightening in yields and the overall trend in Asia for rates to head even lower, yields remain at enticingly positive levels in a number of EM countries (and this has also generally been supportive of inflows into EM fixed income assets this year, after a slow start).

As mentioned earlier, investors with a contrarian view who believe that the USD has peaked may stand to reap strong returns overall going forward, if that in fact turns out to be the case – more so because EM economies (and Asia in particular) are growing at much more impressive rates than the DM world. (All YTD figures through 9/30/2016 as quoted in the JP Morgan Asset Management 4Q 2016 Asia “Guide to Markets).
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
4.7. LCY All: Total Issuance

[Graph showing LCY All: Total Issuance in Asia 2007 - 2016:Q3]

Source: Dealogic
5. China – Domestic

Total Issuance & Outstanding – Domestic CNY issuance

Total domestic CNY issuance stood at USD 174.4bn in the third quarter of 2016, up 9.6% from second quarter volume (USD 159.2bn) and an increase of 11.5% yoy (USD 156.5bn). By tenor, 64.0% of third quarter issuance (USD 111.6bn) would mature in five years or less, followed by the 5 – 7 year bucket (USD 25.1bn, or 14.4% of issuance). By sector, construction led issuance totals (USD 34.1bn), followed by real estate (USD 31.0bn).

Year to date ending September, domestic issuance has already outpaced 2016 volumes, with USD 565.5bn issued domestically in the first nine months of 2016, compared to USD 558.4bn in full year 2015.

Outstanding domestic CNY debt stood at USD 9.1tn at the end of third quarter 2016, with sovereigns leading totals (USD 5.09tn), followed by financials (USD 2.14tn) and industrials (USD 740.6bn).

Chinese securitization volumes ended third quarter at USD 80.2 billion in the third quarter of 2016, down slightly by 5.1% qoq but up 19.6% yoy. At approximately 80 billion, the Chinese securitization market now currently rivals the size of the Australian securitization market, although it remains largely domestic in nature.

Generally speaking, a number of factors continue to be very supportive for the continued growth of onshore bond issuance. These include:

a) Continued regulatory developments (such as Basel III capital requirements) pressuring bank balance sheets, increasing the pace of disintermediation over time – corporates are increasingly likely to tap the bond markets rather than the bank loan markets over the next 3-5 years, thereby increasing the percentage of debt financing relative to bank loans.

b) Growing NPLs in the Chinese banking system will necessarily result in Chinese banks turning more cautious/selective in their loan origination activity. This in turn will result in issuers turning to the bond markets to meet their financing needs.

c) LGFVs increasingly resorting to bond market financing (as opposed to a reliance on the shadow banking system) to meet their funding/refinancing requirements, as the Chinese authorities tighten their oversight of the shadow banking/alternative financing system.

d) The continued deepening and growing sophistication of the Chinese capital markets (including the steep growth in securitization volumes seen over the last two years) should help support Chinese bond market development. The opening of the Chinese bond market to international investors should also help domestic issuance at the margin, more so as investors aim to increase their weighting in the world’s third largest bond market.

e) Liquidity in the onshore (CNY) bond markets remains ample, even as the offshore (CNH) dim sum bond market continues to lose its allure as the offshore renminbi deposit base continues to erode on a number of factors (with the renminbi’s relatively rapid depreciation in recent weeks being primarily responsible for this development). This has also seen more issuers tapping the onshore markets at the expense of the offshore CNH market in Hong Kong.
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

Source: Dealogic

Source: Bloomberg
5.7. Domestic CNY All: Issuance by Sector

5.8. Domestic CNY All: Outstanding by Sector

6. China – CNH

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

The pace of issuance fell on a qoq basis in the third quarter, reflecting largely seasonal variation. For the third quarter of 2016, an equivalent of USD 3.9bn in CNH bonds were issued, a decline of 48.7% qoq and a decline of 1.1% yoy. In terms of tenor, all of third quarter issuance was accounted for by transactions with tenors of 5-years or less, with a third from short-term paper (USD 1.3bn). HG deals rated A+ totaling USD 1.1bn had the highest share among rated deals (28.4%). In terms of sector, finance transactions totaling USD 3.2bn accounted for the largest volume of deals by sector (83.7%), followed by real estate, totaling USD 404.6mn (representing 10.5% of issuance). Year to date ending September, offshore CNH reached USD 13.2bn, down significantly from full year 2015 volumes of USD 29.4bn of volume as onshore issuance took precedence.

The total of dim sum bonds outstanding stands at USD 81.5bn, a decline of 2.8% qoq. There are hardly any factors that are likely to stand in the way of the continued decline in the dim sum bond market. The offshore renminbi (CNH) deposit base continues to fall, with Hong Kong leading the way, with deposits now below the key USD 100bn equivalent level. The only major offshore center with a relatively stable deposit base is Taiwan, where deposits have remained steady at USD 46.0bn in CNH equivalent value, over the last few months. With the renminbi now trading well below the 6.70 level and with some forecasts calling for the Chinese currency to fall to the 7.00 level, this continued fall in offshore CNH deposits is unlikely to be arrested anytime soon. This will of course necessarily have an adverse impact on liquidity and dim sum bond issuance, over the next several months.
6.1. CNH All: Total CNH Issuance

6.2. CNH All: Total Outstanding

6.3. CNH All: Issuance by Rating

6.4. CNH All: Outstanding by Rating

6.5. CNH All: Issuance by Tenor

6.6. CNH All: Outstanding by Remaining Tenor
6.7. CNH All: Issuance by Sector

6.8. CNH All: Outstanding by Sector
7. Spreads, Credit & Total Return

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

Asian HG bond spreads continued to narrow in in the third quarter, trading several basis points tighter than in the second quarter. At the end of 3Q’16, Asian HG bonds on a composite basis were quoted at an average spread of 138 basis points (bps) from 170 bps end-June while US and European HG bond issues were quoted at average spreads of 143 bps (from 162 bps) and 115 bps (from 137 bps), respectively. Asian HY corporates narrowed considerably, ending 3Q’16 at 487 bps (from 603 bps), while US and European bonds were tighter at 497 bps (from 621 bps) and 416 bps (from 482 bps), respectively.

In terms of total return in the third quarter, equities, especially from the emerging market, were the outperformers in the third quarter, followed by Asian HY credit and HY credit generally, while commodities underperformed after their rally in the second quarter. Asian HG gained 2.10 % in the third quarter, while HY indices gained 4.53%.

Going into end-2016 and early 2017, several key themes are worthy of note:

a) For the first time in several months, US corporate credit spreads (both in the HG and HY space) are now a touch wider than their Asian counterparts. It would seem that in the USD-denominated markets at least, the strong rally seen in Asian credits may be set to take a breather and that relative value is likely to be found elsewhere.

b) Moreover, higher US interest rates going forward, will weigh on total returns – even if credit spreads continue to tighten, a sharp move higher in the belly of the USD treasury curve could more than offset any credit spread compression over the next three to six months. Carry on some of the higher yielding USD credits is still attractive, so there could be some value in a handful of Asian USD names, but by and large, investors should consider rotating out of USD credits, in our view.

c) In summary then, regional LCY bonds, particularly in countries where rates are still at attractive levels (such as India and Indonesia) might offer value – LCY overall also looks interesting, given that we are in the final quarter of 2016 with the USD having rallied very strongly. Any turnaround in sentiment towards the US currency could see the recent weakness seen in Asian currencies reverse quite quickly. Moreover, with Chinese authorities also signaling that they do not want a further sharp depreciation of the renminbi, weakness seen in the bellwether Chinese currency could also be at or near an end. All these factors suggest that investors should cautiously consider increasing their exposures to the Asian domestic markets, where it is possible to do so.
7.1. Global HG Corporate Spreads

7.2. Global HY Corporate Spreads

7.3. China Interbank AAA - BBB Corps Fixed Rate Curve

7.4. CNH HG Yield Curve

7.5. CNH HY Yield Curve

7.6. CNH NR Yield Curve
7.7. Global Returns, Quarter-End

Total Return (Global)
2016:Q3

Source: S&P, BAML, MSCI


Total Return (Global)
2016 YTD

Source: S&P, BAML, MSCI

7.9. Asia Upgrades / Downgrades ex DM Asia

Standard & Poor's Asia Upgrades/Downgrades ex DM Asia 2012 - 2016:Q3

Source: Standard & Poor's

7.10. Asia Upgrades / Downgrades, DM Asia

Standard & Poor's Asia Upgrades/Downgrades, DM Asia Only 2012 - 2016:Q3

Source: Standard & Poor's
### 7.11. Asian Upgrades & Downgrades, Standard & Poor's, Third Quarter 2016

<table>
<thead>
<tr>
<th>Upgrades</th>
<th>Country</th>
<th>Date</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>PT Cikarang Listrindo Tbk</td>
<td>Indonesia</td>
<td>8/18/2016</td>
<td>BB</td>
</tr>
<tr>
<td>Broadpectrum Limited</td>
<td>Australia</td>
<td>7/28/2016</td>
<td>BB+</td>
</tr>
<tr>
<td>Woori Bank (Woori Finance Holdings Co. Ltd.)</td>
<td>Korea, Republic of</td>
<td>8/8/2016</td>
<td>A</td>
</tr>
<tr>
<td>Energy/Australia Holdings Ltd. (CLP Holdings Ltd.)</td>
<td>Australia</td>
<td>7/25/2016</td>
<td>BBB</td>
</tr>
<tr>
<td>Tata Motors Ltd. (Tata Sons Ltd.)</td>
<td>India</td>
<td>8/16/2016</td>
<td>BB+</td>
</tr>
<tr>
<td>Industrial Bank of Korea</td>
<td>Korea, Republic of</td>
<td>8/8/2016</td>
<td>AA-</td>
</tr>
<tr>
<td>Alinta Energy Finance Pty. Ltd.</td>
<td>Australia</td>
<td>9/5/2016</td>
<td>BB</td>
</tr>
<tr>
<td>Korea Electric Power Corp. (Republic of Korea)</td>
<td>Korea, Republic of</td>
<td>8/8/2016</td>
<td>AA</td>
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<td>Kookmin Bank</td>
<td>Korea, Republic of</td>
<td>8/8/2016</td>
<td>A+</td>
</tr>
<tr>
<td>Korea Expressway Corporation (Republic of Korea)</td>
<td>Korea, Republic of</td>
<td>8/8/2016</td>
<td>AA</td>
</tr>
<tr>
<td>ORIX JREIT Inc.</td>
<td>Japan</td>
<td>7/11/2016</td>
<td>A</td>
</tr>
<tr>
<td>Korea Gas Corp. (Republic of Korea)</td>
<td>Korea, Republic of</td>
<td>8/8/2016</td>
<td>AA-</td>
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<tr>
<td>Korea Development Bank (Republic of Korea)</td>
<td>Korea, Republic of</td>
<td>8/8/2016</td>
<td>AA</td>
</tr>
<tr>
<td>Korea Land and Housing Corp. (Republic of Korea)</td>
<td>Korea, Republic of</td>
<td>8/8/2016</td>
<td>AA</td>
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<tr>
<td>China Metallurgical Group Corp.</td>
<td>China</td>
<td>7/14/2016</td>
<td>BBB</td>
</tr>
<tr>
<td>Korea National oil Corp. (Republic of Korea)</td>
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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 as 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 as 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 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. 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 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 (COA0) 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 member domestic markets. 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 EUR 250 million. Original issue zero coupon bonds and pay-in-kind securities, including toggle notes, are included in the index. Callable perpetual securities qualify provided they are at least one year from the first call date. Fixed-to-floating securities also qualify provided they are callable within the fixed rate period and 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 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 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 euro domestic 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 at least one year from 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

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10. Credit

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