Asia Credit Report

Prepared in partnership with sifma and asifma

2013 Q4

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1. 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 Q4

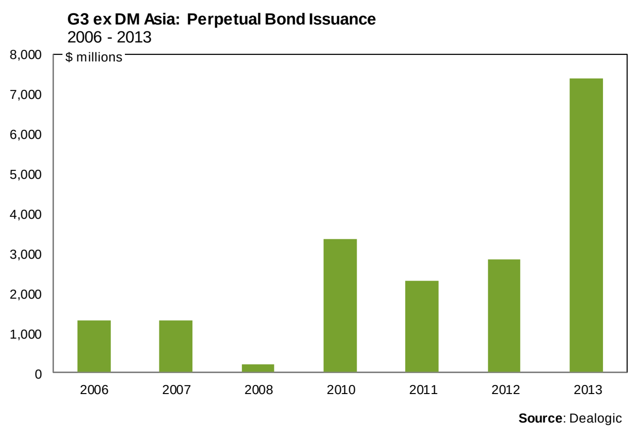
Besides being a most eventful year with several ups and downs, 2013 has nonetheless turned out to be yet another record year for Asia ex-Japan G3 bond issuance. With total issuance this year currently at USD 141.40 billion (bn) (as of December 31, 2013), this figure is ahead of full year (FY) 2012 issuance numbers of USD 134.04bn (inclusive of high grade (HG), high yield (HY), and unrated deals) and a new high in G3 issuance. The key driver of issuance through much of 2013 centered on the timing of tapering of the the Fed's purchase of US Treasuries, something that was first flagged mid-year and was immediately accompanied by both a sharp fall in emerging market (EM) currencies and equities and, more significantly for the credit universe, by a sharp backup in US treasury yields.

However, the surprise decision of the US Federal Reserve (Fed) not to institute the much heralded taper in September resulted in a drop Asia ex-Japan G3 bond issuance in Q3 (USD 23.60bn, a 44.8% decline quarter-over-quarter), only to pick up again in Q4 with USD 29.07bn in deals priced. However, in a somewhat paradoxical twist, the actual tapering announcement was greeted much more favorably by the markets, which reacted very positively to the announcement of the reduction in monthly bond purchases by the Fed to USD 75bn from USD 85bn in the waning days of 2013.

With markets adopting a "risk-on" posture, deal flow has started 2014 on a very constructive note, as spreads continue to tighten (although total returns continue to be muted, on account of US Treasury weakness). Additionally, tentative signs of a bottoming out in the Chinese economy (despite concerns around the country's shadow banking system and mixed signals with respect to Chinese manufacturing indices), coupled with the continued emphasis on economic reforms agreed at the third Chinese plenum, has also helped underpin Asian credit market sentiment.

Qualitative highlights with respect to Asia ex-Japan debt (structures, credit quality)

Propelled largely by the Chinese property sector, Asian high yield (HY) debt has developed into an asset class in its own right (USD 2.75bn in property sector deals were priced in Q4 alone, accounting for the largest share of HY G3 issuance in the quarter). Significantly, one key development in 2013 has been the provision of innovative onshore credit support by People's Republic of China (PRC) entities for offshore issuance by their subsidiaries, through "Keepwell" agreements, Equity Interest Purchase Undertakings (EIPUs) and Standby Letters of Credit (SBLCs). While these forms of credit support fall short of onshore credit guarantees, they nevertheless provide a level of comfort for investors.



Another trend has been the surge of perpetual bond issuance, as structures with features aimed to enhance yield has attracted investors to this asset class. In 2013, USD 7.4bn in perpetual bonds were issued, nearly a threefold increase from 2012 (USD 2.85bn).

Finally, in the banking space, Basel III capital compliant transactions (which could entail the bail-in of bondholders provided certain thresholds are met) have been priced. More such transactions will likely be issued through the 2014-2015 period, as banks seek to refinance some of the maturing/callable subordinated debt issued in prior years.

Credit quality in Asia has generally been improving, with S&P upgrading a total of 17 Asia (ex-Japan, Australia and NZ) issuers in 2013. On the other hand, the agency has downgraded 14 issuers. Inclusive of Australia, Japan, and New Zealand, downgrades exceeded upgrades, with 33 downgrades in 2013, compared to 28 upgrades.

Finally, with just two defaults (Winsway Coking and PT Bakrie Telecom) in 2013, Moody's has stated that the default rate for FY 2013 has dropped to just 1.6% (from the February 2013 forecast of 2%). This still compares favorably with the projected Moody's US speculative grade default rate of 2.9% and the corresponding 2013 European default rate of 3.6%.

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

China has been by far the largest issuing country in Q4, accounting for a total of USD 15.60 bn of the USD 29.07bn in G3 issuance seen so far in Q4, with USD 12.75bn and USD 2.65bn in HG and HY deals, respectively, priced from China alone. South Korea with USD 6.11bn in issuance and India with USD 2.78bn in issuance accounted for the bulk of the remaining issuance. For the full year 2013, total G3 issuance stood at USD 141.40bn, with HG transactions accounting for USD 100.26bn, HY issues accounting for a total of USD 24.82bn, and unrated issues accounting for 16.32bn.

Overall G3 debt outstanding in the region stood at USD 548.6bn, with HG accounting for the bulk of total outstanding debt at USD 407.56bn. HY (USD 73.75bn) and NR (USD 67.3bn) accounted for the balance of debt outstanding. China with USD 124.7bn, South Korea with USD 117.5bn and Hong Kong with USD 77.1bn are the three countries with the largest shares of G3 debt outstanding. In terms of ratings, within the HG space, deals rated A+ (USD 105.7bn) accounted for the largest share of debt outstanding, while NR deals (USD 67.3bn) and BB+ transactions (USD 63.0bn) dominated the deals outstanding in the HY space. By sector, sovereigns with a total of USD 146.4 bn accounted for more than a third of outstanding G3 paper, with financials (USD 124.5bn) a distant second. Finally, deals with remaining tenors of 5 years or less (USD 227.9bn) accounted for the bulk of total Asia (ex-Japan, Australia and NZ) debt outstanding.

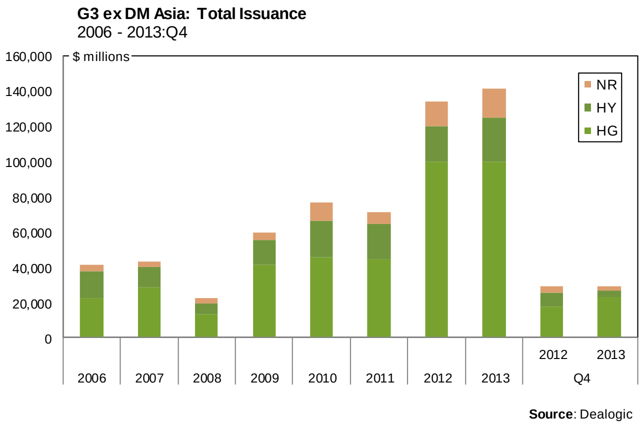
During Q4, three sectors between them accounted for the largest share of G3 issuance by sector: Finance (USD 9.00bn), Real Estate (USD 6.70bn – the bulk of which were Chinese HY property deals) and Oil & Gas (USD 3.81bn). Utility & energy, telecommunications, and the food & beverage sectors were also prominent.

In terms of ratings, within the HG space, AA- transactions accounted for the largest share of deals priced during the quarter, with USD 5.95bn in total issuance, followed by A+ transactions totaling USD 4.95bn and BBB+ issuance with USD 3.64bn. As for HY issuance, the B category was the sweet spot, with B+ transactions adding up to 2.0bn, and B and B- issuance accounting for USD 300mn and 250mn, respectively, of the USD $4.05bn in HY deals priced.

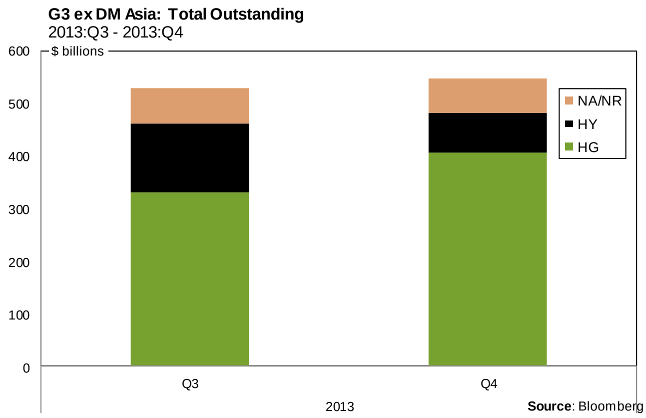
Finally, in terms of tenor, Asia ex-Japan, Australia and NZ G3 deals with tenors of 5 years or less accounted for the bulk of issuance in Q4 2013, with a total of USD 18.14bn in short tenor transactions being priced during the quarter. Of these, USD 14.08bn were HG deals while USD 3.25bn were HY transactions.

Finally, turning to the LCY debt markets, on a full year basis, USD 1.12tn in total LCY-denominated debt was issued in Asia (ex-Japan, Australia & NZ) with USD 226.47bn issued in Q4 2013 alone. The comparable figure for Q4 2012 was higher, at USD 294.13bn. Total LCY debt outstanding at the end of Q4 2013 in Asia (ex-Japan, Australia and NZ) stood at USD 8.8tn, with China accounting for the bulk of total outstanding LCY debt (at USD 4.58tn). Local currency debt markets have become progressively more important in the region and have presently outpaced the G3 debt markets in Asia (ex-Japan, Australia and NZ) by more than a 10-1 margin.

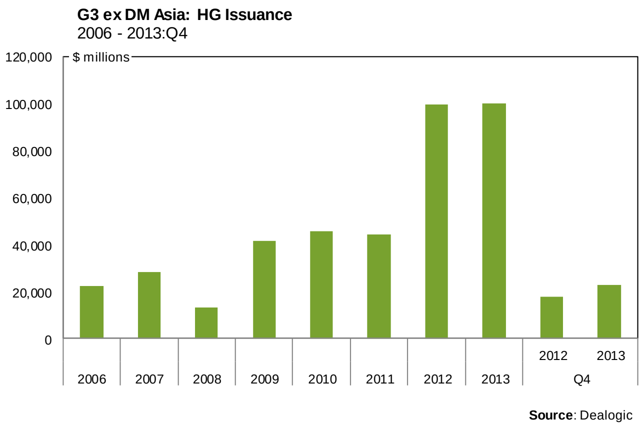
1.1. G3 ex DM Asia: Total Issuance



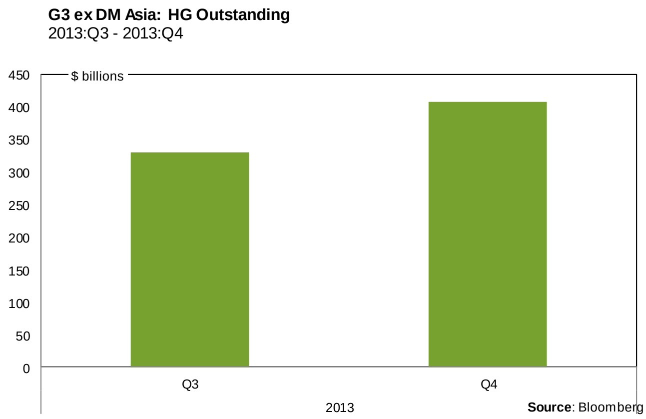
1.2. G3 ex DM Asia: Total Outstanding



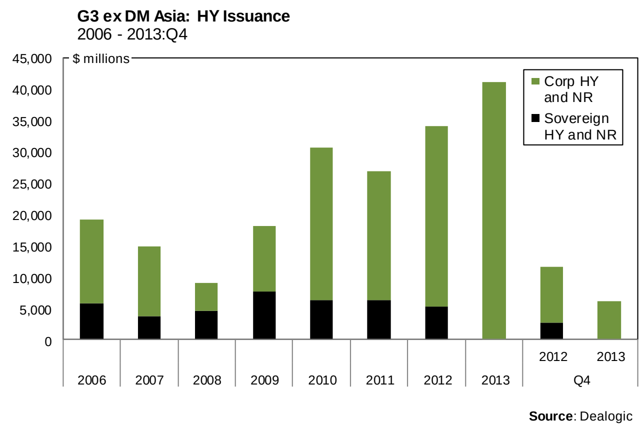
1.3. G3 ex DM Asia: HG Issuance



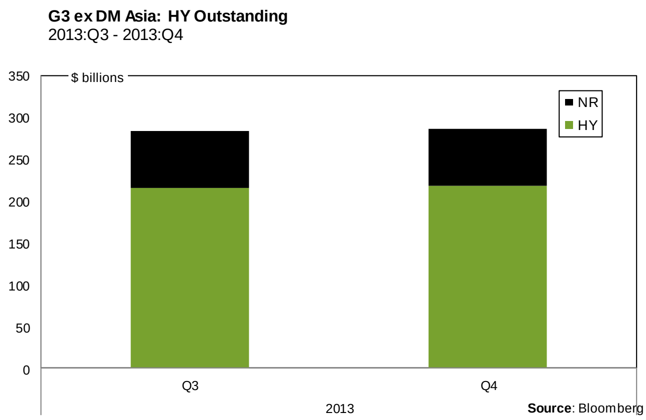
1.4. G3 ex DM Asia: HG Outstanding



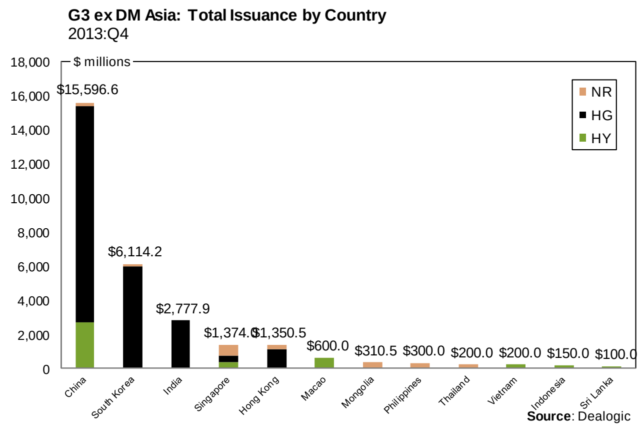
1.5. G3 ex DM Asia: HY Issuance



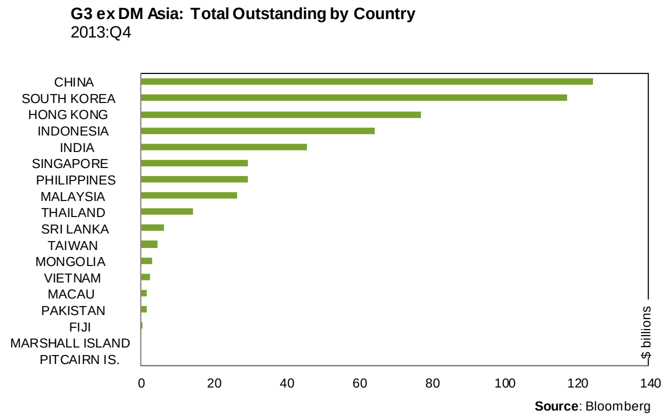
1.6. G3 ex DM Asia: HY Outstanding



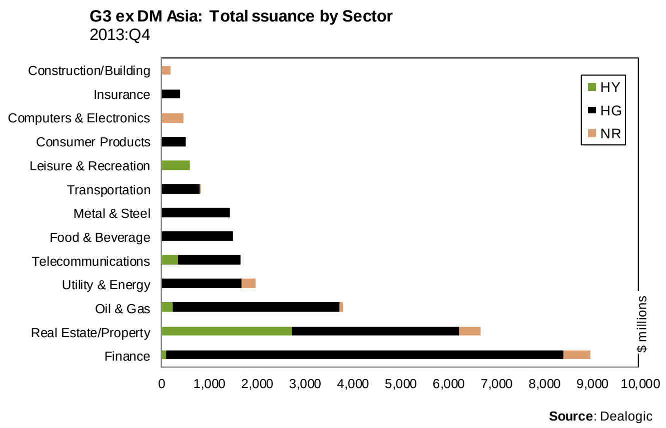
1.7. G3 ex DM Asia: Total Issuance by Country



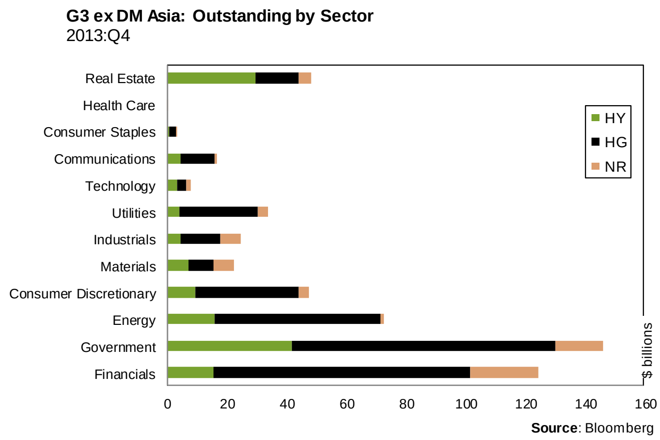
1.8. G3 ex DM Asia: Total Outstanding by Country



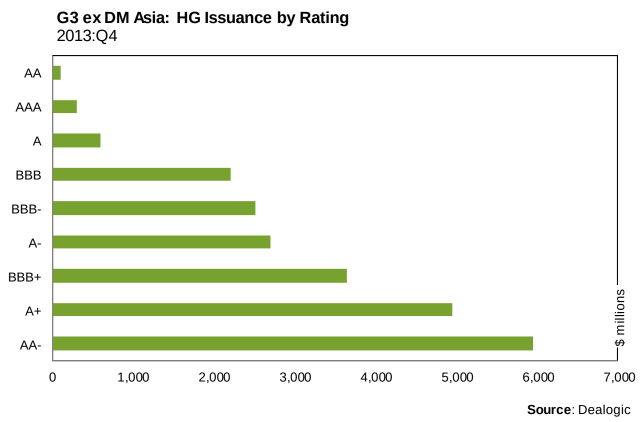
1.9. G3 ex DM Asia: Total Issuance by Sector



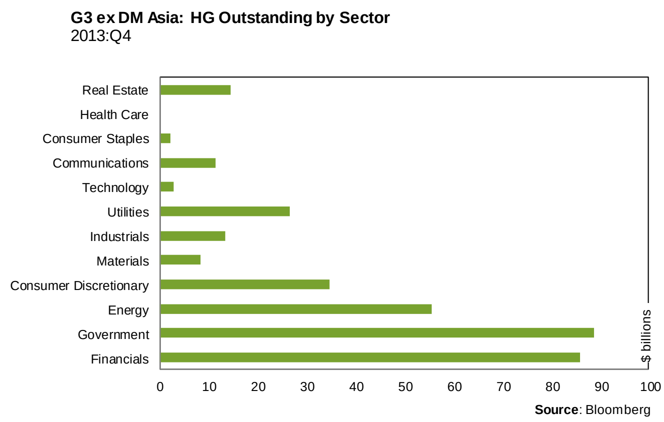
1.10. G3 ex DM Asia: Total Outstanding by Sector



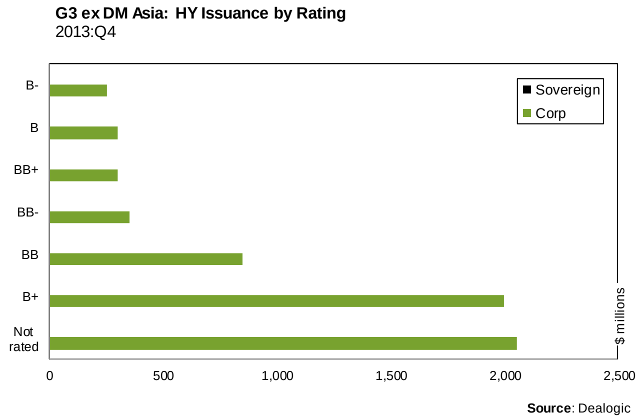
1.11. G3 ex DM Asia: HG Issuance by Rating



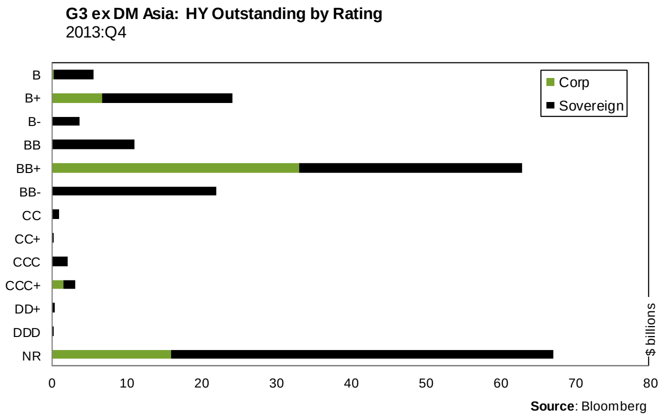
1.12. G3 ex DM Asia: HG Outstanding by Rating



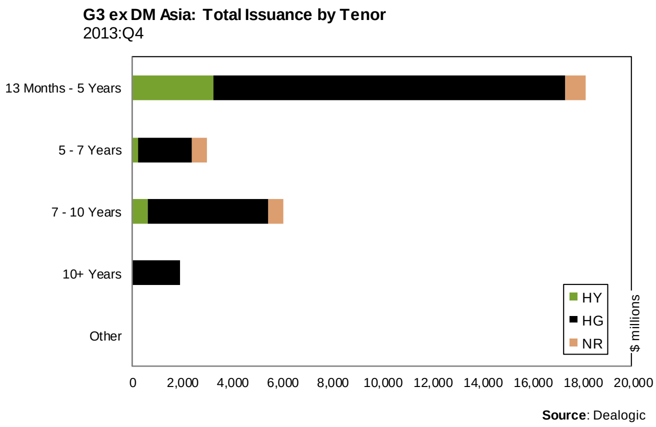
1.13. G3 ex DM Asia: HY Issuance by Rating



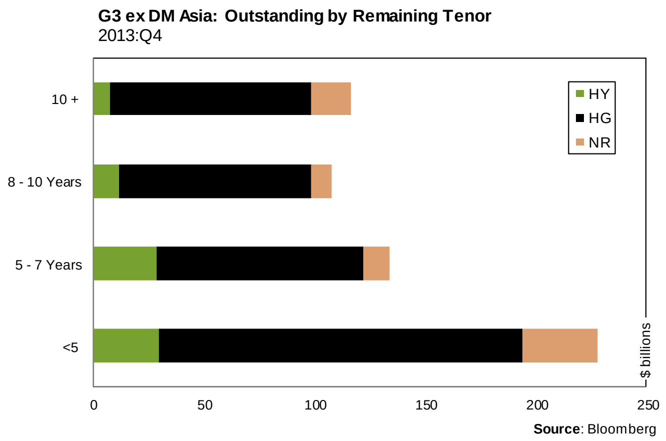
1.14. G3 ex DM Asia: HY Outstanding by Rating



1.15. G3 ex DM Asia: Total Issuance by Tenor

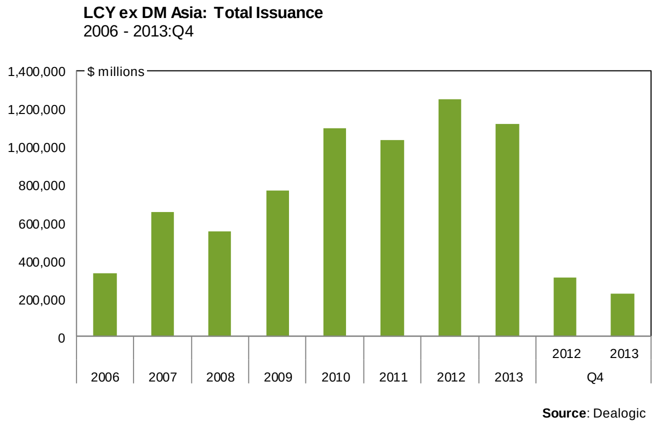


1.16. G3 ex DM Asia: Outstanding by Remaining Tenor

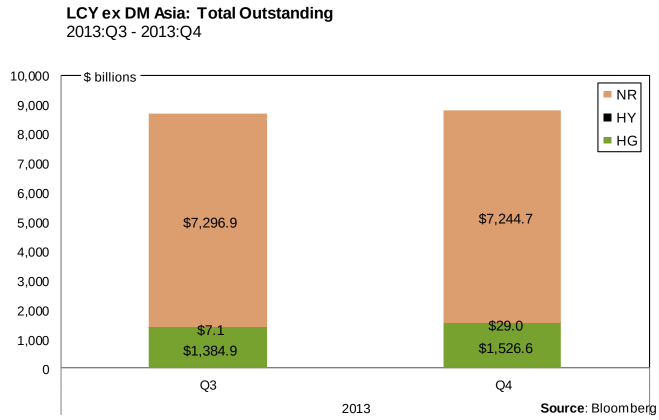


2. LCY Asia ex Developed Market Asia (Japan, Australia and New Zealand)

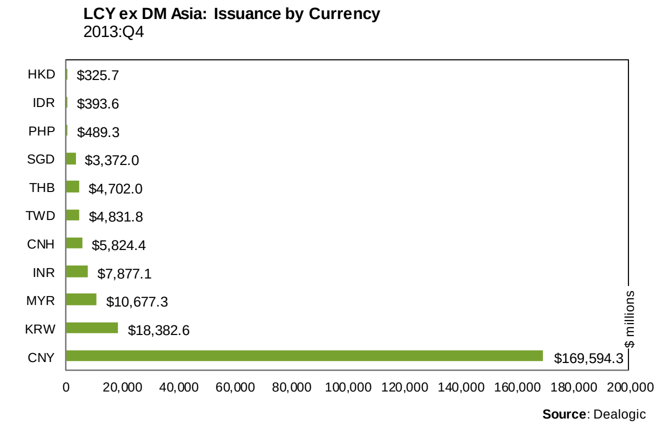
2.1. LCY ex DM Asia: Total Issuance



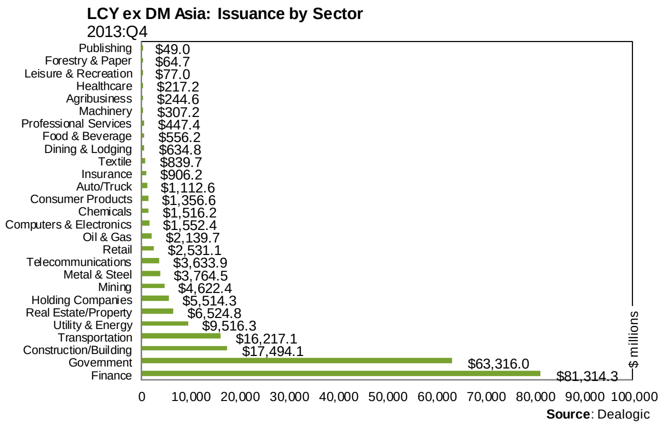
2.2. LCY ex DM Asia: Total Outstanding



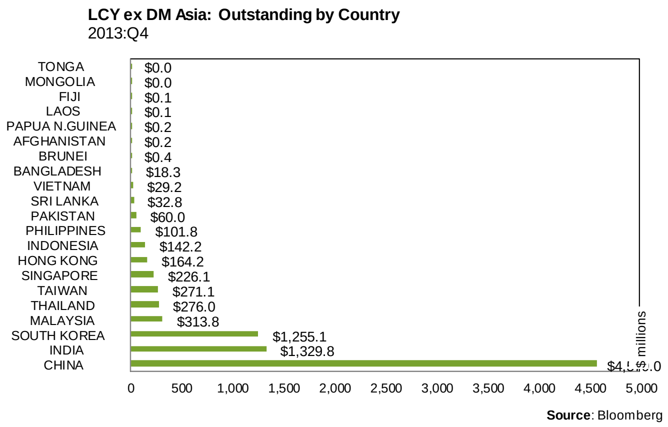
2.3. LCY ex DM Asia: Issuance by Currency



2.4. LCY ex DM Asia: Issuance by Sector



2.5. LCY ex DM Asia: Outstanding by Country



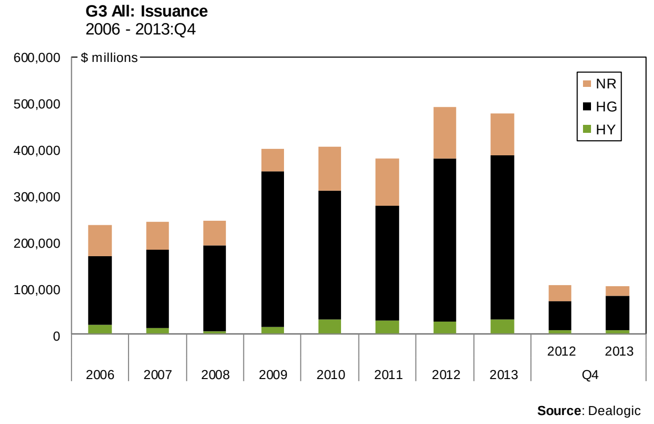
3. All Asia

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

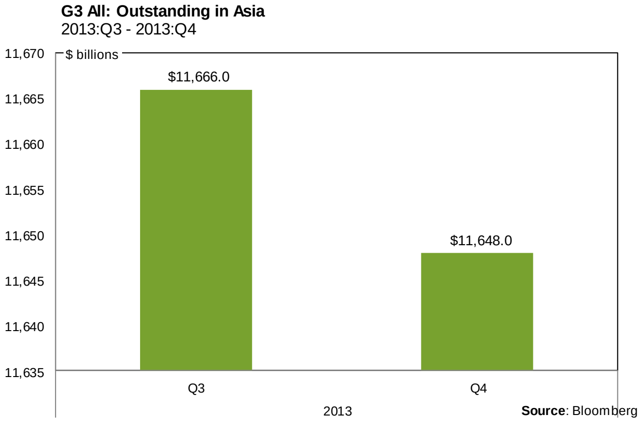
Total HG G3 issuance in Asia (including Japan, Australia and New Zealand) stood at USD 355.75bn on a full year basis for all of 2013, with Q4 2013 issuance of USD 74.08bn coming in slightly higher than Q4 2012 issuance of USD 63.73bn. Total HY G3 issuance in Asia (including Japan, Australia and New Zealand) was USD 33.14bn on a full year basis; Q4 2013 HY issuance of USD 8.61bn was slightly lower than comparable figures for Q4 2012, when issuance stood at USD 8.68bn. Unrated G3 issuance in Asia was USD 88.46bnfor 2013, while Q4 2013 was 21.70bn came in much lower than in Q4 2012, when 33.36bn was issued. In terms of total G3 debt outstanding in all of Asia, HG debt outstanding stood at USD 8.1tn at the end of Q4, while the comparable figure for HY bonds, including NR deals, was USD 3.51tn.

Finally, turning to LCY debt issuance, total HG issuance stood at USD 1.95tn on a full year basis, while HY issuance and unrated issuance was USD 12.35bn and 826.51bn, respectively, over the same period.

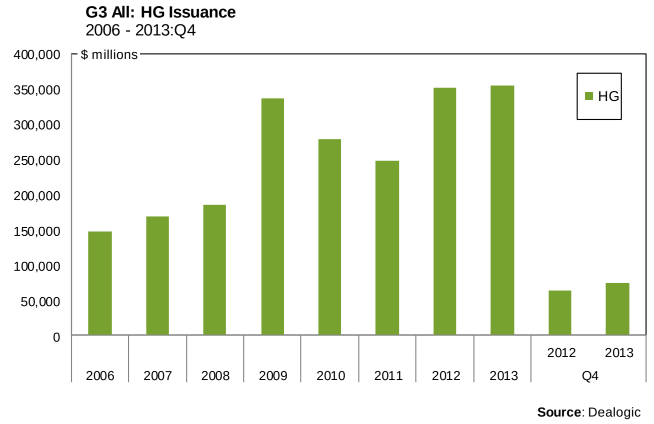
3.1. G3 All: Total Issuance



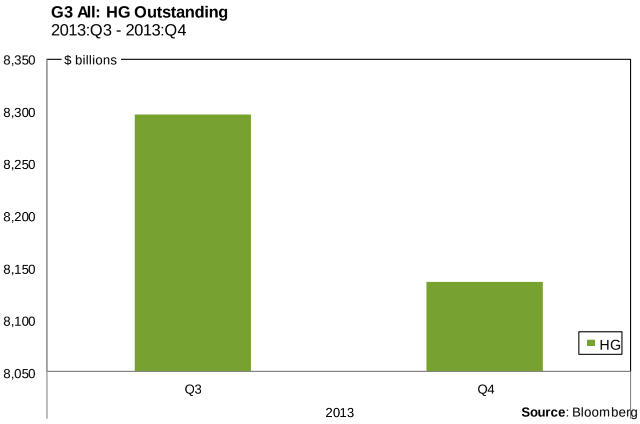
3.2. G3 All: Total Outstanding



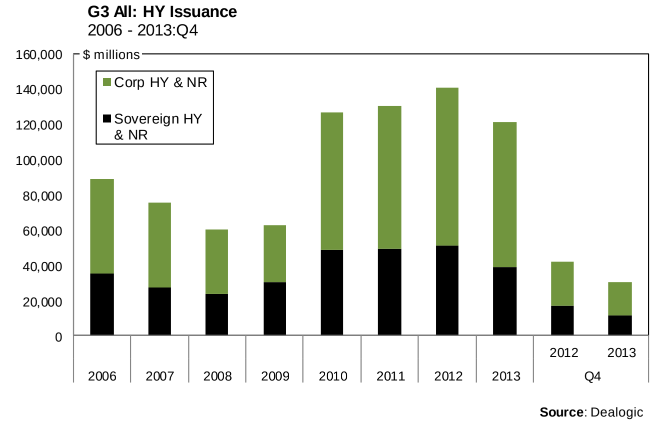
3.3. G3 All: HG Issuance



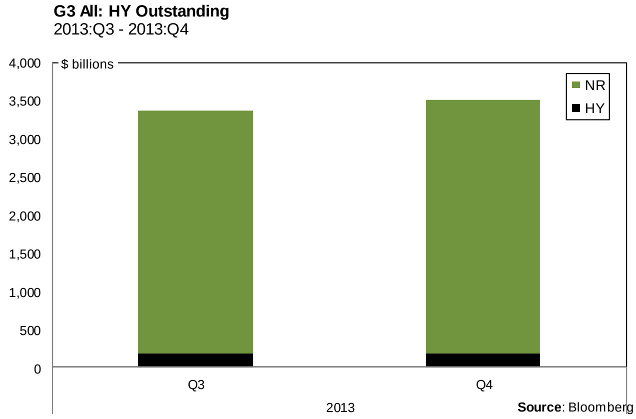
3.4. G3 All: HG Outstanding



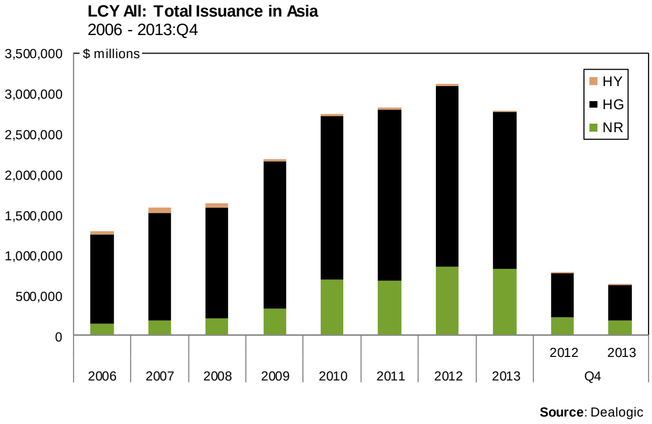
3.5. G3 All: HY Issuance



3.6. G3 All: HY Outstanding



3.7. LCY All: Total Issuance



4. CNH

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

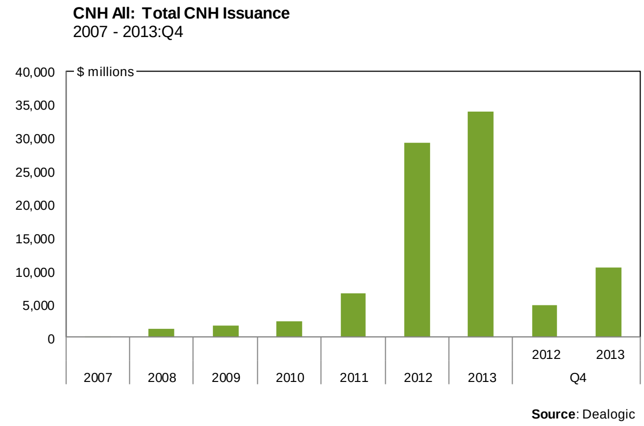
The CNH, or "dim sum", bond market has grown rapidly over the last three years, as issuers from across the world have tapped this market to meet their financing needs, even as financial market liberalization in China continues apace. On a full year basis in 2013, an equivalent of USD 33.96bn in CNH bonds have been issued, higher than FY 2012 issuance of USD 29.33bn and a new record high. In Q4 2013 alone, USD 10.58bn equivalent in dim sum bonds have been issued, more than double Q4 2012's pace of USD 4.78bn.

In terms of tenor, over half (54.0%) of 2013 issuance (USD 18.3bn) was accounted for by short-term transactions with tenors of 1.13 years or less, while HG deals rated A+ totaling USD 4.52bn had the highest share among rated deals. In Q4 2013, Finance sector transactions totaling USD 7.35bn accounted for the largest volume of deals by sector, while sovereigns totaling USD 1.63bn had the second largest share.

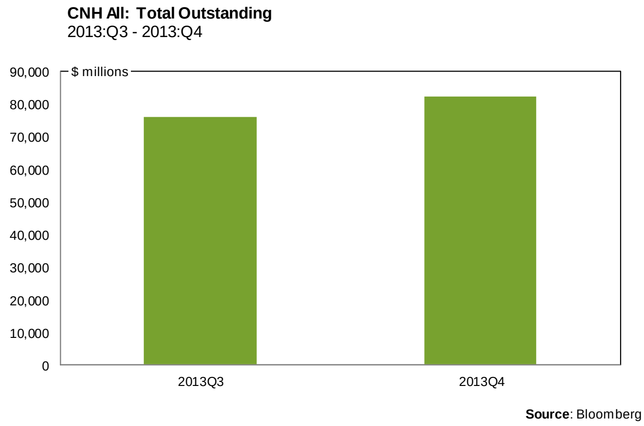
The total of dim sum bonds outstanding stands at USD 82.4bn and this figure is set to grow, as the CNH deposit base in Hong Kong continues to expand. In terms of sector, financial issues, excluding real estate, totaling USD 48.86 n in CNH equivalent dominate total CNH bonds outstanding while deals with tenors of 5 years or less (USD 74.43bn) account for all dim sum bond issues that have yet to mature.

Looking at other important developments in the renminbi markets (both offshore and onshore), the PRC regulatory authorities have gradually liberalized market access by granting increased QFII and RQFII quotas to international investors in domestic renminbi instruments. As far as the offshore markets are concerned, Singapore, Taiwan and London are gradually developing offshore renminbi capability, to complement Hong Kong. Also, while the Shanghai Free Trade Zone (FTZ) is in its infancy, we keenly await developments there for further signs of Chinese currency market liberalization.

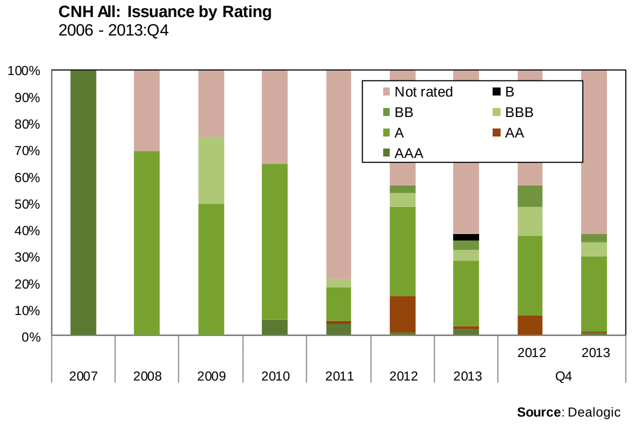
4.1. CNH All: Total CNH Issuance



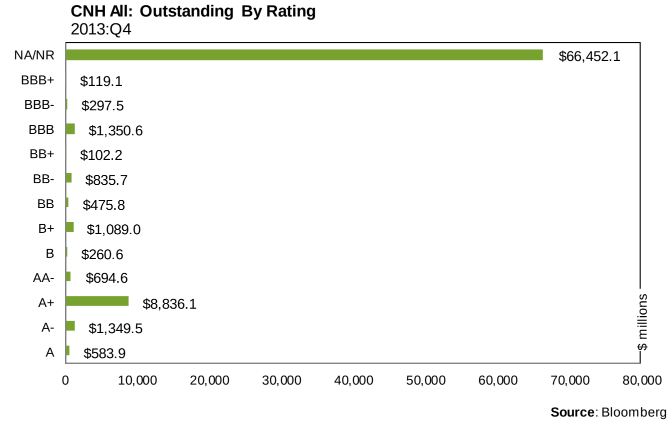
4.2. CNH All: Total Outstanding



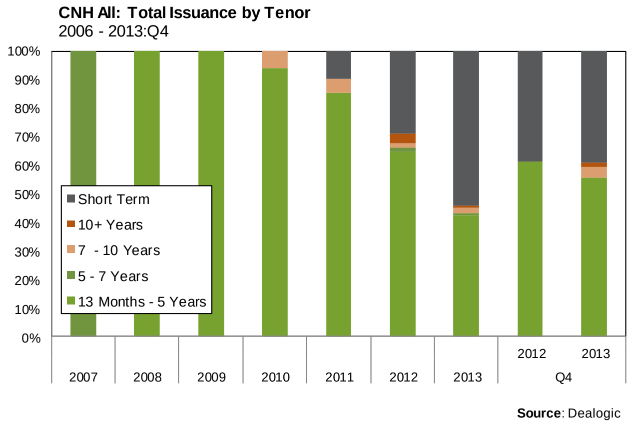
4.3. CNH All: Issuance by Rating



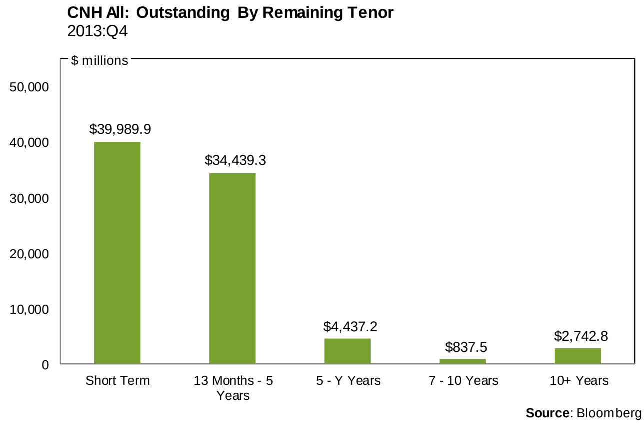
4.4. CNH All: Outstanding by Rating



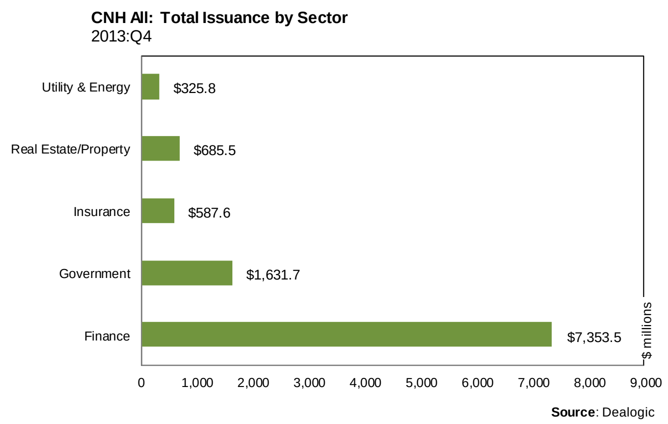
4.5. CNH All: Issuance by Tenor



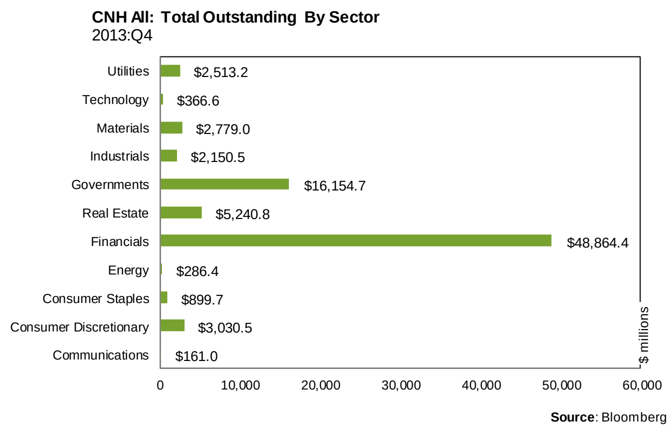
4.6. CNH All: Outstanding by Remaining Tenor



4.7. CNH All: Issuance by Sector



4.8. CNH All: Outstanding by Sector



5. Spreads, Credit & Total Return

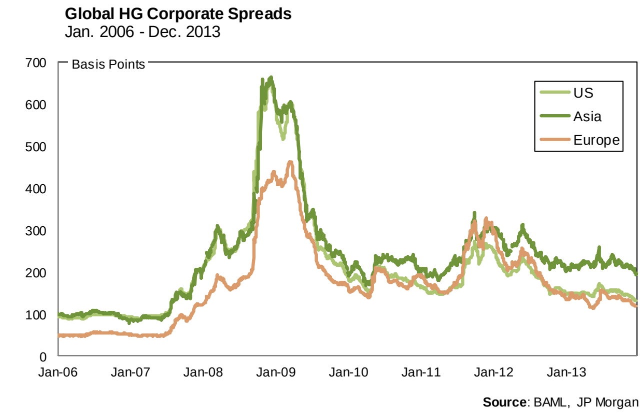
Relative Value and returns (Asia ex-Japan, Australia & New Zealand G3)

It is significant that despite the strong YTD performance, both Asian HG and HY bonds offer value relative to similar bonds issued in Europe and the US. At the end of Q4 2013, Asian HG bonds on a composite basis were quoted at an average spread of 196 basis points (bps), while US and European HG bond issues were quoted at average spreads of 129 bps and 118 bps respectively. Likewise, in the HY space, while spread convergence has been more pronounced than in the HG sector, Asian HY corporates were quoted at a composite spread of 476bps, but US and European HY bonds were tighter at 396 bps and 359 bps respectively.

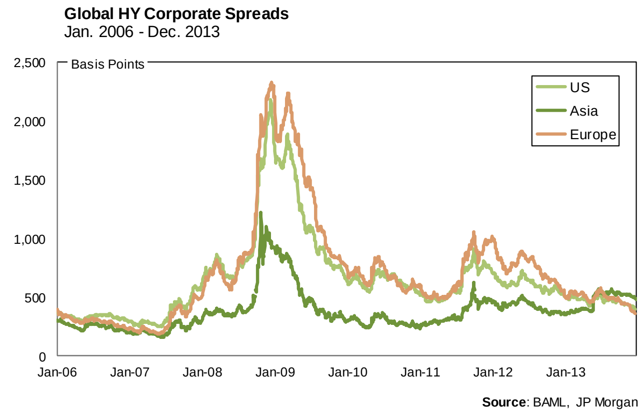
In terms of total returns, credit has clearly underperformed both developed market and EM equities – as for Asian USD HY and HG indices, total returns of 3.16% and 1.05% in Q4 2013, were well inside the double digit percentage returns recorded during the quarter by UK and European benchmark equity indices. Besides, while benchmark Japan and US equity indices recorded positive single digit percentage returns during the quarter, they were still well ahead of Asian credit index returns. Within the credit space, Asian HG and HY returns were comparable to European and US returns, with the developed country HY benchmarks outperforming Asia marginally. However, Asia ex-Japan credit indices outperformed the BAML Japan Corporate index, which returned only 0.30% in Q4.

The key to credit underperformance in general (and Asian credit underperformance in particular) has been the steep sell-off in US Treasuries (UST), which has steadily widened more than 100 bps from its tightest levels in May 2013, as continued expectations of a strengthening US economy and a continuation of the gradual tapering in UST purchases by the Fed has undermined sentiment. Thus, while credit spread compression has been quite pronounced, the bulk of the gains have been offset by the weakness in US Treasuries.

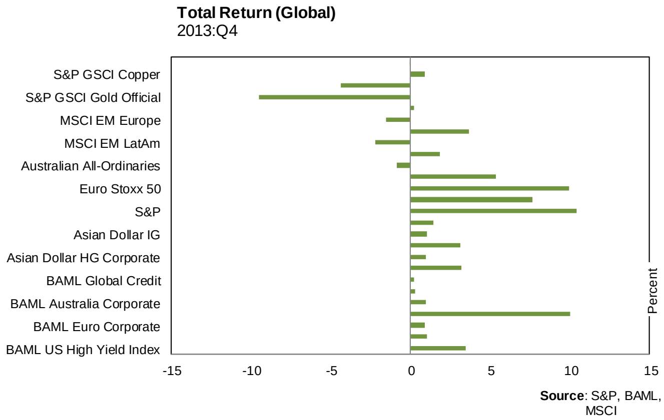
5.1. Global HG Corporate Spreads



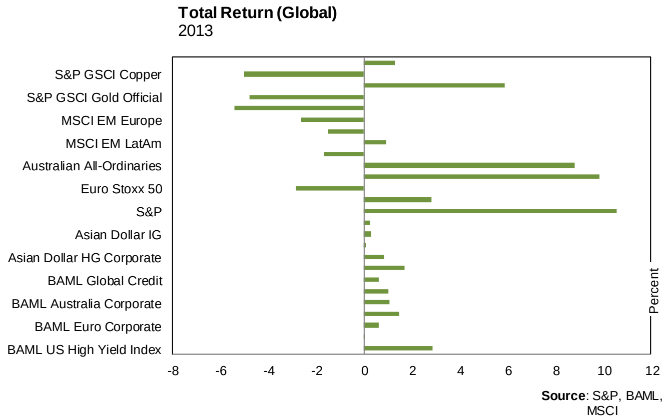
5.2. Global HY Corporate Spreads



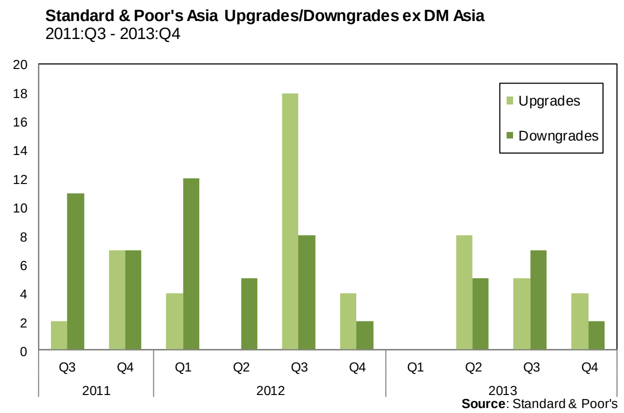
5.3. Global Returns, Quarter-End



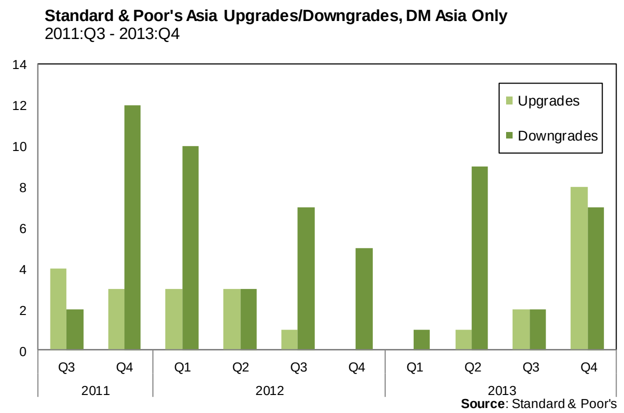
5.4. Global Returns, 2013



5.5. Asia Upgrades / Downgrades ex DM Asia



5.6. Asia Upgrades / Downgrades, DM Asia



5.7. Asian Upgrades & Downgrades, Standard & Poor's, 2013

Upgrades	Country	Date	Rating
MagnaChip Semiconductor Corp	Korea, Republic of	4/15/2013	BB-
China Overseas Land & Investment Ltd.	Hong Kong	4/22/2013	BBB+
Philippine Long Distance Telephone Co.	Philippines	5/2/2013	BBB
Republic of the Phillippines	Philippines	5/2/2013	BBB-
Development Bank of the Philippines (Republic of the Philippines)	Philippines	5/3/2013	BBB-
Envestra Ltd.	Australia	5/23/2013	BBB
Reliance Industries Ltd.	India	5/29/2013	BBB+
GlobalFoundries Singapore Pte. Ltd.	Singapore	6/4/2013	BB
China Taiping Insurance Holdings Co. Ltd. (China Taiping Insurance Group (HK) Co. Ltd)	Hong Kong	6/10/2013	BBB
Japan Tobacco Inc.	Japan	7/4/2013	AA-
Starhill Global Real Estate Investment Trust	Singapore	7/11/2013	BBB+
Hitachi Ltd.	Japan	8/2/2013	A-
Samsung Electronics Co. Ltd	Korea, Republic of	8/8/2013	A+
Industrial Bank of Korea	Korea, Republic of	8/28/2013	A+
China Taiping Insurance Holdings Co. Ltd. (China Taiping Insurance Group (HK) Co. Ltd)	Hong Kong	9/26/2013	BBB+
Axiata Group Berhad	Malaysia	9/30/2013	BBB+
Members Equity Bank Pty Ltd.	Australia	10/10/2013	BBB+
Fortescue Metals Group Ltd.	Australia	11/6/2013	BB
SK Hynix Inc.	Korea, Republic of	12/5/2013	BB+
Mitsui Fudosan Co. Ltd	Japan	12/10/2013	A-
Genting Bhd.	Malaysia	12/10/2013	A-
Transurban Finance Co. Pty Ltd.	Australia	12/12/2013	A-
ATCO Gas Australia LP	Australia	12/18/2013	A-
Franshion Properties (China) Ltd.	Hong Kong	12/18/2013	BBB-
Sinochem Hong Kong (Group) Co. Ltd. (Sinochem Corp.)	Hong Kong	12/18/2013	BBB+
SP AusNet Group (Singapore Power Ltd.)	Australia	12/19/2013	A-
Jemena Ltd. (Singapore Power Ltd)	Australia	12/19/2013	BBB+
SPI (Australia) Assets Pty Ltd. (Singapore Power Ltd.)	Australia	12/19/2013	BBB+

Downgrades	Country	Date	Rating
Sony Corp	Japan	2/8/2013	BBB+
Aeon Co. Ltd.	Japan	4/22/2013	BBB+
PT Bakrie Telecom Tbk.	Indonesia	5/6/2013	CCC
Shiseido Co. Ltd.	Japan	5/8/2013	A-
Mongolian Mining Corp.	Mongolia	5/14/2013	B
IOI Corp. Berhad	Malaysia	5/15/2013	BBB
Jemena Ltd. (Singapore Power Ltd)	Australia	5/17/2013	BBB
SPI (Australia) Assets Pty Ltd. (Singapore Power Ltd.)	Australia	5/17/2013	BBB
SP AusNet Group (Singapore Power Ltd.)	Australia	5/17/2013	BBB+
QBE Insurance Group Ltd.	Australia	5/22/2013	A-
Insurance Australia Group Ltd.	Australia	5/28/2013	A
China Metallurgical Group Corp.	China	5/28/2013	BB+
Hoyts Group Holdings LLC	Australia	6/4/2013	B
PT Bumi Resources Tbk.	Indonesia	6/6/2013	B-
Tabcorp Holdings Ltd.	Australia	6/24/2013	BBB-
Korea Railroad Corp. (Republic of Korea)	Korea, Republic of	7/8/2013	A
eAccess Ltd.	Japan	7/8/2013	BB
Softbank Corp.	Japan	7/8/2013	BB+
China Shanshui Cement Group Ltd.	Hong Kong	7/31/2013	BB-
PT Bumi Resources Tbk.	Indonesia	8/5/2013	CCC
CITIC Pacific Ltd (CITIC Group Corp)	Hong Kong	8/21/2013	BB
Mongolian Mining Corp.	Mongolia	8/30/2013	B-
Tata Power Co. Ltd. (Tata Sons Ltd.)	India	9/6/2013	B+
Yanzhou Coal Mining Co. Ltd.	China	9/30/2013	BB+
Mirabela Nickel Ltd.	Australia	10/2/2013	CCC+
PT Bumi Resources Tbk.	Indonesia	10/15/2013	CC
EnergyAustralia Holdings Ltd. (CLP Holdings Ltd.)	Australia	10/17/2013	BBB-
Mirabela Nickel Ltd.	Australia	10/23/2013	SD
Qantas Airways Ltd.	Australia	12/5/2013	BB+
Orica Ltd.	Australia	12/16/2013	BBB
Vector Ltd.	New Zealand	12/18/2013	BBB
Powercor Australia, LLC (Cheung Kong (Holdings) Ltd.)	Australia	12/18/2013	BBB+
Beijing Enterprises Holdings Ltd.	Hong Kong	12/20/2013	BBB+

5.8. Asian Defaults, Standard & Poor's, 2013

Defaults	Country	Type
Winsway Coking Coal Holdings Ltd	China	Distressed Exchange
Mirabela Nickel Ltd.	Australia	Missed Interest Payment
PT Bakrie Telecom Tbk.	Indonesia	Missed Interest Payment

Summary of the Methodologies Adopted for this Report

1. 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, and medium-term notes 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 critieria 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.

1.1., 1.3, 1.5., 1.7., 1.9., 1.11., 1.13., 1.15.

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.

1.2., 1.4., 1.6., 1.8., 1.10., 1.12.

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.

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

2.1. - 2.4.

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.

3. All Asia

3.1. – 3.9.

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.

4. 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, and commercial paper debt. Due to the lower restrictions in CNH issuance, CNH deals outside of Section 4 are a subset of the deals contained in Section 4.

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 and commercial paper debt.

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

4.1. – 4.8.

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

5. Spreads, Credit Quality & Total Return

5.1. – 5.2. 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 $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 securiites, 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 securiites, 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 isused 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 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 currecy, 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 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 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 Lanaka, Mongolia, Macao, Malaysis, the Phillipines, 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.

5.3. – 5.4. 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,

5.5. 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.

Disclaimer

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