



ASIA CREDIT REPORTFourth Quarter 2017

PREPARED IN PARTNERSHIP WITH





ASIFMA is an independent, regional trade association with over 100 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 2017

Total issuance in 4Q'17 came in at USD 84.8 billion (bn) as of December 31, up 23.6% quarter-over-quarter (qoq) from 3Q'17 (USD 79.4bn) and up 60.8% year-over-year (yoy), inclusive of high grade (HG), high yield (HY), and unrated deals. A combination of investor hunger for yield, favorable perceptions towards Emerging Markets in general and Asia in particular and finally, the fact that credit spreads in Asia, though tight relative to historical levels, remain wider than Europe and the US, have all contributed to record bond issuance out of all corners of the Asian market.

- 1) HG issuance (of USD 64.1bn) continues to easily outpace HY issuance of USD 14.3bn. However, HY issuance remains at elevated levels, with fourth quarter issuance of USD 14.3bn and annual volumes of USD 66.0bn, a new high for the year and more than 50 percent higher than the second highest volume set in 2016 (USD 43.4bn).
- 2) Strong global growth and an abundance of liquidity have combined to contribute to buoyant primary and secondary Asian bond markets. Risks to the favorable outlook are several: A turn in the US interest rate cycle (which is widely expected), US protectionism and rising trade tensions with China and finally, political uncertainties arising from the unstable North Korea equilibrium are all factors that could derail the overall positive market sentiment.
- 3) Despite the fact that China, India and local Asian governments continue to push for the development of their own debt markets, investors and other market participants are looking for more USD exposure in search for diversification, higher returns and lower risks. This should continue to support USD debt issuance in 2018.
- 4) Asian US dollar-denominated bond issuance has hit a record this year, driven by greater liquidity and demand from investors in the region particularly in China. As a consequence, with issuers relying on American investor demand to a progressively lesser extent, exclusively Reg S (as opposed to 144A) transactions have tended to dominate. This trend of exclusive Reg S issuance is expected to continue, as issuers from China and elsewhere tap the markets to fund a wide range of projects linked to China's Belt and Road Initiative.
- 5) Chinese issuers accounted for over two-thirds of bond issuance this year in Asia-Pacific excluding Japan, with the financial sector, especially banks, dominating sales. That said, issuance from countries such as India and Indonesia continue to be robust the trend towards offshore issuance in local currency has picked up pace with a new class of "Komodo" bonds from Indonesia (IDR-denominated bonds sold to foreign investors) making their debut. In India, with the RBI granting approvals for a number of NBFCs (Non-Bank Financial Companies) to issue "masala" bonds, Indian offshore INR-denominated issuance is also set to pick up in 2018.

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

For the fourth quarter 2017, total G3 issuance stood at USD 84.8bn, up 23.6% qoq and 60.8% yoy. For the full year 2017, total G3 issuance was USD 316.0bn, up 25.1% from 2016 (USD 252.7bn). China remained the largest issuing country in the fourth quarter, dominating Asian issuance at USD 59.8bn, or approximately 71.5% of G3



issuance; of fourth quarter totals, USD 46.9bn and USD 7.6bn were in HG and HY deals, respectively. Surprisingly, Indonesia displaced South Korea as the second largest issuer in the fourth quarter, with USD 5.13bn issued; South Korea came in third USD 5.10bn.

Finance remained the largest sector of G3 issuance in the fourth quarter (USD 34.6bn), followed by sovereigns (USD 9.4bn) and real estate/property (USD 8.6bn).

In terms of ratings, within the HG space, A+ transactions accounted for the largest share of deals priced during the quarter, with USD 20.7bn in total issuance, followed by BBB+ rated transactions totaling USD 10.7bn. Within HY issuance, the B category led with USD 4.7bn of issuance, followed by BB rated transactions of USD 3.4bn.

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 4Q'17, with a total of USD 42.0bn in short tenor issues being priced during the quarter. Of these, USD 31.6bn were HG deals, USD 7.0bn were HY deals and the balance unrated.

Overall G3 debt outstanding in the region stood at USD 1.1tn, increasing 5.4% qoq and 19.2% yoy. High grade debt accounted for the bulk of total outstanding debt at USD 697.6bn (a 5.4% increase qoq and 26.8% increase yoy), followed by unrated debt at USD 219.4bn (a growth of 6.2% qoq and 45.4% yoy) and HY debt at USD 134.0bn (an increase of 3.7% qoq but a decline of 25.8% yoy).

China (with USD 498.6bn), South Korea (with USD 118.8bn) and Hong Kong (with USD 112.3bn) remain the three regions with the largest shares of G3 debt outstanding. Ratings-wise, among HG issuers, deals rated BBB-(USD 141.2bn) account for the largest share of debt outstanding, while B+ transactions outstanding (USD 30.2bn) dominate in the HY space. By sector, financials with a total of USD 323.8bn accounted for 31% of outstanding G3 paper, followed by sovereigns (USD 244.3bn) and energy (USD 110.8bn). Finally, deals with remaining tenors of 5 years or less (USD 620.9bn) accounted for the bulk of total Asia (ex-Japan, Australia and NZ) debt outstanding.

Turning to the LCY debt markets, USD 178.2bn in total LCY-denominated debt was issued in Asia (ex-Japan, Australia & NZ) in 4Q'17, a decline of 31.3% qoq (USD 259.2bn) and a decline of 15.0% yoy (USD 209.6bn). For the full year, LCY-denominated debt totaled USD 805.4bn, a decline of 6.5% from 2016 (USD 861.8bn). China remains the largest issuer in the LCY debt markets in the fourth quarter, with USD 133.3bn issued, followed by South Korea (USD 16.4bn). Malaysia came in third, displacing the traditional India with USD 8.0bn in issuance in 4Q'17. Finance continues to remain the largest category in 4Q'17 with USD 83.6bn issued, followed by construction (USD 24.4bn) and transportation (USD 15.2bn).

Total LCY debt outstanding at the end of 4Q'17 in Asia (ex-Japan, Australia and NZ) stood at USD 16.4tn, rising by 2.5% qoq, with HY and unrated debt outstanding increasing 2.3% and 5.2% qoq, respectively. HG debt declined 38.1% to \$613.0bn; the steep decline in HG debt stems primarily from Indian debt moving into unrated debt on the withdrawal of an issuer rating. China remains the bulk of total outstanding LCY debt at USD 11.0tn, followed by India (USD 1.9tn) and South Korea (USD 1.5tn).

State of the Asian leveraged loan market

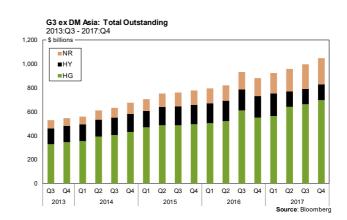
Asian leveraged loan debt, excluding developed market Asia, reached USD 76.0bn in 4Q'17, a 23.3% increase qoq and a 43.4% increase yoy. For the full year, leveraged loan debt totaled USD 234.0bn, a decline of 1.5% from 2016. Leading sectors in 4Q'17 issuance were transportation (USD 18.4bn), construction/building (USD 11.7bn), and finance (USD 10.5bn). Leveraged loan issuance was primarily used for project financing (USD 24.1bn) and refinancing (USD 15.9bn). Sponsored loan deals as a percentage of issuance declined from the prior quarter but remain elevated, representing 8.5% by dollar amount in the fourth quarter.



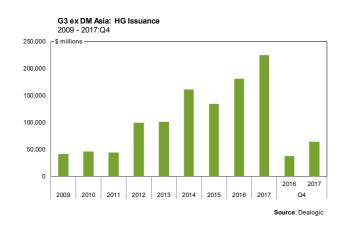
2.1. G3 ex DM Asia: Total Issuance

G3 ex DM Asia: Total Issuance 2009 - 2017:Q4 350,000 -\$ millions ■NR 300,000 ■HY ■HG 250,000 200,000 150.000 100,000 2017 2016 Q4 Source: Dealogic

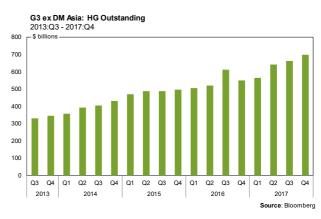
2.2. G3 ex DM Asia: Total Outstanding



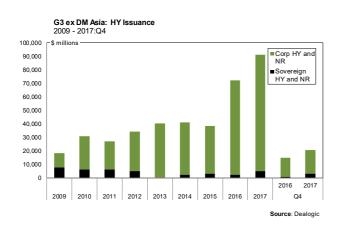
2.3. G3 ex DM Asia: HG Issuance



2.4. G3 ex DM Asia: HG Outstanding



2.5. G3 ex DM Asia: HY Issuance



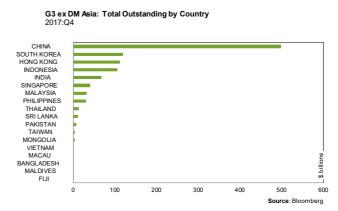
2.6. G3 ex DM Asia: HY Outstanding



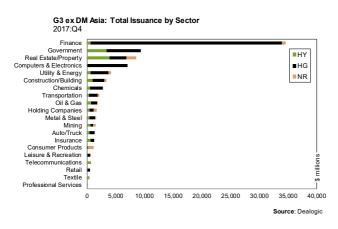


2.7. G3 ex DM Asia: Total Issuance by Country

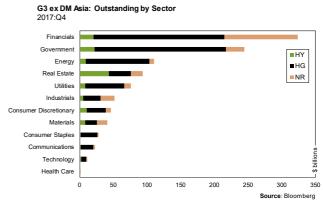
2.8. G3 ex DM Asia: Total Outstanding by Country



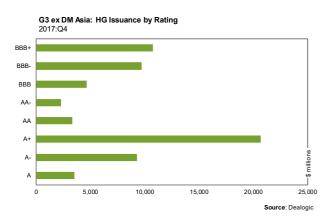
2.9. G3 ex DM Asia: Total Issuance by Sector



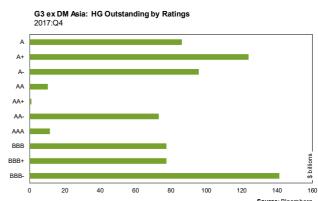
2.10. G3 ex DM Asia: Total Outstanding by Sector



2.11. G3 ex DM Asia: HG Issuance by Rating



2.12. G3 ex DM Asia: HG Outstanding by Rating

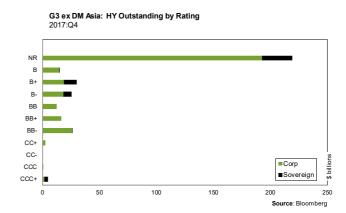




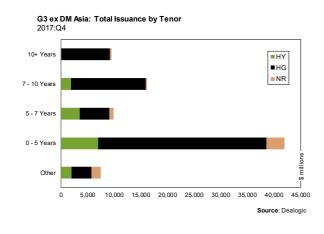
2.13. G3 ex DM Asia: HY Issuance by Rating

G3 ex DM Asia: HY Issuance by Rating 2017:Q4 CCC BB+ BBBB Not rated 0 1,000 2,000 3,000 4,000 5,000 6,000 7,000 Source: Dealogic

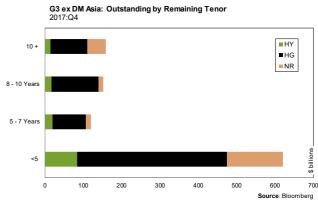
2.14. G3 ex DM Asia: HY Outstanding by Rating



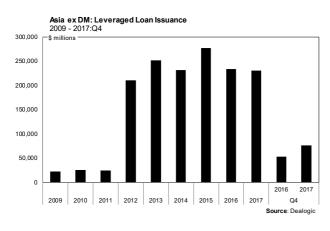
2.15. G3 ex DM Asia: Total Issuance by Tenor



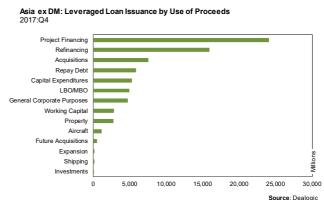
2.16. G3 ex DM Asia: Outstanding by Remaining Tenor



2.17. Asia ex DM: Total Leveraged Loan Issuance



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



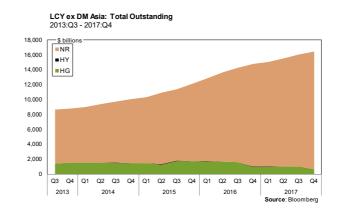


3. LCY Asia ex Developed Market Asia (Japan, Australia and New Zealand)

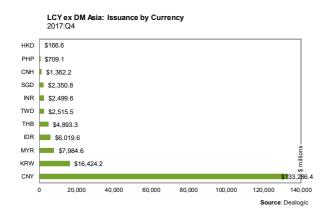
3.1. LCY ex DM Asia: Total Issuance

LCY ex DM Asia: Total Issuance 2009 - 2017:Q4 1,400,000 1,200,000 600,000 400,000 200,000 0 200

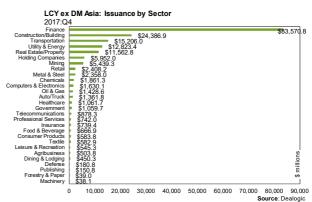
3.2. LCY ex DM Asia: Total Outstanding



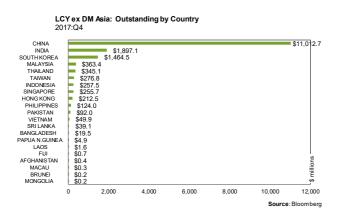
3.3. LCY ex DM Asia: Issuance by Currency



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) was USD 163.5bn in the fourth quarter of 2017, a decline of 16.5% qoq but an increase of 30.6% yoy. In 4Q'17, total HG G3 issuance in Asia was USD 118.7bn, a decline of 14.8% qoq but an increase 31.5% yoy; HY issuance was USD 14.3bn, a decline of 43.4% qoq but an increase of 29.1% increase yoy; and unrated issuance was USD 30.5bn, a decline of 2.3% qoq but an increase of 28.2% yoy. While high yield volumes declined in the fourth quarter, high yield issuance in 2017 set a new high at USD 83.6bn, more than 43.8% higher than the high previously set in 2016. For the full year, issuance totaled USD 693.4bn, an increase of 11.6 percent from 2016, composed of USD 494.7bn in HG issuance USD 83.6bn in HY issuance, and USD 115.1bn in unrated issuance.

LCY debt issuance, including Japan, Australia, and New Zealand, stood at USD 500.9bn in the fourth quarter of 2017, a decline of 16.8% qoq and a decline of 29.2% yoy, comprised of USD 357.7bn in HG issuance, USD 4.1bn in HY issuance and USD 139.1bn in unrated issuance. For the full year, LCY debt issuance totaled \$2.16tn, a decline of 10.7% from 2016.

A year ago, favorable liquidity conditions contributed to the continued growth and expansion of the Indian debt markets. However, by the end of 2017, benchmark Indian local currency debt fell sharply as the government announced plans to borrow higher than expected amounts in 2018, to finance the fiscal deficit. In addition, lingering uncertainties caused by higher crude prices and the after-effects of the demonetization of high denomination notes and the introduction of the Goods and Services Tax (GST) also contributed towards undermining sentiment towards Indian debt.

China's debt markets declined on the back of selling pressure after the country's 19th National Congress in mid-October due to concern about coming reforms and uncertain interest rate lookout, despite the will from Chinese policymakers to attempt to further liberalize the country's sprawling financial system in 2018. Uncertainty around the bond market in China (more defaults and fewer issuance in 2017) in Q42017 has led to a lighter participation in of international investors in the highly anticipated Bond Connect scheme between Hong Kong and mainland China, especially for investors outside of Hong Kong and Singapore. In addition, some unsolved technical and administrative issues linked to Bond Connect such as insufficient delivery versus payment (DVP) settlement procedures, a lack of clarity around taxes, and the inability of investors to make block trades do not help attract potential investors. However, China's policymakers have made it very clear they are open to investor feedback and will reduce barriers to entry over time, which may attract international investors in 2018.

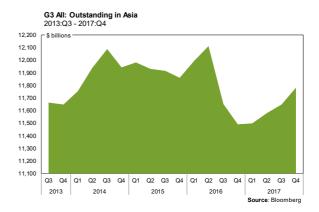
The offshore CNH/dim sum bond market continues to shrink in 2017 and this trend is expected to accelerate in 2018 and beyond. Issuers can issue bonds with lower funding costs in the onshore market and as a consequence, the dim sum market is much less attractive to issuers and will probably continue to decline in importance in the coming years. For investors too, with the Chinese policy makers progressively opening the the onshore bond market.to foreign participation, combined with declining liquidity in the CNH/dim sum bond market, the onshore bond markets are considerably more attractive. Besides ease of access, the greater size, liquidity and depth of the onshore CNY bond market, contribute to its attractiveness to investors.



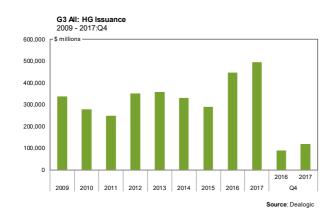
4.1. G3 All: Total Issuance

G3 All: Issuance 2009 - 2017:Q4 800,000 =NR 700.000 ■HG 600,000 ■HY 500,000 400.000 300,000 200,000 100,000 2010 2011 2012 2013 2014 2015 2016 2017 Q4 2009

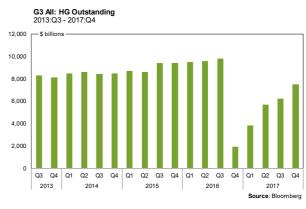
4.2. G3 All: Total Outstanding



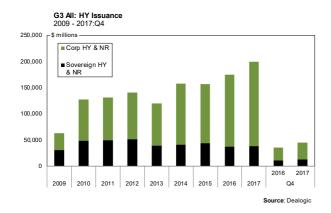
4.3. G3 All: HG Issuance



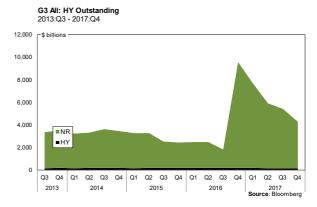
4.4. G3 All: HG Outstanding



4.5. G3 All: HY Issuance



4.6. G3 All: HY Outstanding





4.7. LCY All: Total Issuance

LCY All: Total Issuance in Asia 2009 - 2017:Q4 3,500,000 2,500,000 1,500,000 1,000,000 0 2009 2010 2011 2012 2013 2014 2015 2016 2017 Q4

Source: Dealogic



5. China – Domestic

Total Issuance & Outstanding – Domestic CNY issuance

Total domestic CNY issuance stood at USD 133.4bn in the fourth quarter of 2017, down 34.5% from the third quarter (USD 203.6bn) and down 19.4% yoy (USD 165.4bn). By tenor, 47.8% of fourth quarter issuance (USD 63.8bn) would mature in five years or less, followed by the 7-10 year bucket (USD 37.6bn, or 28.2% of issuance). By sector, finance led issuance totals (USD 57.8bn), followed by construction (USD 22.2bn). For the full year, domestic CNY volumes fell 26.4% from 2016, with USD 578.2bn issued in 2017. Outstanding domestic CNY debt stood at USD 10.9tn at the end of fourth quarter 2017, with sovereigns leading totals (USD 6.2tn), followed by financials (USD 2.7tn) and industrials (USD 837.5bn).

With the Chinese authorities committed to de-leveraging, while at the same time ensuring a soft landing for the Chinese economy, we believe that the slowdown in Chinese onshore debt issuance will not be too steep, or prolonged – a sudden plunge in Chinese GDP growth rates would be counter-productive. On balance, the Chinese authorities are working hard to address major risks, with the priority of managing and preventing financial risk over the next three years.

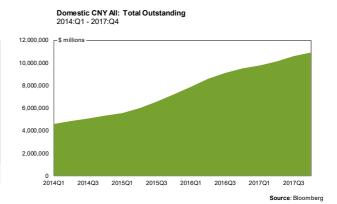
That said, government measures to cut risky behavior at the margin, have shut out a number of mainland issuers from the onshore China bond market. As a result, some issuance has shifted to USD-denominated bonds, especially in the Asian Reg S market, which broke records in 2017. As alluded to earlier, buoyant Chinese institutional investor demand for offshore USD-denominated debt of Chinese issuers, has contributed to record volumes of such issuance.



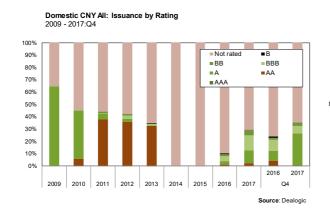
5.1. Domestic CNY All: Total Issuance

Domestic CNY All: Total Domestic Issuance 2009 - 2017:Q4 1,200,000 800,000 400,000 200,000 200,000 200,000 201,00

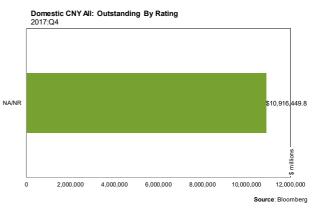
5.2. Domestic CNY All: Total Outstanding



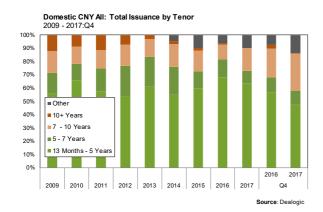
5.3. Domestic CNY All: Issuance by Rating



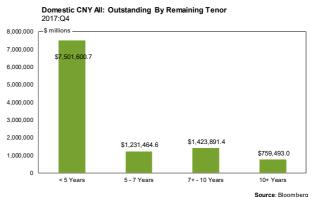
5.4. Domestic CNY All: Outstanding by Rating



5.5. Domestic CNY All: Issuance by Tenor



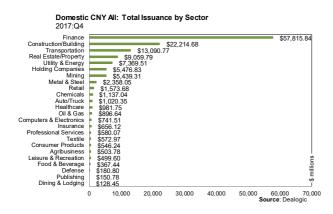
5.6. Domestic CNY All: Outstanding by Remaining Tenor

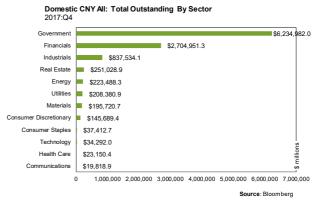




5.7. Domestic CNY All: Issuance by Sector

5.8. Domestic CNY All: Outstanding by Sector





6. China - CNH

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

The pace of offshore issuance picked up slightly in the fourth quarter from the third quarter; an equivalent of USD 2.5bn in CNH bonds were issued, an increase of 35.2% qoq but a decline 66.5% yoy. In terms of tenor, virtually all (96.1%) all of fourth quarter issuance was accounted for by transactions with tenors of 5-years or less. HG deals rated A+ totaling USD 376.5mn had the highest share among rated deals (15.3%). In terms of sector, only finance (USD 1.2bn) and sovereign (USD 1.1bn) deals were issued in the fourth quarter.

CNH Deposit Base by Location	Amt (USD bn)	As of
Hong Kong	85.5	Nov-17
Singapore	21.2	Sep-17
Taiwan	48.6	Nov-17
Korea, Republic of	1.1	Nov-17
Luxembourg	9.8	Aug-15
United Kingdom	13.1	Sep-17
France	3.0	Dec-15
Sources: HKMA (Hong Kong), MAS (Singpore), Central Bank of		
Republic of China (Taiwan), Bank of Korea (Korea), Luxembourg for		
Finance (Luxembourg), Bank of England (UK), PWC (France);		
Exchange Rate: CNH 6.5413 :	= USD 1.0, GBP 1.3	5 = USD 1.0

The total of dim sum bonds outstanding stood at USD 56.3bn at the end of the fourth quarter, a decline of 3.2% qoq and 28.2% yoy. This trend is very much in line with expectations — at best, the pace of the decline in the CNH market might slow (more so in the current environment of relative renminbi strength), but the overall downtrend in dim sum bonds outstanding is unlikely to be reversed any time soon.

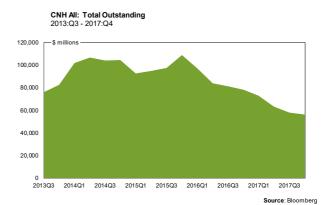
Exchange Rate: CNH 6.5413 = USD 1.0, GBP 1.35 = USD 1.0] Despite the decline in outstanding dim sum bonds, most deposit centers continue to report a pickup in offshore CNH deposits, with the United Kingdom as the only country reporting a decline in deposits in the most recent data reported. Overall deposit volumes remain well below the highs, however.



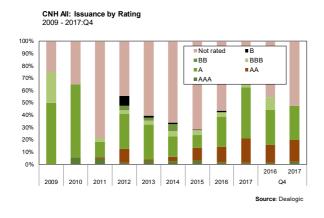
6.1. CNH All: Total CNH Issuance

CNH All: Total CNH Issuance 2009 - 2017:Q4 60,000 40,000 30,000 20,000 10,000 2009 2010 2011 2012 2013 2014 2015 2016 2017 Q4

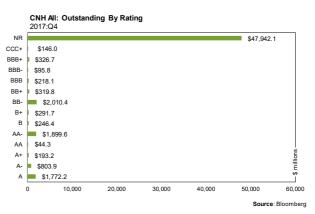
6.2. CNH All: Total Outstanding



6.3. CNH All: Issuance by Rating



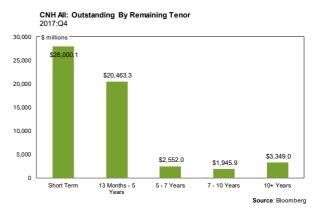
6.4. CNH All: Outstanding by Rating



6.5. CNH All: Issuance by Tenor



6.6. CNH All: Outstanding by Remaining Tenor





6.7. CNH All: Issuance by Sector

CNH All: Total Issuance by Sector 2017:Q4 Finance \$1,168.9 Government \$1,059.7 Real Estate/Property \$151.8 Computers & Electronics \$75.6 0 2,000 4,000 6,000 8,000 10,000 12,000 14,000

6.8. CNH All: Outstanding by Sector





7. Spreads, Credit & Total Return

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

HG bond spreads traded tighter in 4Q'17 from the second quarter: Asian HG bonds on a composite basis were quoted at an average spread of 116 basis points (bps) in December from 125 bps in September while US and European HG bond issues were quoted at average spreads of 100 bps (from 113 bps) and 88 bps (from 100 bps), respectively. Asian and US HY corporates also traded tigher in the fourth quarter of 2017, averaging 374 bps and 361 bps, respectively, in December (from 407 bps and 372 bps, respectively, in September 2017), while European bonds widened to 282 bps in December (from 264 bps in September).

In terms of total return, emerging market European and Japanese equities were the outperformers in the fourth quarter, while Latin American equities and developed market European equities underperformed. Asian HG gained 0.3% in the fourth quarter, while Asian HY indices gained 0.94%. For the full year, Asian HG returned 5.3% in 2017, up from 3.7% in 2016, while Asian HY returned 7.7% in 2017, up from 3.7% in 2016.

Looking ahead, 2018 could well turn out to be a difficult year, for several reasons:

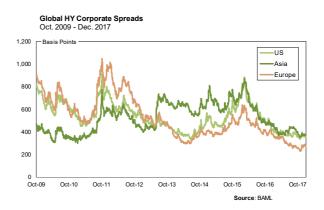
- 1) US treasuries have shown an early change in trend and have weakened substantially in recent weeks, in anticipation of a turn in the interest rate cycle. The weakness in treasuries will undermine total returns in this environment, "carry" will likely be a significant contributor to overall positive returns, so selective higher yielding/high coupon credits could be the key to a strong performance in 2018 but the operative word here is "selective". After several years of heady returns, the credit cycle is also likely to turn and as a consequence, investors will have to do their homework and exhibit a greater degree of vigilance towards vulnerable sectors and individual credits that have a higher risk of default.
- 2) The across-the board strength in markets, both developed and EM, has contributed to a collapse in volatility, which has led to a "virtuous cycle" of strong market performance, begetting even stronger performance in a "self-fulfilling" fashion any abrupt spike in volatility could result in the so-far benign uptrend suddenly changing direction. Interestingly, taking the US equity markets as an example, even as the leading indices surge to all-time record highs, volatility (as measured by the VIX index) has also begun to move up off its lows. While it is too early to tell if this represents a change in trend, unusual movements in the VIX index have to be monitored closely.



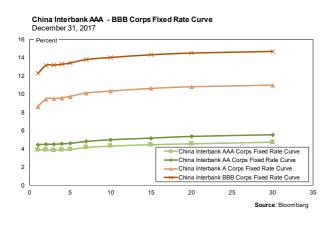
7.1. Global HG Corporate Spreads

Global HG Corporate Spreads Oct. 2009 - Dec. 2017 350 250 200 150 Oct-09 Oct-10 Oct-11 Oct-12 Oct-13 Oct-14 Oct-15 Oct-16 Oct-17 Source: BAMIL

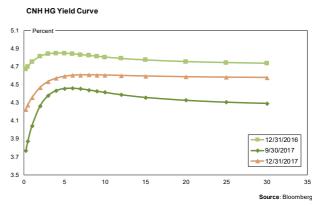
7.2. Global HY Corporate Spreads



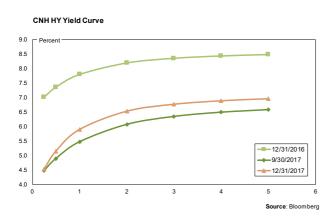
7.3. China Interbank AAA - BBB Corps Fixed Rate Curve



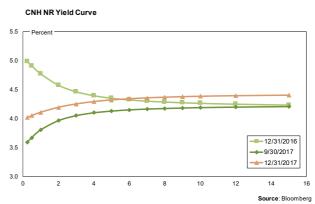
7.4. CNH HG Yield Curve



7.5. CNH HY Yield Curve



7.6. CNH NR Yield Curve

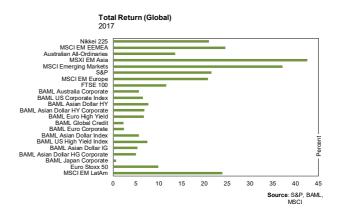




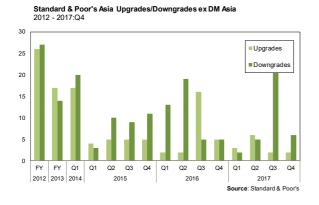
7.7. Global Returns, Quarter-End

Total Return (Global) 2017:Q4 Nikkei 225 MSCIEM EEMEA Australian Al-Ordinaries MSXIEM EM Asia MSCIEMerging Markets MSXIEM Europe BAML Australia CROptoria BAML US Corporate Index BAML Sian Dolar HY BAML Sian Dolar HY Corporate BAML Gobal Credit BAML Euro Eloph Yield BAML Global Credit BAML Sian Dolar BY BAML Euro Floph Yield BAML Gobal Credit BAML Sian Dolar BY BAML Sian BY

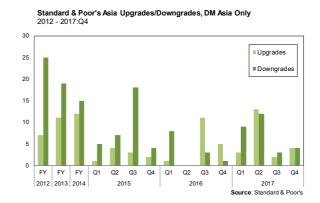
7.8. Global Returns, 2017



7.9. Asia Upgrades / Downgrades ex DM Asia



7.10. Asia Upgrades / Downgrades, DM Asia





7.11. Asian Upgrades & Downgrades, Standard & Poor's, 2017

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Sharp Corp. Japan 7/21/2017 B+ EnergyAustralia Holdings Ltd. (CLP Holdings Ltd.) Australia 7/25/2017 BBB+ PT Gajah Tunggal Tbk. Indonesia 8/7/2017 B- Ausdrill Ltd. Australia 10/11/2017 BB- Energy Partnership (Gas) Pty Ltd. (DUET Group) Australia 11/8/2017 BBB+ CITIC Securities Co. Ltd. China 11/28/2017 BBB+ China National Offshore Oil Corp. China 12/1/2017 A+ Watercare Services Ltd. (Auckland Council) New Zealand 12/11/2017 AA	MagnaChip Semiconductor Corp	Korea, Republic of	6/23/2017	B-
Energy Australia Holdings Ltd. (CLP Holdings Ltd.) PT Gajah Tunggal Tbk. Australia Australia Australia 10/11/2017 BB- Australia 10/11/2017 BB- Energy Partnership (Gas) Pty Ltd. (DUET Group) Australia 11/8/2017 BBB+ CITIC Securities Co. Ltd. China 11/28/2017 BBB+ China National Offshore Oil Corp. China 12/1/2017 A+ Watercare Services Ltd. (Auckland Council)	Samsung Electronics Co. Ltd	Korea, Republic of	7/21/2017	AA-
PT Gajah Tunggal Tbk. Indonesia 8/7/2017 B- Ausdrill Ltd. Australia 10/11/2017 BB- Energy Partnership (Gas) Pty Ltd. (DUET Group) Australia 11/8/2017 BBB+ CITIC Securities Co. Ltd. China 11/28/2017 BBB+ China National Offshore Oil Corp. China 12/1/2017 A+ Watercare Services Ltd. (Auckland Council) New Zealand 12/11/2017 AA	Sharp Corp.	Japan	7/21/2017	B+
Ausdrill Ltd.Australia10/11/2017BB-Energy Partnership (Gas) Pty Ltd. (DUET Group)Australia11/8/2017BBB+CITIC Securities Co. Ltd.China11/28/2017BBB+China National Offshore Oil Corp.China12/1/2017A+Watercare Services Ltd. (Auckland Council)New Zealand12/11/2017AA	EnergyAustralia Holdings Ltd. (CLP Holdings Ltd.)	Australia	7/25/2017	BBB+
Energy Partnership (Gas) Pty Ltd. (DUET Group) Australia 11/8/2017 BBB+ CITIC Securities Co. Ltd. China 11/28/2017 BBB+ China National Offshore Oil Corp. China 12/1/2017 A+ Watercare Services Ltd. (Auckland Council) New Zealand 12/11/2017 AA	PT Gajah Tunggal Tbk.	Indonesia	8/7/2017	B-
CITIC Securities Co. Ltd. China 11/28/2017 BBB+ China National Offshore Oil Corp. China 12/1/2017 A+ Watercare Services Ltd. (Auckland Council) New Zealand 12/11/2017 AA	Ausdrill Ltd.	Australia	10/11/2017	BB-
China National Offshore Oil Corp.China12/1/2017A+Watercare Services Ltd. (Auckland Council)New Zealand12/11/2017AA	Energy Partnership (Gas) Pty Ltd. (DUET Group)	Australia	11/8/2017	BBB+
Watercare Services Ltd. (Auckland Council) New Zealand 12/11/2017 AA	CITIC Securities Co. Ltd.	China	11/28/2017	BBB+
	China National Offshore Oil Corp.	China	12/1/2017	A+
United Energy Distribution Pty Ltd. (DUET Group) Australia 12/18/2017 A-	Watercare Services Ltd. (Auckland Council)	New Zealand	12/11/2017	AA
	United Energy Distribution Pty Ltd. (DUET Group)	Australia	12/18/2017	A-



V	Country	Date	Rating
	China	9/22/2017	BBB-
tirport Authority Hong Kong (Hong Kong (Special Administrative Region of the People's Republic of	0 0	9/22/2017	AA+
	China	9/22/2017	A+
	Singapore	1/25/2017	CCC+
Global A&T Electronics Ltd.	Singapore	8/8/2017	D
Global A&T Electronics Ltd.	Singapore	5/9/2017	CCC-
China National Offshore Oil Corp.	China	9/22/2017	A
Iong Kong (Special Administrative Region of the People's Republic of China)	Hong Kong	9/21/2017	AA+
Oceanwide Holdings Co. Ltd.	China	9/21/2017	B-
Members Equity Bank Pty Ltd.	Australia	5/21/2017	BBB
China Shenhua Energy Company Limited (Shenhua Group Corporation Limited)	China	9/22/2017	A+
NEC Corp.	Japan	2/9/2017	BBB-
Corea Resources Corp. (Republic of Korea)	Korea, Republic of	11/24/2017	A
	China	9/21/2017	A+
1 1	Australia	8/31/2017	D
	Australia	6/22/2017	CCC-
•	Australia	5/11/2017	В
	Australia	5/30/2017	CCC+
	Indonesia	4/25/2017	CCC
, &			
, <u> </u>	China	7/28/2017	BBB+
T T	Indonesia	12/12/2017	В
, , , , , , , , , , , , , , , , , , , ,	China	9/22/2017	BBB
	Hong Kong	7/10/2017	A-
China Petrochemical Corporation	China	9/22/2017	A+
Boart Longyear Ltd.	Australia	4/5/2017	CC
Boart Longyear Ltd.	Australia	2/10/2017	CCC-
China Southern Power Grid Co. Ltd.	China	9/22/2017	A+
'akeda Pharmaceutical Company Ltd.	Japan	2/27/2017	A-
Aitsubishi UFJ Financial Group Inc.	Japan	11/29/2017	A-
BIS Industries Ltd.	Australia	7/20/2017	CC
BIS Industries Ltd.	Australia	2/22/2017	CCC-
Chnia Merchants Port Holdings Co. Ltd. (China Merchants Gruop Ltd.)	Hong Kong	10/30/2017	BBB
• • • • • • • • • • • • • • • • • • • •	China	9/28/2017	BBB+
1 1	China	4/5/2017	BB
	Australia	3/30/2017	SD
	Australia	9/4/2017	A
	Japan	3/17/2017	CCC-
·		1/24/2017	CCC+
*	Japan China		BBB
1 1	Australia	9/21/2017	
		1/23/2017	В
1	China	9/22/2017	A
· · · · · · · · · · · · · · · · · · ·	Japan	12/27/2017	A-
	Singapore	9/21/2017	BBB+
	Indonesia	10/30/2017	CCC
T MNC Investama Tbk.	Indonesia	5/15/2017	CCC+
Jrban Renewal Authority (Hong Kong (Special Administrative Region of the People's Republic of Chir	Hong Kong	9/22/2017	AA+
Yuexiu Real Estate Investment Trust (Guangzhou Yuexiu Holdings LImited)	Hong Kong	5/17/2017	BB+
China Life Insurance (Overseas) Company Limited	Hong Kong	9/22/2017	A
MyState Bank Ltd. (MyState Limited)	Australia	11/16/2017	BBB-
MyState Bank Ltd. (MyState Limited)	Australia	5/21/2017	BBB
	China	9/22/2017	A+
i .	Australia	5/21/2017	BBB-
Cowloon-Canton Railway Corp. (Hong Kong (Special Administrative Region of the People's Republic		9/22/2017	AA+
, 1 (0 0 (1)	India	2/13/2017	BB
	Hong Kong	9/22/2017	AA+
•	New Zealand	2/28/2017	AA+ A
` '			
1	China	9/22/2017	A+
	Australia	5/21/2017	BBB
	Japan	11/30/2017	A-
	Australia	5/21/2017	BBB-
	Indonesia	11/10/2017	B+
Newcastle Permanent Building Society Ltd.	Australia	5/21/2017	BBB
1 10 10 011 0 1 1 0 0 0 11	China	10/31/2017	BB-
Shanxi Road & Bridge Construction Group Co. Ltd.			
1	Australia	5/21/2017	A



7.12. Asian Defaults, Standard & Poor's, 2017

Defaults	Country	Туре
EMECO Holdings Ltd.	Australia	Distressed Exchange
Global A&T Electronics Ltd.	Singapore	Missed Interest Payment
Quintis Ltd.	Australia	Missed Interest Payment



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" issuances 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 issuances 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 (COAO) 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 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 (HOAO) 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 writedown 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, equitylinked 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 payin-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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