An LSEG Business

Fixed Income Insights

MONTHLY REPORT - March 2023 | CHINA EDITION

FOR PROFESSIONAL INVESTORS ONLY

PBoC liquidity stabilises Chinese yields, as post-Covid recovery signs emerge

Chinese sovereign spreads fell back, as G7 yields surged. The PBoC used open market operations to meet increased cash demands, as activity recovered, avoiding more rate cuts. Corporates outperformed govts and agencies. China HY credit retreated in February, as concern about the real estate sector re-surfaced.

Macroeconomic backdrop - Is a post-Covid recovery underway in China?

Stronger January data cast doubt on a US soft landing, as IMF revised up 2023 growth forecasts. Early post-Lockdown data suggests Q4 2022 may have been a cyclical low for Chinese growth. (page 2)

Chinese bonds - PBOC liquidity injection helped stabilise Chinese yields, as Green spreads tightened

Chinese yields barely moved, despite the February sell-off in US Treasuries. Domestic credit spreads tightened in February, including Green spreads, but Chinese HY dollar credits gave up ground. (page 3)

Chinese and Asian bonds - Chinese and Indian yield curves retain low correlation with G7 curves

Asian and Chinese spreads fell versus the US and G7 in February, reflecting more subdued inflation in Asia. Chinese and Indian curves remained upward sloping versus inversions in Singapore and Korea. (page 4)

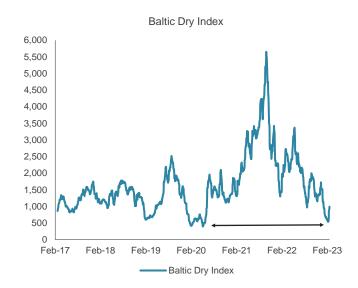
Performance – Global governments retreated in February as inflation fears re-surfaced, including APAC bonds Australasian and Korean bonds gave up most of their January gains, while Indian and Indonesian bonds outperformed, with positive returns in RMB terms. (pages 5-6)

Appendix - Global bond market returns, historical bond yields, duration and market value, foreign exchange returns.

Chart 1: Foreign capital outflows resumed in January, and increased, as yield differentials have become a headwind for Chinese bonds.



Chart 2: .The Baltic Dry index for shipping costs returned to 2020 levels, suggesting global supply-chain pressures have eased.



Macroeconomic Backdrop - Growth and Inflation Expectations

Stronger January data caused some second thoughts on a US soft landing. The IMF forecasts Chinese growth of above 5% in 2023, and spill-over effects may help a broader recovery in Asia, given China's strong regional ties in trade and tourism. Chinese inflation is subdued versus global peers, despite a January uptick, leaving scope for policy easing if required.

The IMF projects Chinese GDP growth at 5.2% in 2023, revised up from previous forecasts, as Chart 1 shows, but domestic demand will need to replace weak external demand as the main engine for growth. Uncertainty remains over post-lockdown consumer behaviour, but the Covid peak may have passed, with companies reporting most staff returning by end-Jan.

Inflation rates fell, but only marginally in January, as fuel prices rebounded, and strong food price inflation remains a factor throughout the G7. Chinese inflation rose a little to 2.1% y/y in January (from 1.8%), with higher food prices a strong contributor. Low inflation gives policymakers room to boost demand growth further in 2023.

Recovering activity after China's reopening drove RMB loan demand higher to 11.5% y/y growth in January, the highest in the last year. The PBoC responded in February by injecting liquidity via 7-day reverse repo and MLF operations to meet loan demand in short and medium terms respectively. The PBoC can supplement liquidity injections by easing rates if required.

Chart 2 shows the dollar's previous negative correlation with energy and commodity prices, broke down in 2022-23. The positive correlation of a strong dollar with high energy prices in 2022-23 increased inflation pressures in Europe and Japan, complicating inflation control, though subdued inflation in China made this less of a policy issue.

Chart 1: Apart from Canada (unchanged.) and a revision down to the UK, all IMF growth forecasts for 2023 show modest revisions higher, including for China, with the Chinese consumer being key.



Chart 2: Subdued Chinese inflation is the consensus forecast for

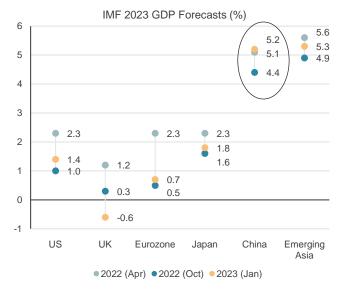
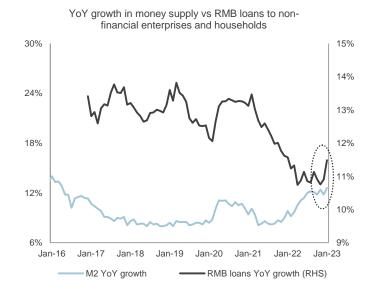
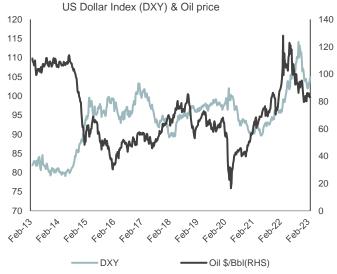


Chart 3: YoY growths in both money supply and loan demand were higher in January, as economic activity rebounded after China's faster-than-expected reopening.

Consensus Inflation Forecasts (%, February 2023)								
	2023	Change Since Jan-23 (Bps)	2024	Change Since Jan-23 (Bps)				
US	3.8	10	2.5	0				
UK	7.0	0	2.6	10				
Eurozone	5.6	-40	2.5	0				
Japan	2.0	20	1.4	10				
China	2.3	0	2.3	0				
Canada	3.7	0	2.2	0				

Chart 4: The US dollar's negative correlation with the oil price has weakened. The positive correlation of strong energy prices and US dollar reinforced inflation pressures on Europe and Japan in 2022.





Chinese Government and Corporate Bonds

Chart 1: Chinese government bond yields have risen modestly since January, led by the short end, after the easing of Covid curbs raised growth expectations and the fiscal deficit widened sharply.

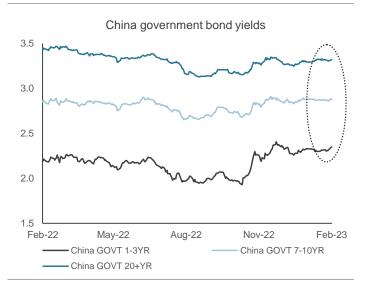


Chart 3: Domestic credit spreads, including green spreads, tightened in February, as investor confidence in a recovery resumed. Only policy bank spreads widened.

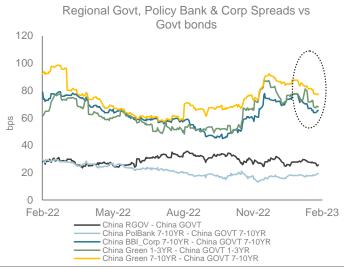


Chart 3; Foreign capital outflows resumed in January, and increased, as the yield differentials have become a headwind for Chinese bonds, after the sizeable G7 tightening moves in 2022.



Chart 2: US 10s/2s curve inversion retreated from the peak inversion of -100bp in February. The Chinese yield curve remains positively sloped and largely uncorrelated with US Treasuries.

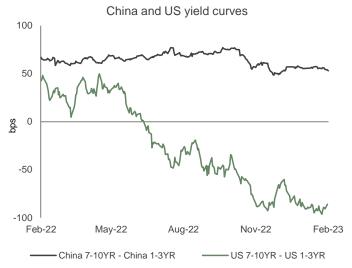


Chart 4: Chinese \$ corporate yields moved back up in February, as uncertainty about the fragile real estate sector returned. A Ukraine effect was also evident in 2022.

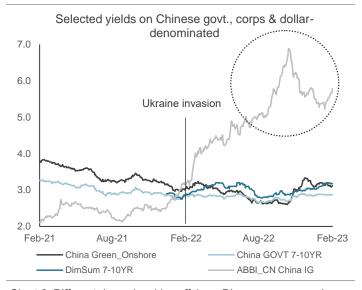
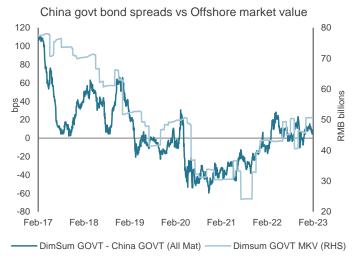


Chart 6: Different dynamics drive offshore Dimsum versus onshore bonds, notably the interest rate differentials between the Fed and PBoC. The level of offshore issuance is another driver of spreads.



China and Asian Bonds in Global Context

Chart 1: Korean yields backed up further in February, tracking US yields higher, as expectations of an early BoK pivot were dashed this month. Indonesian yields continue to trade well through India.

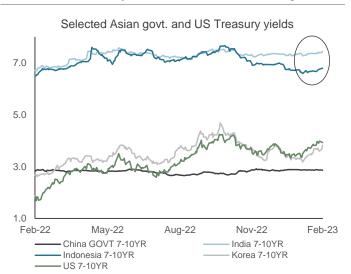


Chart 3: China government spreads reverted in February to end-Dec levels, as G7 yields surged broadly. But spreads held up well vs Japan, where curve control in 10 year limited yield volatility.

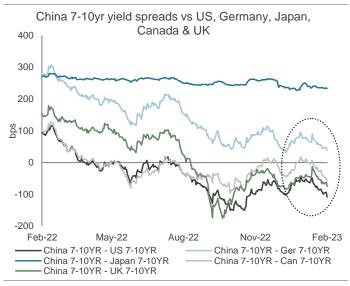


Chart 5: The sharp fall in Chinese \$ HY spreads stabilised in February, as investors mulled over property fundamentals and risk appetite fell back on US inflation concerns.

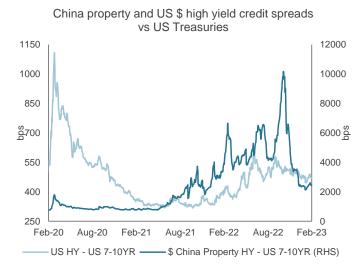


Chart 2: Developed Asian 10s/2s curves have remained slightly inverted or flat, tracking US inversions. While Emerging Asian yield curves (i.e., China & India) have resisted a full inversion in 10s/2s.

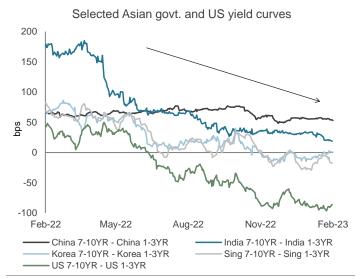


Chart 4: Asian spreads vs US fell across the region, led by India, Indonesia and China. Korea, Singapore and China now trade well through US Treasuries after the back-up in US yields in February.

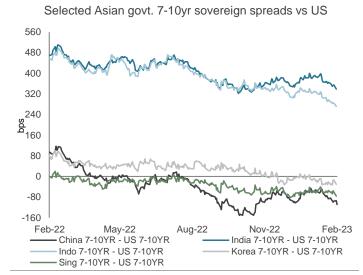


Chart 6: US inflation breakevens backed up in February to 240bp, a level last seen in November. Australian breakevens remain above pre-Ukraine levels, despite lower energy prices.



China Bond Market Returns - 1M & 12M RMB & USD (TR) as of February 28, 2023

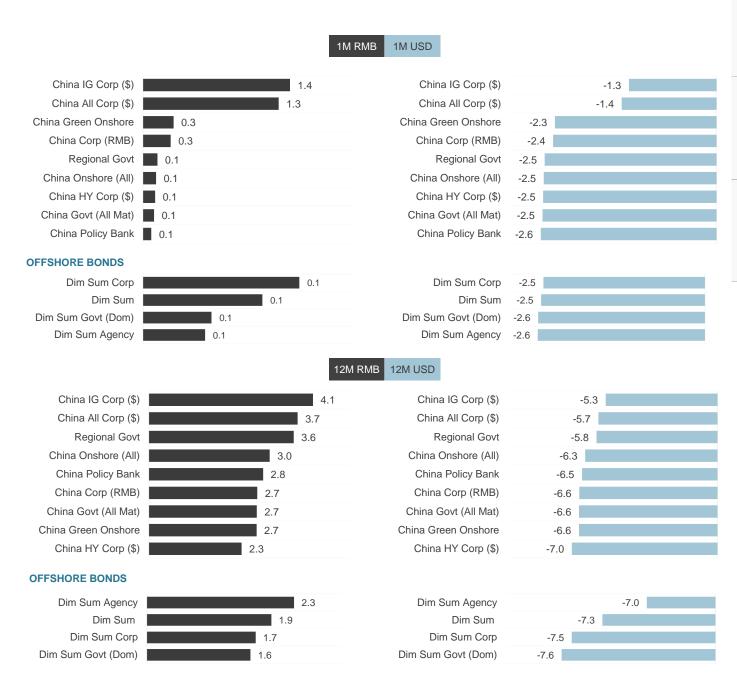
Chinese \$ HY credits posted negative returns of -2.5% in February, reversing some of the recent gains and about in line with onshore government bond losses in dollar terms. Investment grade corporates outperformed high yield credits. Over the last 12M, RMB bonds, onshore and offshore gained 1.6-3.6% in RMB terms.

Losses of 2.3-2.6% in onshore bonds in US dollar terms were driven by a weaker yuan in February, despite modest positive returns in RMB terms. Domestic corporates outperformed sovereigns and agencies as confidence in an economic recovery resumed.

Offshore Dimsum RMB bonds lagged onshore peers in the last 12M, with investment appeal reduced by yuan weakness. Increased issuance in 2022 was another factor, driven by borrowing interest rate differentials in RMB vs USD and other major currencies.

Chinese \$ high yield bonds lost 2.5% in February, erasing some of their gains from the rally since November, despite rebounding towards the month end. Concerns about housing sector fundamentals may have driven the pull-back during the month, as the short-lived optimism cooled.

Chinese government bond yields have remained in narrow yield ranges during the last 12 months, reflecting relatively stable PBoC policy. But the strong dollar dragged 12M returns down by 6.6% in US dollar terms.



Global Bond Market Returns - 1M & 12M RMB & USD (TR) as of February 28, 2023

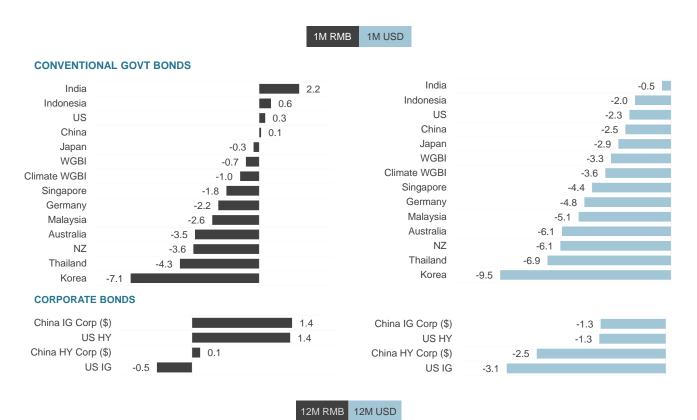
Asian and global govt bonds fell back in February, led by Korea, Thailand and Australasia. US Treasuries were broadly flat for an RMB investor, with currency gains offsetting yield increases. Only Indian and Indonesian bonds outperformed US Treasuries. Asian govt bonds outperformed on 12M, led by Indonesia and Malaysia, despite weaker currencies vs the USD.

Australasian government bonds lost 6.1% in US dollar terms in February, driven by weaker currencies. The RBNZ's 50bp rate move was more substantial than the RBA's 25bps, but both reflect concerns about persistent inflation.

JGBs benefited from the BoJ's bond buying to sustain yield curve control, but investors still expect an end of yield curve control with a new BoJ Governor taking office in April. The weaker yen sent returns negative by 0.3-2.9% in RMB and USD terms.

Bunds and JGBs fell by up to 21% in US dollar terms and the weakest performers over 12 months.

Chinese IG and HY dollar corporate bonds lost 1.3-2.5% in February, as investor concerns about more Fed tightening re-surfaced and investors demanded higher yields for holding dollar corporate bonds.

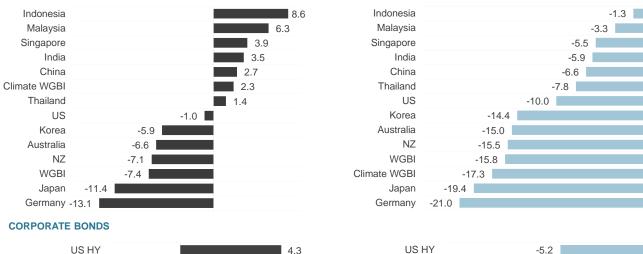




China IG Corp (\$)

China HY Corp (\$)

US IG



Source: FTSE Russell. All data as of February 28, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of Indices used for each market. For professional investors only.

China IG Corp (\$)

China HY Corp (\$)

US IG -10.3

-5.3

-7.0

Global Returns

Appendix - Global Bond Market Returns % (RMB vs USD, TR), February 28, 2023

Government bond returns

Top 15% Bottom 15%

Green highlight indicates highest 15%, red indicates lowest 15%.

		11	M	3	М	6	M	12	2M
		USD	RMB	USD	RMB	USD	RMB	USD	RMB
US	1-3YR	-0.73	1.95	0.17	-2.68	-0.44	0.22	-2.71	6.98
	7-10YR	-3.21	-0.59	-1.23	-4.04	-3.89	-3.26	-12.66	-3.96
	20+YR	-4.88	-2.31	-0.25	-3.09	-7.94	-7.33	-25.34	-17.91
	IG All	-3.10	-0.49	0.45	-2.41	-1.17	-0.52	-10.33	-1.41
	HY All	-1.30	1.37	1.75	-1.15	1.95	2.62	-5.15	4.29
China	1-3YR	-2.57	0.06	3.35	0.40	-0.13	0.53	-7.09	2.16
	7-10YR	-2.37	0.26	3.86	0.90	-0.63	0.02	-6.71	2.58
	20+YR	-2.53	0.10	4.18	1.21	-1.86	-1.21	-4.52	4.98
	All	-2.53	0.10	3.60	0.65	-0.52	0.14	-6.62	2.68
China Policy Ba	ınk	-2.55	0.08	3.41	0.46	-0.42	0.23	-6.47	2.84
Regional Govt		-2.50	0.14	3.41	0.47	-0.28	0.38	-5.78	3.60
China Corp (LC	;)	-2.37	0.26	3.44	0.49	-0.39	0.27	-6.60	2.69
China Onshore	(AII)	-2.51	0.12	3.49	0.54	-0.41	0.24	-6.32	3.00
China Green O	nshore	-2.35	0.29	3.43	0.49	-0.43	0.22	-6.62	2.68
China All Corp	(\$)	-1.38	1.28	4.11	1.15	2.02	2.69	-5.69	3.70
China IG Corp (-1.27	1.39	2.32	-0.59	0.56	1.23	-5.35	4.08
China HY Corp		-2.52	0.11	27.20	23.57	20.31	21.10	-6.96	2.30
Offshore Govt (I		-2.57	0.06	2.09	-0.82	-0.52	0.14	-7.60	1.60
Asia-Pac	1-3YR	-3.57	-0.96	2.59	-0.33	0.52	1.19	-7.15	2.09
	7-10YR	-4.36	-1.78	2.65	-0.27	0.42	1.08	-9.10	-0.05
	20+YR	-6.10	-3.56	3.35	0.40	0.33	0.99	-12.19	-3.45
	All	-4.32	-1.74	2.74	-0.19	0.52	1.18	-8.60	0.50
Australia	1-3YR	-4.94	-2.37	0.51	-2.36	-1.05	-0.40	-8.57	0.53
	7-10YR	-6.39	-3.86	-0.97	-3.79	-1.84	-1.19	-15.78	-7.39
	20+YR	-7.99	-5.50	-3.24	-6.00	-5.83	-5.21	-27.86	-20.68
	All	-6.06	-3.52	-0.66	-3.49	-1.86	-1.21	-15.04	-6.59
India	1-3YR	-0.71	1.97	-0.37	-3.21	-1.50	-0.85	-6.09	3.26
	7-10YR	-0.73	1.95	-0.53	-3.36	-1.72	-1.07	-6.32	3.01
	20+YR	0.03	2.73	0.01	-2.84	0.68	1.34	-5.12	4.33
	All	-0.49	2.19	-0.34	-3.18	-1.05	-0.40	-5.90	3.46
Indonesia	1-3YR	-1.75	0.91	4.68	1.69	-0.32	0.34	-3.39	6.22
	7-10YR	-2.12	0.52	6.14	3.11	2.75	3.43	-0.60	9.29
	20+YR	-1.35	1.31	6.88	3.83	3.12	3.80	0.84	10.88
	All	-2.00	0.65	5.96	2.94	1.92	2.59	-1.27	8.56
Japan	1-3YR	-4.49	-1.92	2.47	-0.45	1.68	2.35	-15.44	-7.02
	7-10YR	-4.45	-1.87	0.70	-2.17	-0.50	0.16	-17.65	-9.45
	20+YR	0.16	2.86	4.36	1.38	-2.90	-2.26	-24.35	-16.81
	All	-2.93	-0.31	2.01	-0.90	-1.16	-0.51	-19.38	-11.35
Korea	1-3YR	-7.30	-4.80	0.51	-2.36	2.82	3.49	-8.51	0.60
	7-10YR	-9.75	-7.31	-0.45	-3.29	2.44	3.12	-13.59	-4.98
	20+YR	-11.46	-9.07	2.39	-0.52	2.48	3.16	-21.75	-13.96
	All	-9.50	-7.05	0.71	-2.16	2.62	3.29	-14.44	-5.92
Malaysia	1-3YR	-4.69	-2.11	0.68	-2.19	1.62	2.29	-4.07	5.49
	7-10YR	-5.34	-2.79	2.07	-0.84	2.53	3.20	-3.84	5.74
	20+YR	-5.46	-2.91	2.84	-0.10	4.87	5.56	-1.26	8.57
	All	-5.13	-2.57	1.79	-1.11	2.63	3.30	-3.32	6.31
New Zealand	1-3YR	-4.41	-1.83	0.29	-2.57	1.08	1.75	-9.13	-0.09
	7-10YR	-7.21	-4.70	-2.72	-5.49	-1.64	-0.99	-17.05	-8.80
	20+YR	-8.19	-5.71	-5.85	-8.53	-2.75	-2.11	-28.86	-21.78
	All	-6.15	-3.61	-1.78	-4.58	-0.68	-0.02	-15.51	-7.10
Singapore	1-3YR	-3.13	-0.51	1.54	-1.35	3.44	4.12	-0.84	9.04
	7-10YR	-4.76	-2.19	0.68	-2.19	2.10	2.78	-6.84	2.43
	20+YR	-5.29	-2.74	2.07	-0.84	7.97	8.68	-9.52	-0.51
	All	-4.38	-1.80	0.99	-1.88	3.51	4.19	-5.53	3.88
Thailand	1-3YR	-6.66	-4.14	-0.01	-2.86	3.50	4.18	-7.70	1.49
	7-10YR	-6.81	-4.29	1.51	-1.38	4.62	5.31	-7.51	1.70
	20+YR	-7.17	-4.66	12.97	9.76	10.17	10.90	-7.06	2.19
	All	-6.86	-4.35	2.02	-0.89	4.83	5.53	-7.77	1.41
	ΔII	-0.00	-4.00	2.02	-0.08	4.03	0.00	-1.11	1.41

Green highlight indicates highest 15%, red indicates lowest 15%.

Top 15% Bottom 15%

Global
Returns

China Bond Returns

Financial Conditions

Curves/Spreads

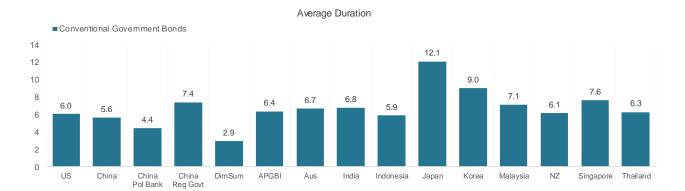
Current 3M Ago 6M Ago 12M Ago Current 3M Ago	1-3YR 4.90 4.47 3.49 1.38	3-5YR 4.34 3.97	7-10YR 3.93	20+YR 4.01	1-5YR	5-10YR	20+YR	All Mat	All Mat
3M Ago 6M Ago 12M Ago Current	4.47 3.49		3.93	4.01					
6M Ago 12M Ago Current	3.49	3.97		7.01	1.82	1.57	1.65	5.55	8.62
12M Ago Current			3.64	3.95	1.76	1.40	1.59	5.38	8.81
Current	1.38	3.44	3.19	3.46	0.87	0.75	1.14	4.86	8.37
		1.71	1.82	2.26	-2.12	-1.01	-0.09	3.13	5.77
3M Ago	3.95	3.79	3.72	4.07	0.45	0.18	0.67		
	3.36	3.26	3.20	3.39	-1.95	-0.58	0.10		
6M Ago	3.04	2.82	2.77	3.06	-3.47	-1.62	-0.45		
12M Ago	1.02	1.01	1.11	1.41	-4.71	-3.55	-2.18		
Current	-0.04	0.11	0.53	1.35	-1.25	-0.36			
3M Ago	-0.04	0.05	0.28	1.40	-1.44	-0.76			
6M Ago	-0.10	-0.04	0.20	1.10	-1.23	-0.83			
12M Ago	-0.04	0.00	0.11	0.80	-1.11	-0.83			
Current	2.38	2.62	2.86	3.32					
3M Ago	2.26	2.54	2.87	3.34					
6M Ago	1.96	2.30	2.68	3.16					
12M Ago	2.18	2.49	2.86	3.45					
Current	3.71	4.48	4.88	4.57	1.46	3.33	5.35	5.95	10.85
3M Ago	3.72	4.51	4.89	4.89	2.45	3.14	5.10	6.08	12.18
	3.49	4.16	4.76	4.65	2.45	3.50	5.09	5.25	11.65
									10.39
Current	3.65	3.81	4.18	4.55	0.84	1.69	1.90		
3M Ago	2.73	3.09	3.59	3.86	0.12	1.32	1.35		
	2.11								
	-0.01								
Current	3.18						0.69		
3M Ago	2.25						0.09		
				4.19			1.78		
		5.10			3.02	1.10	1.34	5.16	7.19
									7.13
									6.97
									4.93
	Current 3M Ago 6M Ago 12M Ago 12M Ago 12M Ago 12M Ago 12M Ago 12M Ago	Current -0.04 3M Ago -0.04 6M Ago -0.10 12M Ago -0.04 Current 2.38 3M Ago 2.26 6M Ago 1.96 12M Ago 2.18 Current 3.71 3M Ago 3.49 12M Ago 3.39 Current 3.09 3M Ago 2.04 6M Ago 0.97 12M Ago -0.57 Current 3.65 3M Ago 2.73 6M Ago 2.11 12M Ago -0.01 Current 3.18 3M Ago 2.25 6M Ago 1.21 12M Ago -0.46 Current 3.18 3M Ago 2.52 6M Ago 3.12 6M Ago 3.12 6M Ago 3.11 12M Ago -0.05 Current 3.06 3M Ago 4.67 <t< td=""><td>Current -0.04 0.11 3MAgo -0.04 0.05 6MAgo -0.10 -0.04 12MAgo -0.04 0.00 Current 2.38 2.62 3MAgo 2.26 2.54 6MAgo 1.96 2.30 12MAgo 2.18 2.49 Current 3.71 4.48 3MAgo 3.72 4.51 6MAgo 3.49 4.16 12MAgo 3.39 4.03 Current 3.09 2.78 3MAgo 2.04 1.95 6MAgo 0.97 1.25 12MAgo -0.57 0.23 Current 3.65 3.81 3MAgo 2.73 3.09 6MAgo 2.11 2.78 12MAgo -0.01 1.12 Current 3.18 3.03 3MAgo 2.25 2.19 6MAgo 1.21 1.53 12MAgo <</td><td>Current -0.04 0.11 0.53 3M Ago -0.04 0.05 0.28 6M Ago -0.10 -0.04 0.20 12M Ago -0.04 0.00 0.11 Current 2.38 2.62 2.86 3M Ago 2.26 2.54 2.87 6M Ago 1.96 2.30 2.68 12M Ago 2.18 2.49 2.86 Current 3.71 4.48 4.88 3M Ago 3.72 4.51 4.89 6M Ago 3.49 4.16 4.76 12M Ago 3.39 4.03 4.58 Current 3.09 2.78 2.59 3M Ago 2.04 1.95 1.91 6M Ago 0.97 1.25 1.41 12M Ago -0.57 0.23 0.48 2urrent 3.65 3.81 4.18 3M Ago 2.11 2.78 3.53 12M Ago -0.01 <t< td=""><td>Current -0.04 0.11 0.53 1.35 3MAgo -0.04 0.05 0.28 1.40 6MAgo -0.10 -0.04 0.20 1.10 12MAgo -0.04 0.00 0.11 0.80 Current 2.38 2.62 2.86 3.32 3MAgo 2.26 2.54 2.87 3.34 6MAgo 1.96 2.30 2.68 3.16 12MAgo 2.18 2.49 2.86 3.45 Current 3.71 4.48 4.88 4.57 3MAgo 3.72 4.51 4.89 4.89 6MAgo 3.49 4.16 4.76 4.65 12MAgo 3.39 4.03 4.58 4.90 Current 3.09 2.78 2.59 2.57 3MAgo 2.04 1.95 1.91 1.81 6MAgo 0.97 1.25 1.41 1.62 12MAgo -0.57 0.23</td><td>Current -0.04 0.11 0.53 1.35 -1.25 3MAgo -0.04 0.05 0.28 1.40 -1.44 6MAgo -0.10 -0.04 0.20 1.10 -1.23 12MAgo -0.04 0.00 0.11 0.80 -1.11 Current 2.38 2.62 2.86 3.32 3MAgo 2.26 2.54 2.87 3.34 6MAgo 1.96 2.30 2.68 3.16 12MAgo 2.18 2.49 2.86 3.45 Current 3.71 4.48 4.88 4.57 1.46 3MAgo 3.49 4.16 4.76 4.65 2.45 12MAgo 3.39 4.03 4.58 4.90 2.17 Current 3.09 2.78 2.59 2.57 0.22 3MAgo 2.04 1.95 1.91 1.81 -0.59 6MAgo 0.97 1.25 1.41 1.62 -1.</td><td>Current -0.04 0.11 0.53 1.35 -1.25 -0.36 3M Ago -0.04 0.05 0.28 1.40 -1.44 -0.76 6M Ago -0.10 -0.04 0.20 1.10 -1.23 -0.83 12M Ago -0.04 0.00 0.11 0.80 -1.11 -0.83 12M Ago -0.04 0.00 0.11 0.80 -1.11 -0.83 3M Ago 2.26 2.54 2.87 3.34 -6MAgo 1.96 2.30 2.68 3.16 12M Ago 2.18 2.49 2.86 3.45 -6MAgo 1.46 3.33 3.14 -6MAgo 3.49 4.16 4.76 4.65 2.45 3.14 6MAgo 3.49 4.16 4.76 4.65 2.45 3.50 12MAgo 3.39 4.03 4.58 4.90 2.17 3.01 2.02 0.08 3.49 4.16 4.76 4.65 2.45 3.50 3.14 6MAgo</td><td>Current -0.04 0.11 0.53 1.35 -1.25 -0.36 3MAgo -0.04 0.05 0.28 1.40 -1.44 -0.76 6MAgo -0.10 -0.04 0.20 1.10 -1.23 -0.83 12MAgo -0.04 0.00 0.11 0.80 -1.11 -0.83 Current 2.38 2.62 2.86 3.32 3.34 6MAgo 1.96 2.30 2.68 3.45 Current 3.71 4.48 4.88 4.57 1.46 3.33 5.35 3MAgo 3.72 4.51 4.89 4.89 2.45 3.14 5.10 6MAgo 3.49 4.16 4.76 4.65 2.45 3.50 5.09 12MAgo 3.39 4.03 4.58 4.90 2.17 3.01 4.91 Current 3.09 2.78 2.59 2.57 0.22 0.08 0.03 3MAgo 0.97 <</td><td>Current</td></t<></td></t<>	Current -0.04 0.11 3MAgo -0.04 0.05 6MAgo -0.10 -0.04 12MAgo -0.04 0.00 Current 2.38 2.62 3MAgo 2.26 2.54 6MAgo 1.96 2.30 12MAgo 2.18 2.49 Current 3.71 4.48 3MAgo 3.72 4.51 6MAgo 3.49 4.16 12MAgo 3.39 4.03 Current 3.09 2.78 3MAgo 2.04 1.95 6MAgo 0.97 1.25 12MAgo -0.57 0.23 Current 3.65 3.81 3MAgo 2.73 3.09 6MAgo 2.11 2.78 12MAgo -0.01 1.12 Current 3.18 3.03 3MAgo 2.25 2.19 6MAgo 1.21 1.53 12MAgo <	Current -0.04 0.11 0.53 3M Ago -0.04 0.05 0.28 6M Ago -0.10 -0.04 0.20 12M Ago -0.04 0.00 0.11 Current 2.38 2.62 2.86 3M Ago 2.26 2.54 2.87 6M Ago 1.96 2.30 2.68 12M Ago 2.18 2.49 2.86 Current 3.71 4.48 4.88 3M Ago 3.72 4.51 4.89 6M Ago 3.49 4.16 4.76 12M Ago 3.39 4.03 4.58 Current 3.09 2.78 2.59 3M Ago 2.04 1.95 1.91 6M Ago 0.97 1.25 1.41 12M Ago -0.57 0.23 0.48 2urrent 3.65 3.81 4.18 3M Ago 2.11 2.78 3.53 12M Ago -0.01 <t< td=""><td>Current -0.04 0.11 0.53 1.35 3MAgo -0.04 0.05 0.28 1.40 6MAgo -0.10 -0.04 0.20 1.10 12MAgo -0.04 0.00 0.11 0.80 Current 2.38 2.62 2.86 3.32 3MAgo 2.26 2.54 2.87 3.34 6MAgo 1.96 2.30 2.68 3.16 12MAgo 2.18 2.49 2.86 3.45 Current 3.71 4.48 4.88 4.57 3MAgo 3.72 4.51 4.89 4.89 6MAgo 3.49 4.16 4.76 4.65 12MAgo 3.39 4.03 4.58 4.90 Current 3.09 2.78 2.59 2.57 3MAgo 2.04 1.95 1.91 1.81 6MAgo 0.97 1.25 1.41 1.62 12MAgo -0.57 0.23</td><td>Current -0.04 0.11 0.53 1.35 -1.25 3MAgo -0.04 0.05 0.28 1.40 -1.44 6MAgo -0.10 -0.04 0.20 1.10 -1.23 12MAgo -0.04 0.00 0.11 0.80 -1.11 Current 2.38 2.62 2.86 3.32 3MAgo 2.26 2.54 2.87 3.34 6MAgo 1.96 2.30 2.68 3.16 12MAgo 2.18 2.49 2.86 3.45 Current 3.71 4.48 4.88 4.57 1.46 3MAgo 3.49 4.16 4.76 4.65 2.45 12MAgo 3.39 4.03 4.58 4.90 2.17 Current 3.09 2.78 2.59 2.57 0.22 3MAgo 2.04 1.95 1.91 1.81 -0.59 6MAgo 0.97 1.25 1.41 1.62 -1.</td><td>Current -0.04 0.11 0.53 1.35 -1.25 -0.36 3M Ago -0.04 0.05 0.28 1.40 -1.44 -0.76 6M Ago -0.10 -0.04 0.20 1.10 -1.23 -0.83 12M Ago -0.04 0.00 0.11 0.80 -1.11 -0.83 12M Ago -0.04 0.00 0.11 0.80 -1.11 -0.83 3M Ago 2.26 2.54 2.87 3.34 -6MAgo 1.96 2.30 2.68 3.16 12M Ago 2.18 2.49 2.86 3.45 -6MAgo 1.46 3.33 3.14 -6MAgo 3.49 4.16 4.76 4.65 2.45 3.14 6MAgo 3.49 4.16 4.76 4.65 2.45 3.50 12MAgo 3.39 4.03 4.58 4.90 2.17 3.01 2.02 0.08 3.49 4.16 4.76 4.65 2.45 3.50 3.14 6MAgo</td><td>Current -0.04 0.11 0.53 1.35 -1.25 -0.36 3MAgo -0.04 0.05 0.28 1.40 -1.44 -0.76 6MAgo -0.10 -0.04 0.20 1.10 -1.23 -0.83 12MAgo -0.04 0.00 0.11 0.80 -1.11 -0.83 Current 2.38 2.62 2.86 3.32 3.34 6MAgo 1.96 2.30 2.68 3.45 Current 3.71 4.48 4.88 4.57 1.46 3.33 5.35 3MAgo 3.72 4.51 4.89 4.89 2.45 3.14 5.10 6MAgo 3.49 4.16 4.76 4.65 2.45 3.50 5.09 12MAgo 3.39 4.03 4.58 4.90 2.17 3.01 4.91 Current 3.09 2.78 2.59 2.57 0.22 0.08 0.03 3MAgo 0.97 <</td><td>Current</td></t<>	Current -0.04 0.11 0.53 1.35 3MAgo -0.04 0.05 0.28 1.40 6MAgo -0.10 -0.04 0.20 1.10 12MAgo -0.04 0.00 0.11 0.80 Current 2.38 2.62 2.86 3.32 3MAgo 2.26 2.54 2.87 3.34 6MAgo 1.96 2.30 2.68 3.16 12MAgo 2.18 2.49 2.86 3.45 Current 3.71 4.48 4.88 4.57 3MAgo 3.72 4.51 4.89 4.89 6MAgo 3.49 4.16 4.76 4.65 12MAgo 3.39 4.03 4.58 4.90 Current 3.09 2.78 2.59 2.57 3MAgo 2.04 1.95 1.91 1.81 6MAgo 0.97 1.25 1.41 1.62 12MAgo -0.57 0.23	Current -0.04 0.11 0.53 1.35 -1.25 3MAgo -0.04 0.05 0.28 1.40 -1.44 6MAgo -0.10 -0.04 0.20 1.10 -1.23 12MAgo -0.04 0.00 0.11 0.80 -1.11 Current 2.38 2.62 2.86 3.32 3MAgo 2.26 2.54 2.87 3.34 6MAgo 1.96 2.30 2.68 3.16 12MAgo 2.18 2.49 2.86 3.45 Current 3.71 4.48 4.88 4.57 1.46 3MAgo 3.49 4.16 4.76 4.65 2.45 12MAgo 3.39 4.03 4.58 4.90 2.17 Current 3.09 2.78 2.59 2.57 0.22 3MAgo 2.04 1.95 1.91 1.81 -0.59 6MAgo 0.97 1.25 1.41 1.62 -1.	Current -0.04 0.11 0.53 1.35 -1.25 -0.36 3M Ago -0.04 0.05 0.28 1.40 -1.44 -0.76 6M Ago -0.10 -0.04 0.20 1.10 -1.23 -0.83 12M Ago -0.04 0.00 0.11 0.80 -1.11 -0.83 12M Ago -0.04 0.00 0.11 0.80 -1.11 -0.83 3M Ago 2.26 2.54 2.87 3.34 -6MAgo 1.96 2.30 2.68 3.16 12M Ago 2.18 2.49 2.86 3.45 -6MAgo 1.46 3.33 3.14 -6MAgo 3.49 4.16 4.76 4.65 2.45 3.14 6MAgo 3.49 4.16 4.76 4.65 2.45 3.50 12MAgo 3.39 4.03 4.58 4.90 2.17 3.01 2.02 0.08 3.49 4.16 4.76 4.65 2.45 3.50 3.14 6MAgo	Current -0.04 0.11 0.53 1.35 -1.25 -0.36 3MAgo -0.04 0.05 0.28 1.40 -1.44 -0.76 6MAgo -0.10 -0.04 0.20 1.10 -1.23 -0.83 12MAgo -0.04 0.00 0.11 0.80 -1.11 -0.83 Current 2.38 2.62 2.86 3.32 3.34 6MAgo 1.96 2.30 2.68 3.45 Current 3.71 4.48 4.88 4.57 1.46 3.33 5.35 3MAgo 3.72 4.51 4.89 4.89 2.45 3.14 5.10 6MAgo 3.49 4.16 4.76 4.65 2.45 3.50 5.09 12MAgo 3.39 4.03 4.58 4.90 2.17 3.01 4.91 Current 3.09 2.78 2.59 2.57 0.22 0.08 0.03 3MAgo 0.97 <	Current

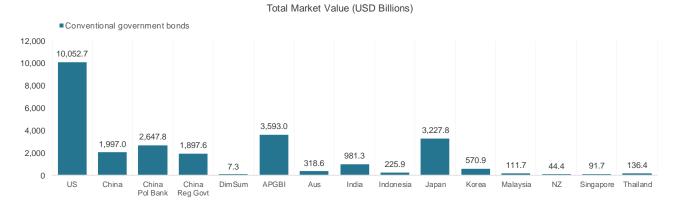
Appendix - Duration and Market Value (USD, Bn), February 28, 2023

Conventional Government Bonds								
		Durat	tion		Market Value			
	3-5YR	7-10YR	20+YR	Overall	3-5YR	7-10YR	20+YR	Total
US	3.7	7.6	17.5	6.0	2,171.5	1,031.7	1,240.4	10,052.7
China	3.6	7.5	17.3	5.6	462.0	326.1	232.2	1,997.0
China Pol Bank				4.4				2,647.8
China Reg Govt				7.4				1,897.6
DimSum	3.7			2.9	1.7			7.3
APGBI	3.6	7.4	17.8	6.4	723.9	631.4	442.0	3,593.0
Aus	3.6	7.8	17.8	6.7	55.2	87.1	15.4	318.6
India	3.3	6.1	11.6	6.8	149.2	197.5	218.1	981.3
Indonesia	3.1	6.1	11.2	5.9	36.6	52.3	11.7	225.9
Japan	3.9	7.9	23.8	12.1	357.0	383.5	705.7	3,227.8
Korea	3.5	7.3	19.1	9.0	84.0	89.5	145.6	570.9
Malaysia	3.6	7.0	14.8	7.1	21.1	13.1	13.4	111.7
NZ	3.4	7.8	17.3	6.1	8.5	6.4	2.2	44.4
Singapore	3.5	7.2	20.0	7.6	17.9	11.7	13.6	91.7
Thailand	3.8	7.7	16.8	6.3	22.1	22.8	7.9	136.4

Corporate Bonds							
		Duration		Market Value			
	Inv Grade	High Yield	Overall	Inv Grade	High Yield	Overall	
US	7.1	4.2		6,156.8	1,001.8		
China Corp (LC)			2.3			546.0	
China Green Onshore			2.5			131.6	
China Corp (\$)	4.0	2.3	7.4	281.8	25.6	307.4	
DimSum	2.2		2.2	10.1		11.7	
EM	5.0	3.6	4.6	604.7	203.6	808.3	
EUxUK	4.5	3.1		2,646.1	422.3		

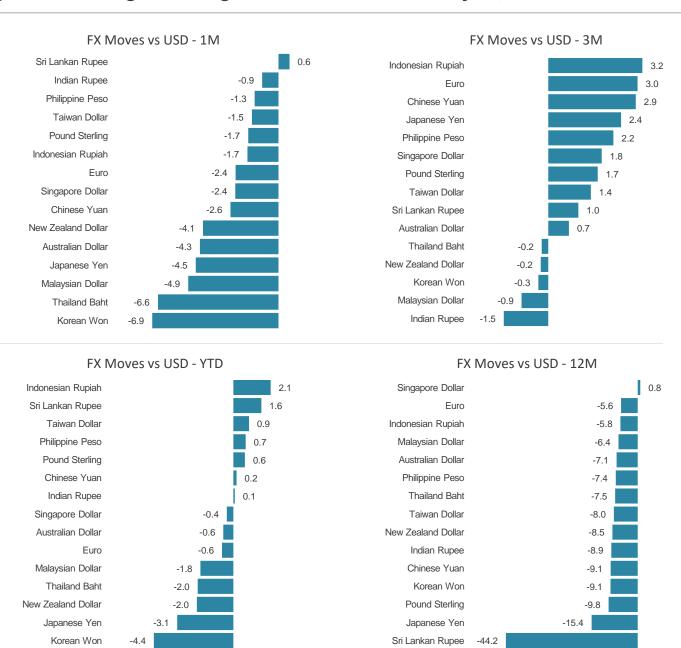
Other Sectors							
		Duration		Market Value			
	Supra	Agency	Corp NR	Supra	Agency	Corp NR	
Offshore (DimSum)	1.8	2.5	2.1	2.0	6.9	1.7	





Data as of 2023-02-28

Appendix - Foreign Exchange Returns % as of February 28, 2023



Bond markets are based on the following Indices:

FTSE World Government Bond Index (WGBI) for all global government bond markets

FTSE World Inflation-Linked Securities Index (WorldILSI) for all global inflation-linked bond markets

FTSE US Broad Investment-Grade Bond Index (USBIG®) for the US corporate bond market

FTSE US High-Yield Market Index for the US high yield bond market

FTSE Euro Broad Investment-Grade Bond Index (EuroBIG®) for the Euro-denominated corporate bond market

FTSE European High-Yield Market Index for the European high yield market

FTSE Chinese Government and Policy Bank Bond Index (CNGPBI) for the Chinese government bond market

FTSE Emerging Markets Inflation-Linked Securities Index (EMILSI) for the emerging markets inflation-linked bond market

FTSE Emerging Markets Government Bond Index (EMGBI) for the emerging markets government bond market. Please note that over 50% of this index is invested in China.

FTSE Emerging Markets Broad Bond Index (EMUSDBBI) for the emerging markets corporate bond market

List of Abbreviations used in charts:

IL = Inflation-linked bonds

IG = Investment-grade bonds

HY = High-yield bonds

BPS = Basis points

EM = Emerging market

LC = Local currency

Source: FTSE Russell. All data as of February 28, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. For professional investors only



© 2023 London Stock Exchange Group plc and its applicable group undertakings (the "LSE Group"). The LSE Group includes (1) FTSE International Limited ("FTSE"), (2) Frank Russell Company ("Russell"), (3) FTSE Global Debt Capital Markets Inc. and FTSE Global Debt Capital Markets Limited (together, "FTSE Canada"), (4) FTSE Fixed Income Europe Limited ("FTSE FI Europe"), (5) FTSE Fixed Income LLC ("FTSE FI"), (6) The Yield Book Inc ("YB") and (7) Beyond Ratings S.A.S. ("BR"). All rights reserved.

FTSE Russell® is a trading name of FTSE, Russell, FTSE Canada, FTSE FI, FTSE FI Europe, YB and BR. "FTSE®", "Russell®", "FTSE Russell®", "FTSE4Good®", "ICB®", "The Yield Book®", "Beyond Ratings®" and all other trademarks and service marks used herein (whether registered or unregistered) are trademarks and/or service marks owned or licensed by the applicable member of the LSE Group or their respective licensors and are owned, or used under licence, by FTSE, Russell, FTSE Canada, FTSE FI, FTSE FI Europe, YB or BR. FTSE International Limited is authorised and regulated by the Financial Conduct Authority as a benchmark administrator.

All information is provided for information purposes only. All information and data contained in this publication is obtained by the LSE Group, from sources believed by it to be accurate and reliable. Because of the possibility of human and mechanical error as well as other factors, however, such information and data is provided "as is" without warranty of any kind. No member of the LSE Group nor their respective directors, officers, employees, partners or licensors make any claim, prediction, warranty or representation whatsoever, expressly or impliedly, either as to the accuracy, timeliness, completeness, merchantability of any information or of results to be obtained from the use of FTSE Russell products, including but not limited to Indices, data and analytics, or the fitness or suitability of the FTSE Russell products for any particular purpose to which they might be put. Any representation of historical data accessible through FTSE Russell products is provided for information purposes only and is not a reliable indicator of future performance.

No responsibility or liability can be accepted by any member of the LSE Group nor their respective directors, officers, employees, partners or licensors for (a) any loss or damage in whole or in part caused by, resulting from, or relating to any error (negligent or otherwise) or other circumstance involved in procuring, collecting, compiling, interpreting, analysing, editing, transcribing, transmitting, communicating or delivering any such information or data or from use of this document or links to this document or (b) any direct, indirect, special, consequential or incidental damages whatsoever, even if any member of the LSE Group is advised in advance of the possibility of such damages, resulting from the use of, or inability to use, such information.

No member of the LSE Group nor their respective directors, officers, employees, partners or licensors provide investment advice and nothing in this document should be taken as constituting financial or investment advice. No member of the LSE Group nor their respective directors, officers, employees, partners or licensors make any representation regarding the advisability of investing in any asset or whether such investment creates any legal or compliance risks for the investor. A decision to invest in any such asset should not be made in reliance on any information herein. Indices cannot be invested in directly. Inclusion of an asset in an index is not a recommendation to buy, sell or hold that asset nor confirmation that any particular investor may lawfully buy, sell or hold the asset or an index containing the asset. The general information contained in this publication should not be acted upon without obtaining specific legal, tax, and investment advice from a licensed professional.

The information contained in this report should not be considered "research" as defined in recital 28 of the Commission Delegated Directive (EU) 2017/593 of 7 April 2016 supplementing Directive 2014/65/EU of the European Parliament and of the Council ("MiFID II") and is provided for no fee.

Past performance is no guarantee of future results. Charts and graphs are provided for illustrative purposes only. Index returns shown may not represent the results of the actual trading of investable assets. Certain returns shown may reflect back-tested performance. All performance presented prior to the index inception date is back-tested performance. Back-tested performance is not actual performance, but is hypothetical. The back-test calculations are based on the same methodology that was in effect when the index was officially launched. However, back-tested data may reflect the application of the index methodology with the benefit of hindsight, and the historic calculations of an index may change from month to month based on revisions to the underlying economic data used in the calculation of the index.

This document may contain forward-looking assessments. These are based upon a number of assumptions concerning future conditions that ultimately may prove to be inaccurate. Such forward-looking assessments are subject to risks and uncertainties and may be affected by various factors that may cause actual results to differ materially. No member of the LSE Group nor their licensors assume any duty to and do not undertake to update forward-looking assessments.

No part of this information may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission of the applicable member of the LSE Group. Use and distribution of the LSE Group data requires a licence from FTSE, Russell, FTSE Canada, FTSE FI, FTSE FI Europe, YB, BR and/or their respective licensors.

Refinitiv content is the intellectual property of Refinitiv. Any copying, republication or redistribution of Refinitiv content, including by caching, framing or similar means, is expressly prohibited without the prior written consent of Refinitiv. Refinitiv is not liable for any errors or delays in content, or for any actions taken in reliance on any content.