4°<sup>00</sup>

UK

# **Fixed Income Insights**

MONTHLY REPORT - APRIL 2023 | CHINA EDITION

FOR PROFESSIONAL INVESTORS ONLY

### Sweet spot for China IG credit and government bonds created by low inflation

Although Chinese spreads widened versus the G7 in March, as G7 yields fell more, Chinese yields also fell, as the PBoC eased reserve requirements, and sought to boost growth. IG credits outperformed HY globally, as investor risk-appetite weakened on US bank woes. Indonesian govts proved best Q1 and 12M performers.

### Macroeconomic backdrop – US banking woes reinforce G7 recession risks

Global banking stresses reinforce case for domestic-led growth in China, and further PBoC easing, given low inflation. (page 2)

Chinese bonds - PBoC reserve requirement cut helps government bonds rally, led by longs Domestic credit spreads, including green spreads, tightened further in March, with economic recovery on track. (page 3)

Chinese and Asian bonds - Asian govts joined the global govt bond rally on the flight to quality, HY underperformed Asian government bond spreads generally widened versus Treasuries, including China, as US Treasury yields fell faster in March, but yields still fell. Chinese high yield spreads in US dollars widened as risk-appetite fell. (page 4)

### Performance – Indonesian and Australian governments were strongest performers in Q1

Korean, Singaporean and Japanese government bonds performed best in March, reversing February losses, though Indonesia was the strongest performers in Q1, in both dollars and renminbi, followed by Australia, Bunds and climate-WGBI. (pages 5-6)

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

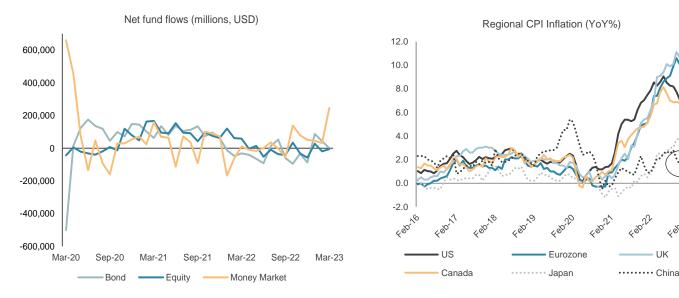


Chart 1: Inflows into global money market funds, out of bonds, equities and bank deposits, show the impact of US regional banking woes.

Chart 2: Chinese inflation dropped to 1% in February, helped by base effects, giving the central bank more room to ease.

Source: FTSE Russell. All data as of March 31, 2023. \*ChinaBond. Past performance is no guarantee of future results. This report should not be considered 'research' for the purposes of MIFID II. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix for list of Indices used for each market.

# Macroeconomic Backdrop – Growth and Inflation Expectations

Global focus shifted to US and European banking woes in March, although forecasts have yet to be downgraded, and there may be an offset from less G7 tightening. G7 banking strains reinforce the need for China to switch to domestic-led growth, explaining recent PBoC easing moves. Fund flows show the risk-aversion ushered in by the banking crisis.

Although the IMF projects Chinese GDP growth at 5.2% in 2023, Consensus forecasts are below 5.0%, as Chart 1 shows, and the IMF notes the need for structural reforms to facilitate the switch to domestic consumption as the main engine for growth, given the shrinking labour force and diminishing returns to capex. This helps explain recent PBoC easing.

Chinese inflation fell sharply in February to 1.0% y/y (from 2.1%), with lower food prices, notably pork, a strong contributor, and falling house prices another factor. Base effects, due to different timing of the Lunar New Year versus last year, should also be noted. Chinese inflation at these levels gives policymakers room to boost demand growth further in 2023.

China's RMB loans continued to grow strongly in February, with y/y growth reaching 11.5%, a level last seen in January 2022. The PBoC cut the reserve requirement ratio (RRR) for most banks to support the economic recovery. Long-term liquidity was provided to the banking system in this move, following the short and medium-term liquidity injection in February.

March saw sizeable capital flows into global money market funds, and out of bonds, equities, and most importantly, bank deposits, though the flows are small, compared to Covid. Central banks moved quickly to increase US dollar liquidity (March 19), offering daily dollar swaps from March 20, to ease funding strains in global markets, and prevent tightening in credit conditions (Chart 4).

Chart 1: GDP forecasts do not yet show downgrades for the tightening in credit conditions in March. This increases downside risks, and the dependence of Chinese growth on the consumer.

Latest Consens	us Real GDP F	orecasts (%, N	larch 2023)
	2022	2023	2024
US	2.1	1.0	1.0
UK	4.1	-0.5	0.8
Eurozone	3.3	0.5	1.2
Japan	1.6	1.0	1.1
China	3.0	4.9	5.0
Canada	3.5	0.5	1.5

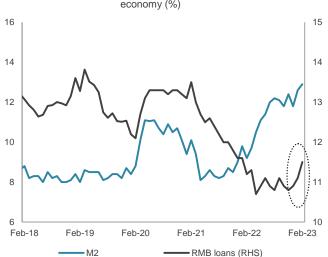
Chart 3: YoY growth in money supply rose to a new high of 12.9% in February, as the aggregate financing need in the real economy recovered, reflected by the RMB loan YoY growth hitting 11.5%.

Chart 2: Chinese inflation dropped to a 12-month low of 1.0% y/y in February. US and Canadian inflation is falling, but slowly, near pre-Covid levels. Forecast adjustments for 2024 are more modest.

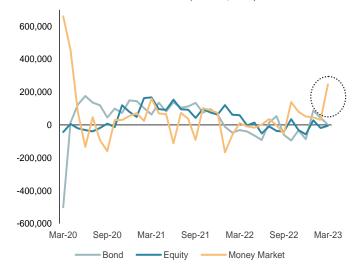
Consensus Inflation Forecasts (%, March 2023)									
	2023	Change Since Jan-23 (Bps)	2024	Change Since Jan-23 (Bps)					
US	4.1	40	2.5	0					
UK	6.6	-40	2.4	-10					
Eurozone	5.8	-20	2.5	0					
Japan	2.1	30	1.3	0					
China	2.3	0	2.3	0					
Canada	3.7	0	2.2	0					

Chart 4: Inflows into global money market funds, out of bonds, equities and bank deposits, show the impact of US regional banking woes. Flows to date are modest by Covid standards.

Net fund flows (millions, USD)



YoY growth in money supply vs RMB loans to real economy (%)



Source: FTSE Russell and Refinitiv. All data as of March 31, 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.

# **Chinese Government and Corporate Bonds**

Chart 1: Chinese government yields fell in March, led by the long end, helped by the PBoC's long-term liquidity support through the RRR cut. Lower inflation gives PBOC room to ease rates also.

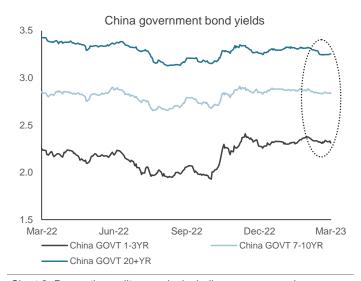


Chart 3: Domestic credit spreads, including green spreads, tightened further in March, with economic recovery on track. Only regional government spreads widened, as issuance remained high.

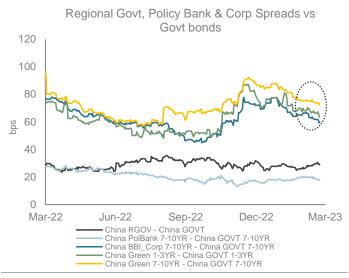


Chart 5: Foreign investors withdrew another RMB 66bn from Chinese govt bonds in February, as the yield differentials remain a headwind. Foreign ownership of CGBs remains below 10%.



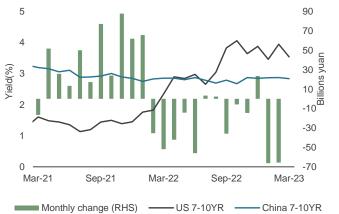


Chart 2: The US 10s/2s curve ended March inverted by 70bps, after a sharp fall in 2yr yields, on bank woes, caused some disinversion. The Chinese curve remains stable with PBoC rates on hold.

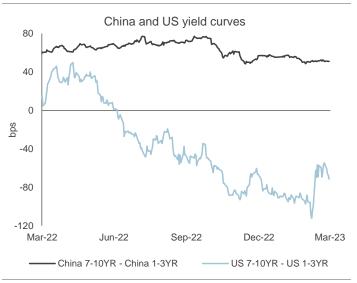


Chart 4: Chinese \$ corporate yields fell in March, tracking Treasuries, but remained significantly higher than onshore and offshore government yields.

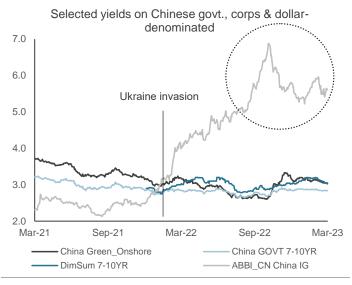
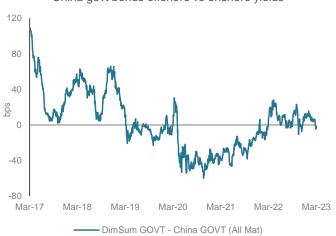


Chart 6: Offshore Dimsum spreads vs domestic govt bonds fell in March but upward pressure from US Treasury yields has been greater on Dim Sum bonds since Fed tightening began in Q1 2022.



China govt bonds offshore vs onshore yields

Source: FTSE Russell and Refinitiv, \*China Bond. All data as of March 31, 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 and Asian Bonds in Global Context**

Chart 1: Korean yields tracked US yields lower in March. Other Asian government bond yields also decreased, including Indonesia and Malaysia, which held policy rates steady.

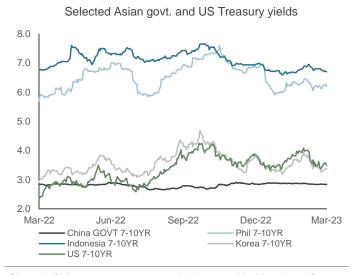
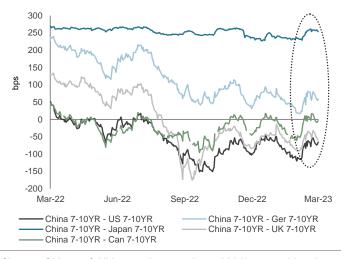
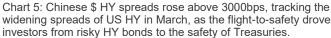


Chart 3: China government spreads increased in March, as G7 yields fell sharply in the rally on bank woes. Spreads vs Japan ticked up, with Japan yields decreasing in the global rally.

China sovereign spreads vs US, Germany, Japan, UK, Canada





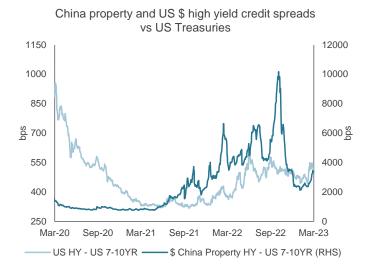


Chart 2: The Korean 10s/2s curve has remained slightly inverted, tracking US inversion. Indian and Indonesian yield curves have resisted a full inversion, although flattened significantly on 12M.

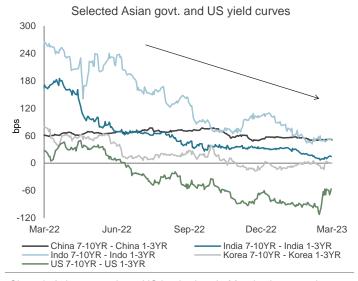


Chart 4: Asian spreads vs US backed up in March, due to a sharper fall in US Treasury yields, led by India, Indonesia and China. But Singapore and China still trade well through US Treasuries.

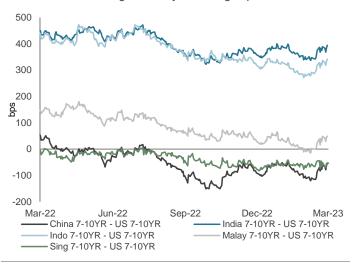


Chart 6: US inflation breakevens dropped sharply on banking woes mid-month, before recovering later in March. Australian breakevens were also pulled lower, as banking fears globalised.



Source: FTSE Russell and Refinitiv. All data as of March 31, 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.

FTSE Russell | Fixed Income Insight Report - April 2023



Onshore bond returns were positive in both RMB and US dollar terms in Q1. Investment grade corporates outperformed high yield credits as investors shifted away from riskier assets, on financial stability fears globally. Onshore and offshore RMB bonds gained 1.6-2.3% in US dollar terms on 3M, but 12M US dollar returns remained negative.

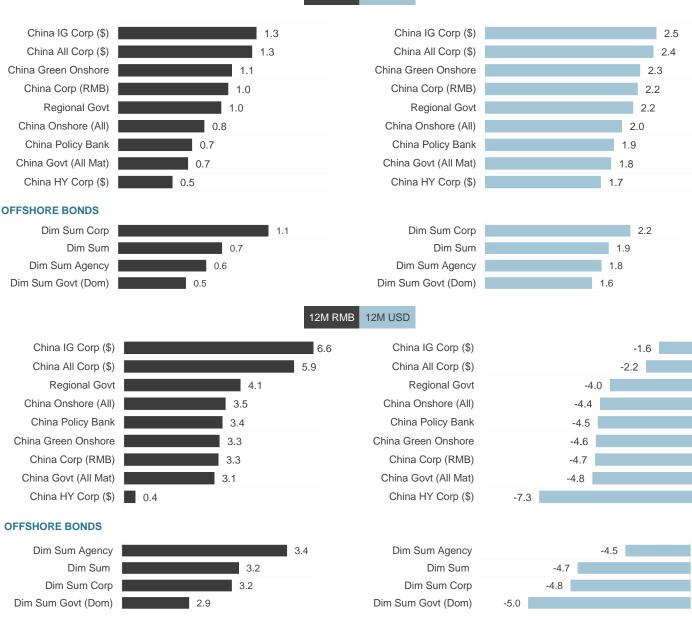
Chinese onshore bonds gained 0.7-2.3% (0.3%-1.5% in March) in RMB and US dollars in Q1, as the stronger yuan drove higher returns for USD investors. March gains boosted 3M returns, although 12M returns in USD remained negative due to currency effects. Foreign participation in the onshore bond market fell with further outflows, as adverse rate differentials remain a feature.

Chinese \$ corporates outperformed onshore bonds year-to-date in USD terms, with returns of 2.4%, although high yield dollar bonds lost 5.9% in March, in line with the global trend. The flight-to-safety helped IG gain 1.5% in March, outperforming riskier HY bonds.

Chinese government bond yields have remained in narrow yield ranges in the last 12M, reflecting stable PBoC policy. Liquidity support from the PBoC in Q1, such as the reverse repo and MLF operations in February, and the RRR cut in March, helped prevent Chinese bond yields increasing.

3M RMB

3M USD



Source: FTSE Russell. All data as of March 31, 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.



Global Returns

Financial Conditions

Curves/Spreads

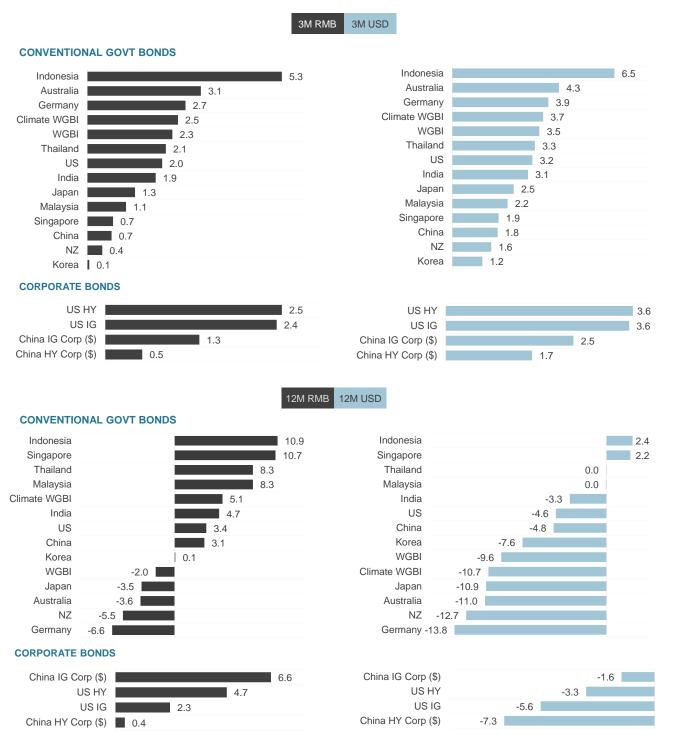
Appendix

Asian bonds joined the global government bond rally in March, led by developed markets such as Korea, Singapore, and Japan. Indonesian, Australian, and German bonds led 3M returns in RMB and USD. Indonesian and Singaporean bonds are the best 12M performers. US credit outperformed Chinese credit, and particularly HY, as property woes hit Chinese HY.

JGBs gained 3.5-4.5% in RMB and USD terms in March, benefitting from the strong yen during recent banking woes, and yield declines. But JGBs remained weak performers, particularly on 12M, due to yen weakness. Bunds, Australian governments, and JGBs fell by up to 13.8% in US dollars and were the weakest performers over 12M, as rate differentials drove the US dollar higher.

Australian government bonds rose in March, and gained 3.1% in RMB terms in Q1, only bettered by Indonesia's 5.3% returns, despite another 25bps RBA rate hike. Australian inflation slowed in February, raising hopes the RBA could pause rate hikes soon.

Dollar corporate bonds in the US gained 3.6% year-to-date, outperforming Chinese dollar corporates. But Chinese \$ IG led on a 12M basis, with small losses of 1.6%.



Source: FTSE Russell. All data as of March 31, 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.

### Government bond returns

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

		1	м	3	3M	6	M	12M	
		USD	RMB	USD	RMB	USD	RMB	USD	RMB
US	1-3YR	1.60	0.61	1.61	0.45	2.32	-0.84	0.20	8.55
	7-10YR	3.68	2.67	3.92	2.72	4.55	1.32	-5.71	2.15
	20+YR	4.76	3.74	7.25	6.01	5.08	1.83	-17.67	-10.80
	IG All	2.63	1.63	3.58	2.39	7.07	3.76	-5.56	2.32
	HY All	1.09	0.11	3.65	2.46	7.58	4.26	-3.34	4.72
China	1-3YR	1.31	0.33	1.69	0.52	4.05	0.83	-5.46	2.42
onna	7-10YR	1.44	0.45	1.97	0.80	4.38	1.15	-4.91	3.02
	20+YR	2.38	1.38	2.09	0.91	3.96	0.75	-1.94	6.23
	All	1.50	0.51	1.83	0.66	4.17	0.94	-4.79	3.15
China Policy Ba		1.60	0.61	1.87	0.70	4.20	0.98	-4.53	3.43
Regional Govt		1.55	0.56	2.15	0.98	4.03	0.82	-3.95	4.05
China Corp (LC	2)	1.45	0.46	2.22	1.04	3.93	0.72	-4.66	3.29
China Onshore		1.56	0.57	1.99	0.82	4.13	0.91	-4.43	3.54
China Green O	. ,	1.48	0.49	2.25	1.08	3.93	0.72	-4.62	3.33
China All Corp		0.56	-0.42	2.45	1.27	5.86	2.58	-2.23	5.92
China IG Corp		1.24	0.26	2.49	1.31	4.31	1.08	-1.61	6.59
China IG Corp China HY Corp	( )	-6.79	-7.70	1.68	0.52	26.51	22.59	-7.33	0.39
•		1.86	0.86	1.65	0.52	4.88	1.63	-7.55	2.95
Offshore Govt (	1-3YR	1.66	0.86	1.00	0.48	6.18	2.90	-4.98	2.95
Asia-Pac	7-10YR	2.77	1.77	3.08	1.89	9.28	5.90	-5.21	2.69
	20+YR	4.14	3.13	3.08	2.23	9.28	5.90 8.72	-5.28 -5.86	1.99
		-							
A	All	2.54	1.54	2.45	1.27	8.49	5.14	-5.08	2.84
Australia	1-3YR	0.78	-0.20	0.38	-0.77	6.78	3.47	-9.95	-2.45
	7-10YR	4.06	3.04	5.65	4.43	11.17	7.73	-10.85	-3.42
	20+YR	6.58	5.55	10.13	8.86	11.78	8.32	-16.35	-9.37
	All	3.27	2.27	4.30	3.10	9.99	6.59	-11.03	-3.62
India	1-3YR	1.57	0.58	2.34	1.17	2.50	-0.67	-4.13	3.86
	7-10YR	2.21	1.21	2.90	1.72	3.12	-0.07	-3.53	4.51
	20+YR	1.82	0.83	3.49	2.30	3.91	0.69	-2.37	5.76
	All	2.03	1.04	3.05	1.87	3.28	0.08	-3.34	4.72
Indonesia	1-3YR	2.54	1.54	5.08	3.88	5.48	2.22	-1.08	7.17
	7-10YR	2.97	1.96	7.21	5.98	10.00	6.60	3.31	11.92
	20+YR	2.69	1.69	7.80	6.56	9.24	5.86	5.30	14.07
	All	2.72	1.72	6.54	5.32	8.68	5.31	2.37	10.91
Japan	1-3YR	2.42	1.43	-0.65	-1.79	8.81	5.44	-8.74	-1.13
	7-10YR	4.30	3.29	0.89	-0.27	8.91	5.55	-9.20	-1.63
	20+YR	5.61	4.58	6.60	5.38	11.56	8.11	-15.16	-8.09
	All	4.51	3.49	2.48	1.30	9.55	6.16	-10.93	-3.51
Korea	1-3YR	2.74	1.74	-1.24	-2.38	13.50	9.99	-4.97	2.95
	7-10YR	5.25	4.22	0.97	-0.19	18.23	14.58	-6.53	1.27
	20+YR	6.46	5.42	4.33	3.13	23.36	19.55	-12.47	-5.17
	All	4.85	3.83	1.22	0.05	18.31	14.65	-7.63	0.07
Malaysia	1-3YR	2.32	1.32	1.60	0.43	8.15	4.81	-1.73	6.47
	7-10YR	2.06	1.07	1.96	0.79	11.72	8.26	-0.55	7.74
	20+YR	1.79	0.80	3.61	2.42	17.38	13.75	2.44	10.98
	All	2.17	1.18	2.23	1.06	11.71	8.25	-0.04	8.29
New Zealand	1-3YR	1.87	0.88	0.48	-0.67	12.03	8.57	-9.39	-1.84
	7-10YR	4.06	3.04	1.80	0.63	13.55	10.04	-13.28	-6.06
	20+YR	6.91	5.87	3.01	1.83	18.03	14.37	-21.12	-14.55
	All	3.52	2.51	1.57	0.41	13.50	9.99	-12.75	-5.48
Singapore	1-3YR	2.65	1.65	1.62	0.45	10.28	6.87	2.48	11.02
	7-10YR	4.63	3.61	2.79	1.60	14.38	10.84	0.27	8.63
		_	6.51		-0.21		22.05		14.06
	20+YR	7.56		0.95		25.94		5.28	
	All	4.66	3.64	1.87	0.70	15.01	11.45	2.17	10.69
Thailand	1-3YR	3.68	2.67	1.34	0.18	11.64	8.19	-2.33	5.82
	7-10YR	4.95	3.93	3.40	2.21	18.77	15.10	-0.06	8.27
	20+YR	8.07	7.02	12.61	11.32	32.96	28.85	9.38	18.49
	All	4.80	3.78	3.33	2.15	17.51	13.88	-0.04	8.30
		1		1	-				

Top 15% Bottom 15%

Global Returns

	r night indicates nighest 15%, red indicates lowest 15%.									
		Conv	entional go	overnment k	oonds	Inflation-linked bonds			Inv Grade	High Yld
		1-3YR	3-5YR	7-10YR	20+YR	1-5YR	5-10YR	20+YR	All Mat	All Mat
US	Current	4.20	3.72	3.49	3.76	1.44	1.17	1.53	5.25	8.45
	3M Ago	4.54	4.13	3.88	4.11	2.09	1.68	1.82	5.50	9.00
	6M Ago	4.31	4.18	3.83	3.95	2.11	1.82	1.95	5.72	9.55
	12M Ago	2.20	2.49	2.35	2.54	-1.68	-0.66	0.01	3.64	6.10
UK	Current	3.79	3.55	3.43	3.80	0.00	-0.27	0.35		
	3M Ago	3.50	3.65	3.69	3.92	-0.68	0.15	0.49		
	6M Ago	4.39	4.44	4.16	3.72	-0.88	0.08	-0.16		
	12M Ago	1.38	1.52	1.66	1.80	-4.36	-2.98	-1.84		
Japan	Current	-0.09	0.02	0.30	1.22	-1.30	-0.51			
	3M Ago	0.03	0.15	0.48	1.50	-1.22	-0.54			
	6M Ago	-0.07	0.01	0.26	1.27	-1.37	-0.78			
	12M Ago	-0.06	-0.01	0.21	0.94	-1.22	-0.74			
China	Current	2.31	2.56	2.84	3.25					
	3M Ago	2.28	2.53	2.85	3.26					
	6M Ago	2.06	2.42	2.79	3.21					
	12M Ago	2.24	2.50	2.86	3.40					
EM	Current	3.62	4.37	4.69	4.52	2.59	3.67	5.15	5.77	11.18
	3M Ago	3.78	4.38	4.95	4.61	2.79	3.04	5.15	5.92	11.40
	6M Ago	3.70	4.31	5.05	4.78	2.51	3.42	5.19	6.09	13.35
	12M Ago	3.39	4.16	4.63	4.91	2.28	2.91	4.93	4.09	10.46
Germany	Current	2.69	2.36	2.24	2.33	-0.02	-0.12	-0.15		
Sermany	3M Ago	2.56	2.53	2.54	2.51	0.40	0.34	0.18		
	6M Ago	1.66	1.82	2.03	2.11	-0.52	-0.10	-0.07		
	12M Ago	-0.17	0.52	0.81	1.00	-4.17	-2.12	-1.62		
tob	Current	3.27	3.43	3.88	4.34	0.45	1.50	1.74		
Italy	3M Ago	3.34	3.72	4.38	4.72	1.16	2.19	2.18		
	6M Ago	2.87	3.45	4.16	4.37	-0.14	2.02	2.10		
	12M Ago	0.31	1.84	2.68	3.19	-3.37	-0.33	0.78		
	Current	2.83	2.66	2.70	3.13	-0.29	0.05	0.53		
France	3M Ago	2.85	2.82	2.97	3.30	0.15	0.03	0.33		
	6M Ago	1.91			2.99	-0.58	0.21	0.63		
	12M Ago	-0.08	2.12 0.77	2.46	1.93	-0.58	-1.60	-0.47		
0	Current	2.85	2.56	2.25	1.33	0.09	0.32	-0.47		
Sweden		2.85		2.25						
	3M Ago	-	2.65			-0.24	0.25			
	6M Ago	2.31	2.41	2.22		-0.72	-0.23			
	12M Ago	0.70	1.59	1.72	2.00	-1.55	-1.08	4 40		
Australia	Current	3.03	3.00	3.27	3.82	0.01	0.82	1.43		
	3M Ago	3.43	3.62	4.01	4.37	0.60	1.45	1.88		
	6M Ago	3.44	3.64	3.87	4.10	0.80	1.58	2.01		
	12M Ago	1.66	2.97	3.27	3.72	-0.38	0.63	1.30		
NZ	Current	4.78	4.37	4.23	4.37	1.04	1.72			
	3M Ago	5.00	4.62	4.46	4.54	1.54	2.06			
	6M Ago	4.20	4.25	4.30	4.62	1.21	2.13			
	12M Ago	2.68	3.39	3.47	3.85	0.35	1.41			
Canada	Current	3.58		2.87	3.03			1.28	5.00	7.37
	3M Ago	3.90		3.30	3.31			1.33	5.27	7.34
	6M Ago	3.65		3.19	3.13			1.43	5.20	7.38
	12M Ago	2.24		2.38	2.40			0.34	3.76	5.39

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

# Source: FTSE Russell. All data as of March 31, 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.

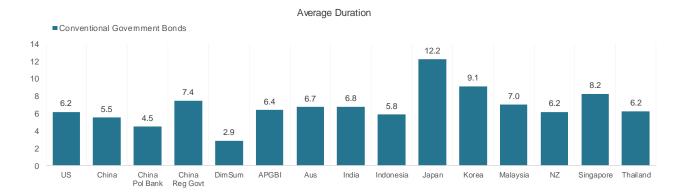
## Appendix - Duration and Market Value (USD, Bn), March 31, 2023

Conventional Gover	nment Bonds								
		Durat	ion		Market Value				
	3-5YR	7-10YR	20+YR	Overall	3-5YR	7-10YR	20+YR	Total	
US	3.7	7.6	17.7	6.2	2,245.2	1,053.2	1,303.1	10,351.1	
China	3.6	7.4	17.5	5.5	467.4	330.4	239.6	2,064.5	
China Pol Bank				4.5				2,662.4	
China Reg Govt				7.4				1,943.7	
DimSum	3.6			2.9	1.7			7.4	
APGBI	3.5	7.3	18.0	6.4	734.2	660.5	462.5	3,730.4	
Aus	3.5	7.8	18.2	6.7	56.6	90.6	16.4	331.8	
India	3.2	6.0	11.7	6.8	153.1	203.5	224.8	1,009.6	
Indonesia	3.2	6.2	11.2	5.8	36.2	60.0	12.2	232.9	
Japan	3.9	7.9	24.0	12.2	367.3	402.5	753.5	3,370.8	
Korea	3.5	7.2	19.5	9.1	87.7	96.0	155.1	602.9	
Malaysia	3.5	6.8	14.8	7.0	22.9	14.6	13.6	116.3	
NZ	3.4	7.7	17.6	6.2	8.9	6.6	2.4	46.9	
Singapore	3.5	7.3	20.3	8.2	18.5	14.5	14.6	91.2	
Thailand	3.7	7.6	16.8	6.2	23.9	24.0	8.7	144.2	

Corporate Bon	

corporate bolius						
		Duration		Market Value		
	Inv Grade	High Yield	Overall	Inv Grade	High Yield	Overall
US	7.2	4.2		6,329.3	1,019.8	
China Corp (LC)			2.3			545.7
China Green Onshore			2.5			131.7
China Corp (\$)	4.0	2.3	7.4	280.3	23.9	304.2
DimSum	2.2		2.2	10.4		11.8
EM	5.0	3.5	4.6	608.1	203.3	811.5
EUxUK	4.5	3.1		2,739.4	426.1	

Other Sectors						
		Duration			Market Value	
	Supra	Agency	Corp NR	Supra	Agency	Corp NR
Offshore (DimSum)	1.9	2.6	2.1	2.3	6.7	1.4





Data as of 2023-03-31

Source: FTSE Russell. All data as of March 31, 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.

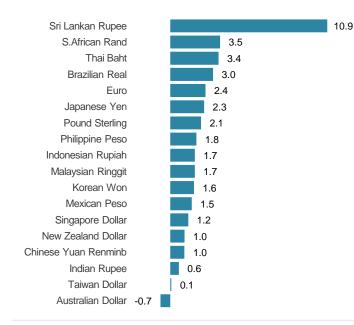
China Bond Returns

Global Returns

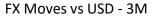
Financial Conditions

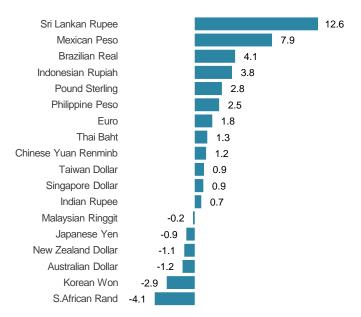
Curves/Spreads

FTSE Russell | Fixed Income Insight Report - April 2023

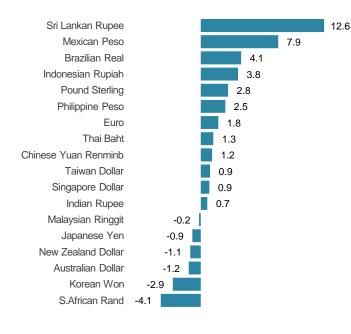


### FX Moves vs USD - 1M

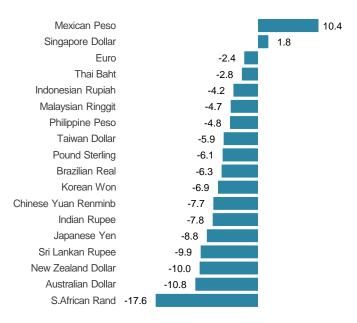




### FX Moves vs USD - YTD



### FX Moves vs USD - 12M



Source: FTSE Russell and Refinitiv. All data as of March 31, 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.

# Appendix – Glossary

#### 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 March 31, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. For professional investors only

FTSE Russell | Fixed Income Insight Report - April 2023



© 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.