

October 18, 2022 04:14 PM GMT

EM Sovereign Credit Strategy | Global

Rich & Cheap Watch

10Y sovereign bond spreads widened by 42bp in the past week (1W), and EMBIG-D widened by 22bp. Spreads widened across all rating categories. Region-wise, spreads widened the most in Frontier Asia and the least in Europe.

Country level: The cheapest countries based on 6m z-scores across each region are currently Ecuador, Guatemala, Romania, Gabon, Egypt, the Philippines and Pakistan. The richest are Brazil, Costa Rica, Azerbaijan, Senegal, Morocco, China and PNG.

10s30s spread curves: IG curves flattened by 2bp to 87bp and HY curves flattened by 4bp to 81bp in the past 1W on aggregate. On an absolute basis, Oman, Sharjah, and South Africa have the steepest curves. On a 6m z-score basis, Brazil, Israel, and Panama are the steepest, while Pakistan is the flattest. [See page 9.](#)

5s10s spread curves: IG curves remain steepened by 1 bp to 54bp, and HY curves flattened by 1bp to 97bp in the past 1W on aggregate. On an absolute basis, Costa Rica, Bahrain, and Armenia are the steepest curves. On a 6m z-score basis, Abu Dhabi, Jordan, and Armenia are the steepest, while Brazil is the flattest. [See page 10.](#)

The CDS-bond basis: The CDS-bond basis decreased by 11bp to 15bp in the past 1W. On an absolute basis, Egypt increased the most while Colombia decreased the most over the past 1M. [See page 14.](#)

Cheap bonds as highlighted by the model are ADGB 28, BHRAIN 26, CHILE 27, COLOM 42, DOMREP Jan 27, INDON Mar 52, KSA Oct 25, MEX Aug 31, PANAMA 25, PERU 26, PKSTAN 31, QATAR 48, SHARSK 26 and PEMEX 28.

Rich bonds as highlighted by the model are ANGOL 49, BRAZIL 37, ECUA 40, EGYPT Feb 26, GHANA 42, ISRAEL €49, NGERIA 25, OMAN 32, ROMANI 48, SOAF 25, SRILAN 28, TURKEY Feb 25, URUGUA 45, ADGLXY 34, DPWDU 28 and PLBIJ 45,

Exhibit 1: 10y EM sovereign bond valuation summary

Category	Outright Spread	Z-Score (6M)	Vs. Index Z-Score (6M)	Cheapest Country Within Category			Richest Country Within Category				
				Country	Current Spread	Spd. Vs. Category	Z-score (6M)	Country	Current Spread	Spd. Vs. Category	Z-score (6M)
By Rating											
A & Above	107	2.1	-1.1	Saudi Arabia	137	30	1.9	China	33	-74	-1.9
BBB	246	2.3	-1.3	Romania	423	177	1.8	Mexico	241	-5	-2.5
BB	393	0.8	-1.9	Colombia	496	103	2.4	Azerbaijan	247	-147	-2.5
B & non-distressed CCC	838	0.9	-0.7	Ecuador	1995	1156	1.3	Turkey	700	-139	-2.2
By Region											
LatAm	505	1.5	1.0	Ecuador	1995	1490	1.2	Brazil	299	-206	-1.6
Central & North America	392	0.3	-1.7	Guatemala	350	-42	1.6	Costa Rica	385	-7	-1.5
Europe	446	0.7	-2.3	Romania	423	-23	2.7	Azerbaijan	247	-200	-1.9
SSA	895	0.9	0.5	Gabon	1036	141	1.2	Senegal	662	-233	-1.3
MENA	405	1.1	-1.2	Egypt	1183	778	1.1	Morocco	328	-77	-1.8
Asia	124	1.9	-1.1	Philippines	171	46	2.6	China	33	-91	-1.7
Frontier Asia	1748	2.7	2.8	Pakistan	2543	795	2.8	Papua New Guinea	952	-795	-2.8

Source: Bloomberg, Morgan Stanley Research

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[Market Composite](#)

[Sovereign Valuations](#)

[Curves Snapshot](#)

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[EUR vs. USD Bonds Snapshot](#)

[CDS Snapshot](#)

[ESG Snapshot](#)

[Country Bond Curves](#)

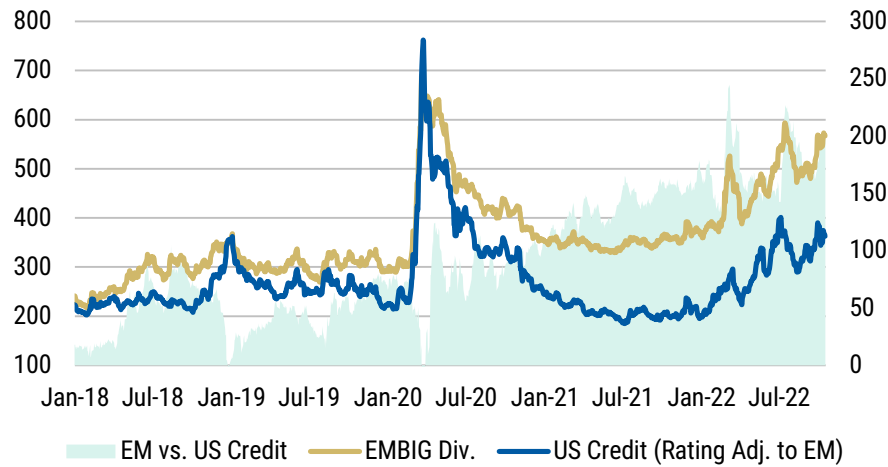
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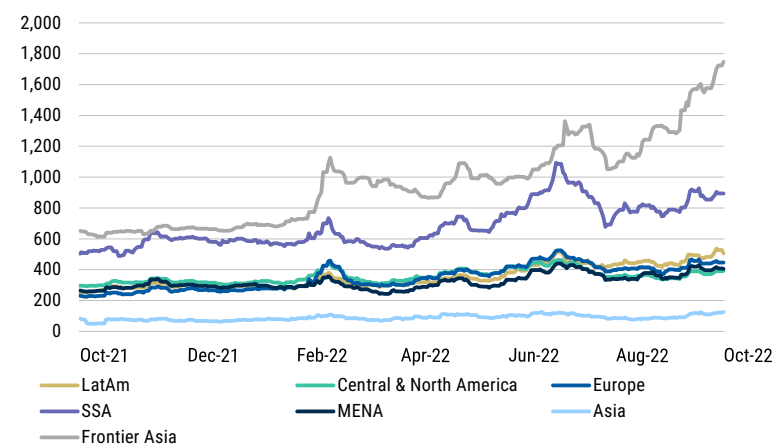
EM Sovereign Market Composite

Exhibit 2: EM vs. US – credit spreads (bp)*



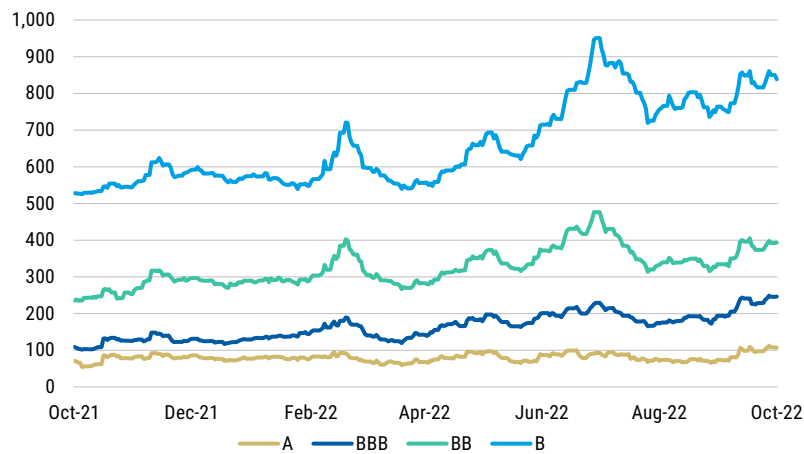
Source: Bloomberg, Morgan Stanley Research; * US credit is a weighted average of US HY and IG with the weights taken to achieve an equal rating to the EM index. **Prior to November 29, 2019, the EM Index is ex-Venezuela

Exhibit 3: Global EM 10Y bond spreads by region (bp)**



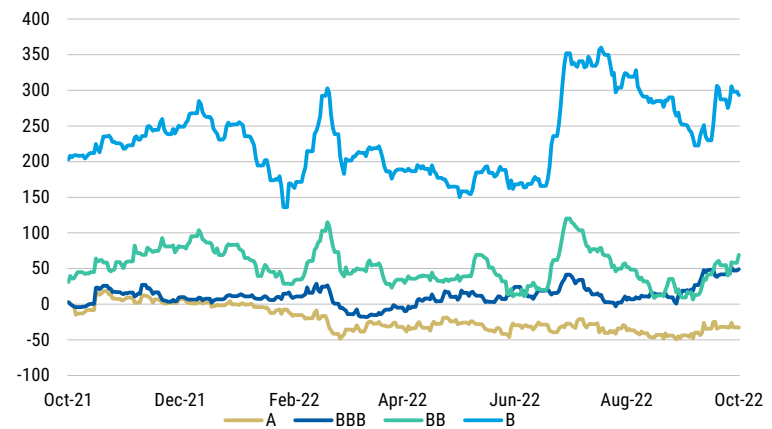
Source: Bloomberg, Morgan Stanley Research; **Excludes distressed CCC and below credits.

Exhibit 4: Global EM 10Y bond spreads by rating (bp)



Source: Bloomberg, Morgan Stanley Research

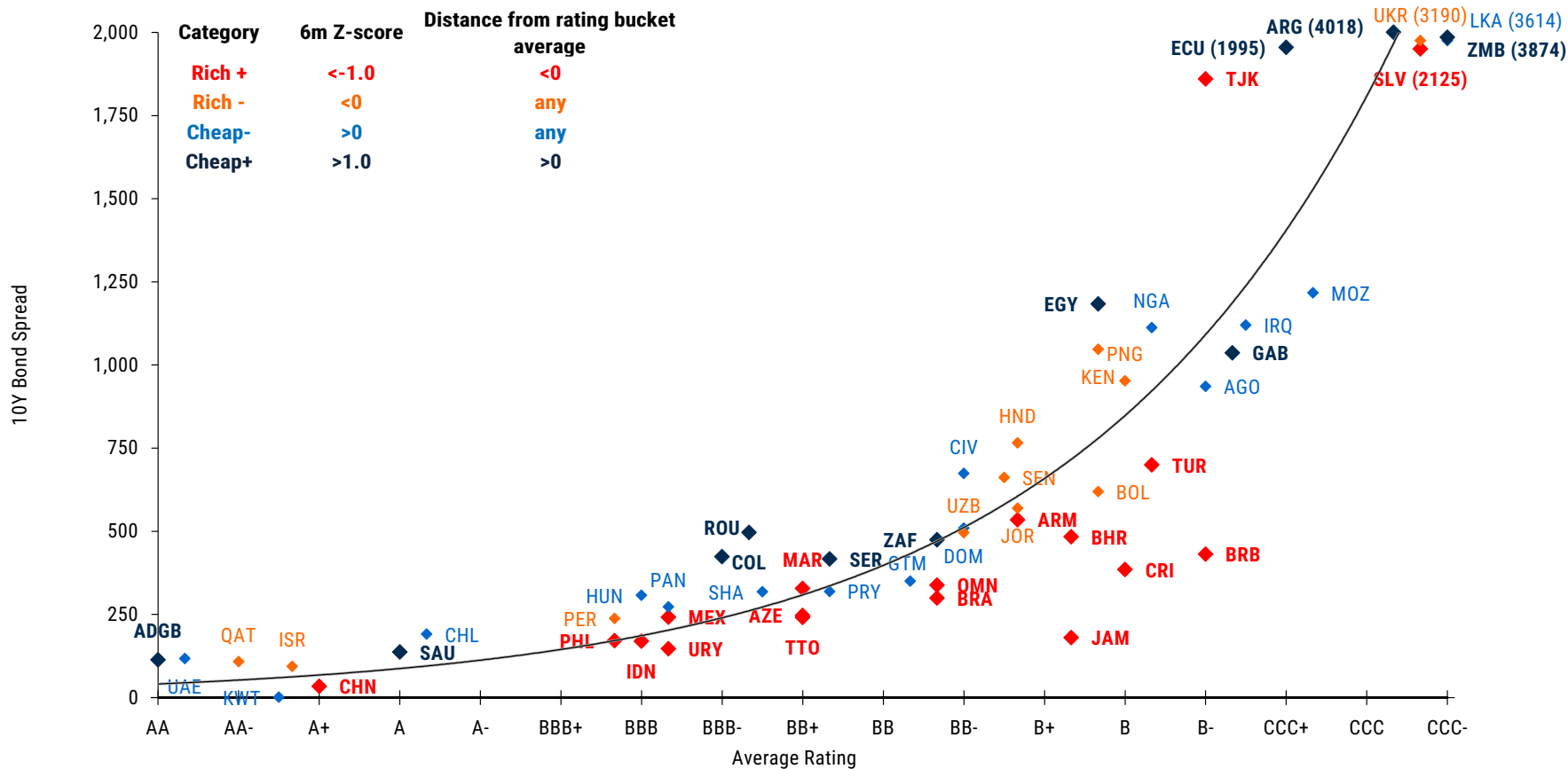
Exhibit 5: EM sovereign vs. US credit spreads by rating (bp)



Source: Bloomberg, Morgan Stanley Research

Sovereign 10Y Benchmark Bonds vs. Ratings

Exhibit 6: Rich and cheap by rating



Source: Bloomberg, Morgan Stanley Research. Closest 10y bond is used for each sovereign, using z-spread. Rich and Cheap status aim to give an indication of not only how each sovereign currently trades vs. the rating average but also how this compares to the six month history of the spread vs. the rating bucket.

Sovereign 10Y Benchmark Bond Valuations (page 1)

Exhibit 7:

Rating	Country	Bond	Outright Spreads				Vs. EM Rating Bucket		Vs. US Rating Bucket		Vs. Region Bucket			Country
			Min	Current Spread	Max	6M Z-Score	Current Spread	6M Z-Score	Current Spread	6M Z-Score	Region	Current Spread	6M Z-Score	
A & Above	Saudi Arabia	KSA '32	78	137	146	2.1	30	1.9	-3	1.0	MENA	-269	-0.5	Saudi Arabia
	Abu Dhabi	ADGB '31	53	114	120	2.3	6	1.7	-26	1.0	MENA	-292	-0.4	Abu Dhabi
	United Arab Emirates	UAE '31	41	117	123	1.9	10	0.7	-23	0.7	MENA	-288	-0.6	United Arab Emirates
	Chile	CHILE '32	119	190	200	1.8	83	0.5	50	0.7	LatAm	-314	-1.3	Chile
	Kuwait	KUWIB '27	13	74	85	1.5	-33	0.1	-66	0.1	MENA	-332	-0.7	Kuwait
	Qatar	QATAR '30	60	108	117	1.5	1	-0.5	-32	-0.1	MENA	-297	-0.7	Qatar
	Israel	ISRAEL '30	42	94	99	1.5	-13	-0.6	-46	-0.2	MENA	-312	-0.7	Israel
	China	CHINA '31	24	33	40	0.8	-74	-1.9	-107	-2.1	Asia	-91	-1.7	China
BBB	Romania	ROMANI '31	179	423	434	2.1	177	1.8	226	2.1	Europe	-23	2.7	Romania
	Hungary	REPHUN '31	140	307	335	1.7	61	0.7	110	1.4	Europe	-139	1.0	Hungary
	Panama	PANAMA '32	150	272	274	2.3	26	0.7	75	2.2	Central & North America	-119	1.5	Panama
	Peru	PERU '32	153	238	244	2.9	-8	-0.3	41	2.8	LatAm	-267	-0.9	Peru
	Philippines	PHILIP '32	94	171	171	2.2	-75	-1.0	-26	1.6	Asia	46	2.6	Philippines
	Uruguay	URUGUA '31	81	147	148	2.0	-99	-1.2	-50	0.9	LatAm	-358	-1.0	Uruguay
	Indonesia	INDON '31	95	169	182	1.5	-77	-1.4	-28	0.7	Asia	45	0.8	Indonesia
	Mexico	MEX '32	197	241	255	1.3	-5	-2.5	44	-0.4	Central & North America	-151	0.3	Mexico
	Colombia	COLOM '32	313	496	496	2.6	103	2.4	172	3.4	LatAm	-9	0.3	Colombia
	South Africa	SOAF '30	276	474	525	1.6	81	2.1	150	2.5	SSA	-420	-0.3	South Africa
BB	Serbia	SERBIA '30	231	417	479	1.4	24	1.2	93	1.4	Europe	-29	1.5	Serbia
	Dominican Rep.	DOMREP '32	387	509	573	1.0	116	0.8	185	1.7	Central & North America	118	1.5	Dominican Rep.
	Paraguay	PARGUY '31	214	319	362	1.1	-74	0.6	-5	1.4	LatAm	-186	-0.9	Paraguay
	Guatemala	GUATEM '32	248	350	395	1.0	-43	0.6	26	1.3	Central & North America	-42	1.6	Guatemala
	Ivory Coast	IVYCST '32	385	673	989	0.6	280	0.5	349	0.7	SSA	-221	-0.7	Ivory Coast
	Sharjah	SHJGOV '33	202	318	342	1.5	-75	0.4	-6	0.9	MENA	-87	-0.1	Sharjah
	Uzbekistan	UZBEK '31	304	495	628	0.4	102	-0.1	171	0.4	Europe	49	-0.2	Uzbekistan
	Brazil	BRAZIL '31	251	299	365	-0.1	-94	-1.3	-25	-0.4	LatAm	-206	-1.6	Brazil
	Trinidad & Tobago	TRITOB '30	199	241	393	-0.8	-153	-1.6	-83	-1.0	LatAm	-264	-1.5	Trinidad & Tobago
	Oman	OMAN '31	286	338	463	-0.1	-55	-2.2	14	-0.4	MENA	-68	-1.6	Oman
Morocco	MOROC '32	256	328	452	-0.2	-65	-2.3	4	-0.6	MENA	-77	-1.8	Morocco	
Azerbaijan	AZERBJ '32	203	247	379	-0.7	-147	-2.5	-77	-1.1	Europe	-200	-1.9	Azerbaijan	

Source: Bloomberg, Morgan Stanley Research. Closest 10y bond used for each sovereign. Z-Score Min/Max: -4/4. Each rating bucket includes the +/-middle/-level of each rating. All ratings CCC and below are grouped into one bucket as are all ratings A and above.

Sovereign 10Y Benchmark Bond Valuations (page 2)

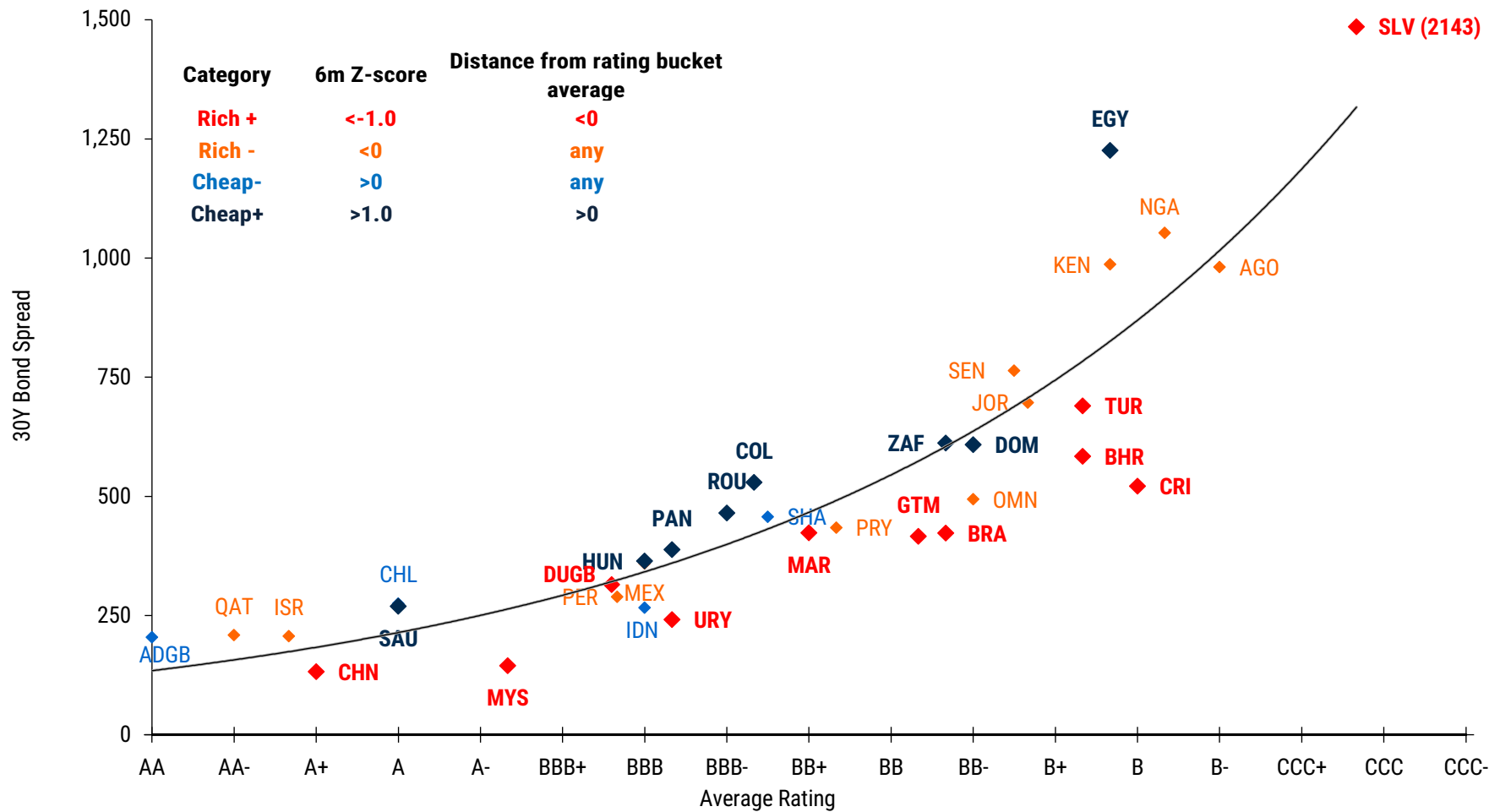
Exhibit 8:

Rating	Country	Bond	Outright Spreads				Vs. EM Rating Bucket		Vs. US Rating Bucket		Vs. Region Bucket			Country
			Min	Current Spread	Max	6M Z-Score	Current Spread	6M Z-Score	Current Spread	6M Z-Score	Region	Current Spread	6M Z-Score	
B and non-distressed CCC	Ecuador	ECUA '30	734	1,995	2,261	1.3	1,156	1.3	1,450	1.3	LatAm	1,490	1.2	Ecuador
	Gabon	GABON '31	542	1,036	1,248	1.1	198	1.2	491	1.1	SSA	141	1.2	Gabon
	Egypt	EGYPT '32	737	1,183	1,339	1.1	345	1.1	638	1.1	MENA	778	1.1	Egypt
	Nigeria	NGERIA '32	662	1,112	1,277	1.1	274	0.9	567	1.4	SSA	218	0.9	Nigeria
	Iraq	IRAQ '28	421	1,120	1,359	0.9	281	0.8	575	0.9	MENA	714	0.8	Iraq
	Mozambique	MOZAM '31	752	1,217	1,344	0.8	379	0.6	672	0.7	SSA	322	0.4	Mozambique
	Angola	ANGOL '29	553	936	1,229	0.8	98	0.4	391	0.8	SSA	41	0.2	Angola
	Kenya	KENINT '32	673	1,047	1,319	0.6	208	-0.1	502	0.4	SSA	152	-0.7	Kenya
	Papua New Guinea	PNGIB '28	782	952	967	1.2	114	-0.4	407	0.2	Frontier Asia	-795	-2.8	Papua New Guinea
	Honduras	HONDUR '30	613	765	928	0.0	-73	-0.9	220	-0.6	Central & North America	373	-0.2	Honduras
	Jordan	JORDAN '30	450	569	731	0.3	-269	-0.9	24	-0.4	MENA	163	-0.6	Jordan
	Bolivia	BOLIVI '30	485	619	672	0.4	-219	-0.9	74	-0.3	LatAm	114	-1.4	Bolivia
	Senegal	SENEGL '33	461	662	855	0.5	-177	-1.0	117	0.1	SSA	-233	-1.3	Senegal
	Bahrain	BHRAIN '32	356	483	591	0.6	-355	-1.0	-62	-0.2	MENA	78	-1.2	Bahrain
	Barbados	BARBAD '29	408	431	506	-1.2	-407	-1.2	-114	-0.9	Central & North America	39	-1.0	Barbados
	Jamaica	JAMAN '28	121	180	355	-0.7	-658	-1.3	-365	-1.2	Central & North America	-212	-1.3	Jamaica
	Costa Rica	COSTAR '31	344	385	502	-0.4	-453	-1.3	-160	-1.1	Central & North America	-7	-1.5	Costa Rica
	Armenia	ARMEN '31	429	535	641	-0.1	-304	-1.5	-10	-0.8	Europe	88	-1.7	Armenia
	Turkey	TURKEY '31	572	700	894	-0.3	-139	-2.2	155	-1.1	Europe	253	-1.4	Turkey
	Distressed CCC	Zambia	ZAMBIN '27	1,589	3,874	3,874	2.8	630	2.9	2,756	3.1	-	-	-
Pakistan		PKSTAN '31	872	2,543	2,543	2.8	-701	2.6	1,425	2.9	-	-	-	Pakistan
Ghana		GHANA '32	1,216	2,553	2,553	2.2	-691	1.4	1,435	2.2	-	-	-	Ghana
Argentina		ARGENT '30	2,176	4,018	4,048	1.5	774	1.4	2,900	1.4	-	-	-	Argentina
Sri Lanka		SRILAN '30	2,125	3,614	4,000	1.2	370	0.8	2,496	1.0	-	-	-	Sri Lanka
Ukraine		UKRAIN '34	2,082	3,190	4,613	0.6	-54	0.0	2,072	0.3	-	-	-	Ukraine
Russia		RUSSIA '29	3,297	3,772	4,642	-0.3	528	-1.1	2,654	-1.0	-	-	-	Russia
Belarus		BELRUS '31	3,105	3,590	7,048	-1.0	346	-1.4	2,472	-1.1	-	-	-	Belarus
Lebanon		LEBAN '32	4,546	4,546	4,546	1.0	1,302	-1.4	3,428	-1.6	-	-	-	Lebanon
Tajikistan		TAJIKI '27	1,298	1,860	2,130	0.5	-1,384	-2.4	742	-0.5	-	-	-	Tajikistan
El Salvador	ELSALV '32	1,896	2,125	3,159	-0.9	-1,119	-2.7	1,007	-1.8	-	-	-	El Salvador	

Source: Bloomberg, Morgan Stanley Research. Closest 10y bond used for each sovereign. Z-Score Min/Max: -4/4. Each rating bucket includes the +/-middle/-level of each rating. All ratings CCC and below are grouped into one bucket as are all ratings A and above.

Sovereign 30Y Benchmark Bonds vs. Ratings

Exhibit 9: Rich and cheap by rating



Source: Bloomberg, Morgan Stanley Research. Closest 30y bond is used for each sovereign, using z-spread. Rich and Cheap status aim to give an indication of not only how each sovereign currently trades vs. the rating average but also how this compares to the six month history of the spread vs. the rating bucket.

Sovereign 30Y Benchmark Bond Valuations

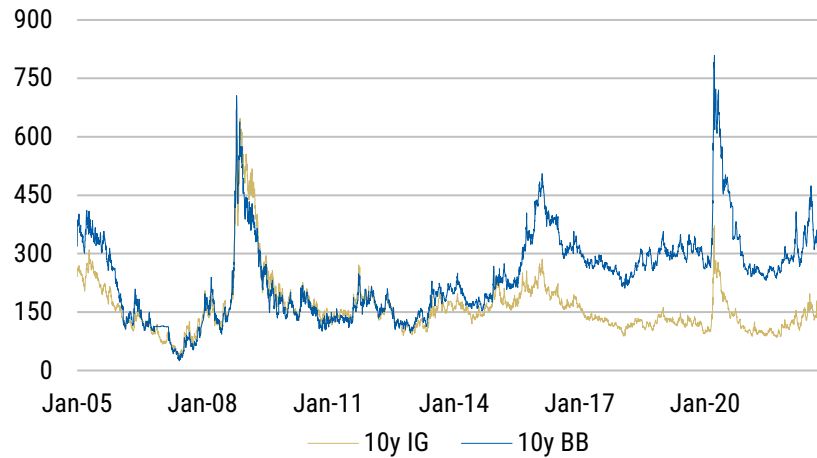
Exhibit 10:

Rating	Country	Bond	Outright Spreads				Vs. EM Rating Bucket		Vs. US Rating Bucket		Vs. Region Bucket			Country
			Min	Current Spread	Max	6M Z-Score	Current Spread	6M Z-Score	Current Spread	6M Z-Score	Region	Current Spread	6M Z-Score	
A & Above	Saudi Arabia	KSA '50	194	269	276	3.1	53	3.0	129	0.5	MENA	-193	0.3	Saudi Arabia
	Abu Dhabi	ADGB '50	147	204	213	2.6	-11	0.9	64	-0.3	MENA	-258	-0.2	Abu Dhabi
	Chile	CHILE '52	207	275	284	1.8	59	0.2	135	-0.4	LatAm	-255	-1.5	Chile
	Israel	ISRAEL '50	149	207	213	2.2	-9	-0.2	67	-0.6	MENA	-256	-0.4	Israel
	Qatar	QATAR '50	153	209	219	2.1	-7	-0.5	69	-0.6	MENA	-253	-0.4	Qatar
BBB	China	CHINA '50	107	132	133	2.1	-84	-1.3	-8	-1.3	Asia	-49	-1.6	China
	Romania	ROMANI '51	271	465	488	2.2	148	2.0	268	1.7	Europe	-41	2.2	Romania
	Panama	PANAMA '50	257	397	404	2.4	81	2.0	200	1.4	Central & North America	-63	1.8	Panama
	Hungary	REPHUN '51	204	364	379	2.1	47	1.5	167	1.3	Europe	-142	0.5	Hungary
	Indonesia	INDON '50	170	266	266	2.8	-50	0.9	69	0.6	Asia	85	2.4	Indonesia
	Peru	PERU '51	209	289	296	2.5	-28	-0.4	92	0.1	LatAm	-241	-1.1	Peru
	Dubai	DUGB '50	247	315	354	0.5	-2	-1.9	118	-1.1	MENA	-147	-1.6	Dubai
	Malaysia	MALAYS '46	127	145	151	1.1	-172	-2.0	-52	-1.7	Asia	-36	-2.3	Malaysia
	Mexico	MEX '52	299	359	368	1.6	42	-2.1	162	-0.9	Central & North America	-101	-0.3	Mexico
	Uruguay	URUGUA '50	199	250	259	1.6	-67	-2.1	53	-0.9	LatAm	-280	-1.4	Uruguay
BB	Colombia	COLOM '51	369	529	536	2.1	41	2.0	205	0.9	LatAm	0	0.0	Colombia
	South Africa	SOAF '49	442	611	668	1.5	123	1.7	287	0.5	SSA	-267	0.3	South Africa
	Dominican Rep.	DOMREP '49	475	608	644	1.4	120	1.6	284	0.2	Central & North America	148	1.8	Dominican Rep.
	Sharjah	SHJGOV '51	312	457	488	1.2	-32	0.5	133	0.1	MENA	-5	0.4	Sharjah
	Paraguay	PARGUY '50	340	434	480	1.0	-54	-0.1	110	-0.2	LatAm	-95	-1.2	Paraguay
	Morocco	MOROC '50	348	423	488	0.5	-65	-1.4	99	-0.5	MENA	-39	-1.3	Morocco
	Guatemala	GUATEM '50	363	416	492	0.1	-73	-1.6	92	-0.7	Central & North America	-44	-1.6	Guatemala
	Brazil	BRAZIL '50	373	423	492	0.0	-66	-1.8	99	-0.8	LatAm	-107	-1.8	Brazil
	Oman	OMAN '51	439	494	597	-0.1	5	-2.2	170	-0.8	MENA	32	-2.2	Oman
	Ecuador	ECUA '40	805	1,509	1,725	1.5	608	1.5	964	1.3	LatAm	979	1.4	Ecuador
B	Egypt	EGYPT '50	862	1,226	1,369	1.1	325	1.1	681	0.1	MENA	764	1.1	Egypt
	Angola	ANGOL '49	708	981	1,246	0.8	80	0.0	436	-0.4	SSA	102	0.7	Angola
	Nigeria	NGERIA '49	765	1,052	1,303	0.5	152	-0.7	507	-0.6	SSA	174	-0.2	Nigeria
	Senegal	SENEGL '48	567	764	953	0.7	-137	-0.7	219	-0.6	SSA	-115	-0.2	Senegal
	Kenya	KENINT '48	751	986	1,316	0.3	86	-0.8	441	-0.6	SSA	108	-0.6	Kenya
	Jordan	JORDAN '47	569	697	813	0.8	-204	-0.8	152	-0.8	MENA	234	0.1	Jordan
	Bahrain	BHRAIN '51	484	584	694	0.5	-317	-1.3	39	-1.1	MENA	122	-0.9	Bahrain
	Turkey	TURKEY '47	567	690	795	0.4	-211	-1.4	145	-1.2	Europe	183	-1.7	Turkey
	Costa Rica	COSTAR '45	468	521	636	-0.2	-380	-1.5	-24	-1.3	Central & North America	61	-1.8	Costa Rica
	Ghana	GHANA '51	1,157	2,244	2,244	2.3	-41	2.5	1,126	1.5	-	-	-	Ghana
CCC	Russia	RUSSIA '47	1,811	2,467	2,700	0.2	182	-0.7	1,349	-1.7	-	-	-	Russia
	El Salvador	ELSALV '52	1,897	2,143	3,351	-0.6	-141	-1.7	1,025	-1.8	-	-	-	El Salvador

Source: Bloomberg, Morgan Stanley Research. Closest 30y bond used for each sovereign. Z-Score Min/Max: -4/4. Each rating bucket includes the +/-middle/-level of each rating. All ratings CCC and below are grouped into one bucket as are all ratings A and above.

Constant Maturity Charts

Exhibit 11: 10y spreads (bp)



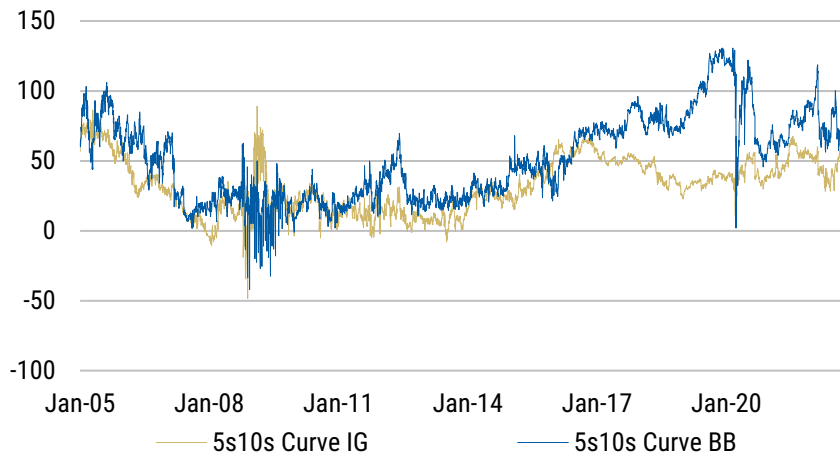
Source: Bloomberg, Morgan Stanley Research. Note: Russia excluded from calculation on 14-Feb-2022

Exhibit 12: 30y spreads (bp)



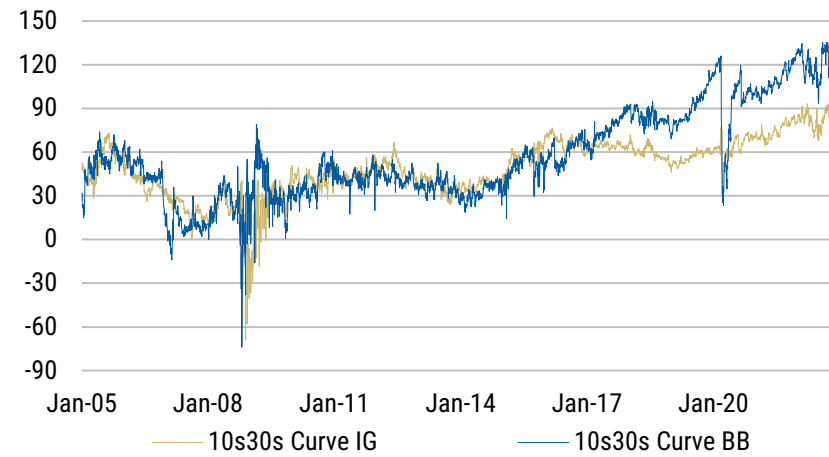
Source: Bloomberg, Morgan Stanley Research. Note: Russia excluded from calculation on 14-Feb-2022

Exhibit 13: 5s10s curves (bp)



Source: Bloomberg, Morgan Stanley Research. Note: Russia excluded from calculation on 14-Feb-2022

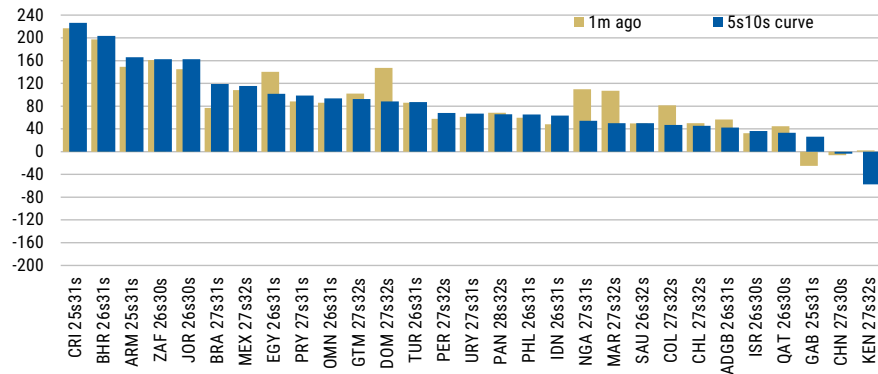
Exhibit 14: 10s30s curves (bp)



Source: Bloomberg, Morgan Stanley Research. Note: Russia excluded from calculation on 14-Feb-2022

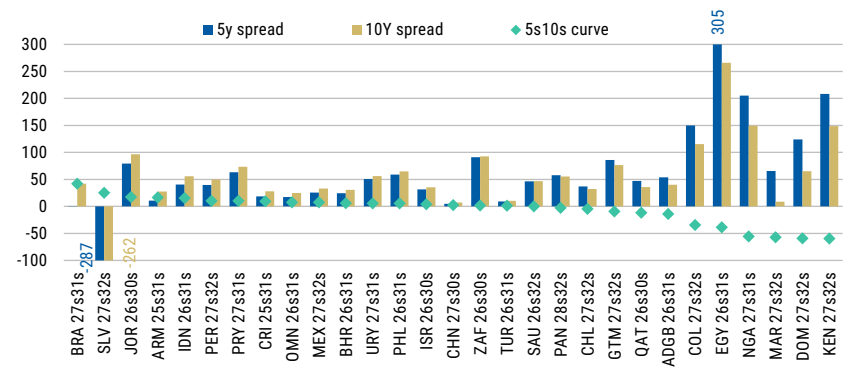
Bond 5s10s Curves Snapshot

Exhibit 15: 5s10s bond slope (Z-spread curves, bp)



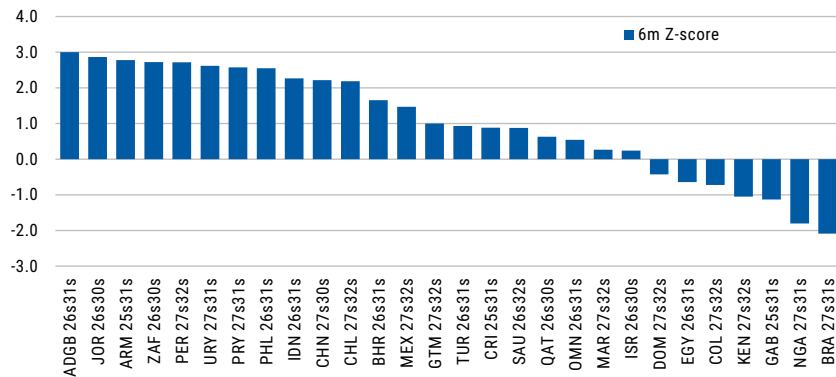
Source: Bloomberg, Morgan Stanley Research

Exhibit 16: 5s10s bond slope (1M Z-spread change, bp)



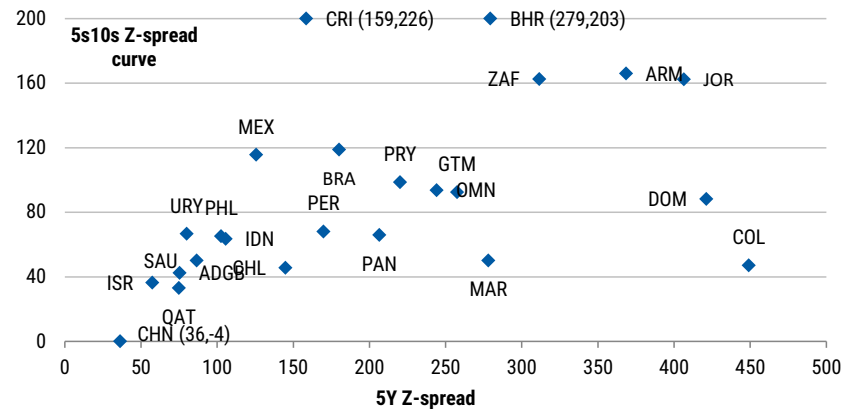
Source: Bloomberg, Morgan Stanley Research

Exhibit 17: 5s10s bond slope (6m z-score)



Source: Bloomberg, Morgan Stanley Research

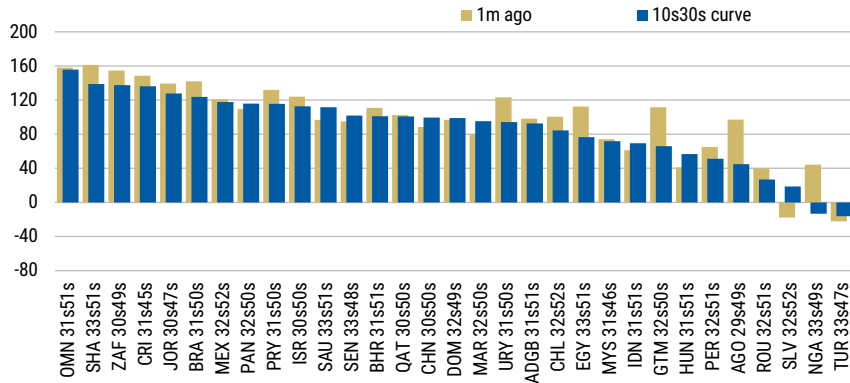
Exhibit 18: 5s10s bond slope (5s10s curve vs. 5y spread, bp)



Source: Bloomberg, Morgan Stanley Research

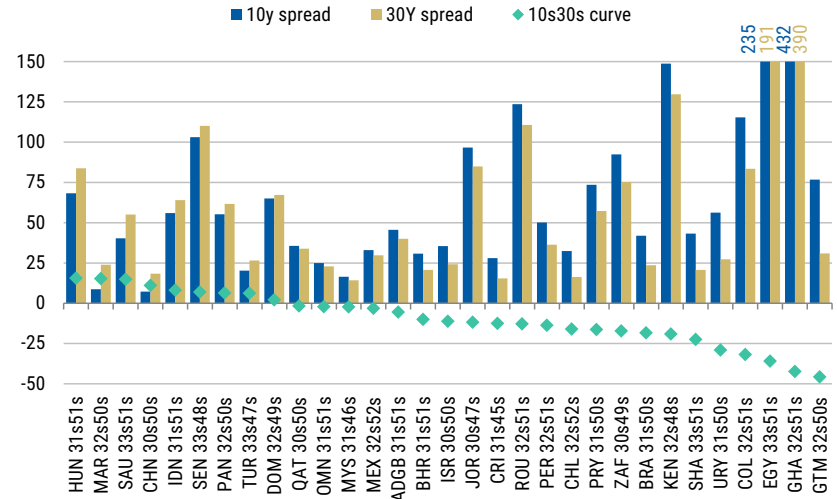
Bond 10s30s Curves Snapshot

Exhibit 19: 10s30s bond slope (Z-spread curves, bp)



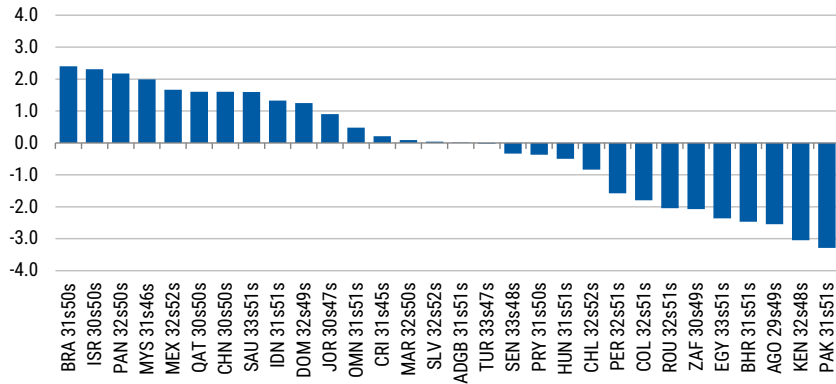
Source: Bloomberg, Morgan Stanley Research

Exhibit 20: 10s30s bond slope (1M Z-spread change, bp)



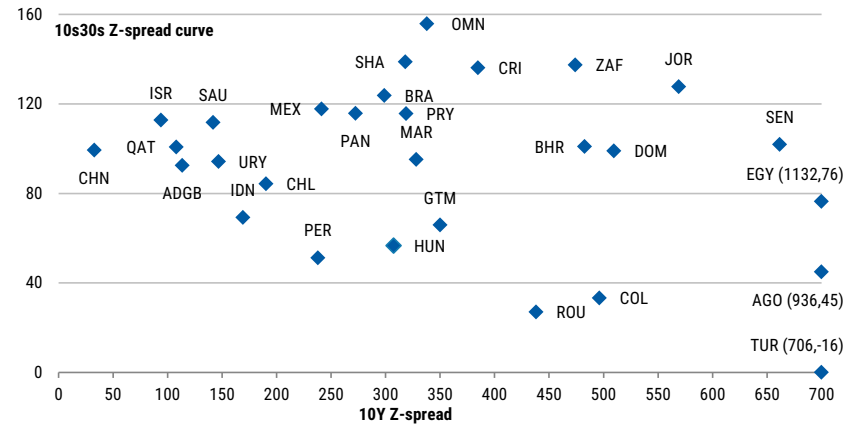
Source: Bloomberg, Morgan Stanley Research

Exhibit 21: 10s30s bond slope (6m z-score)



Source: Bloomberg, Morgan Stanley Research

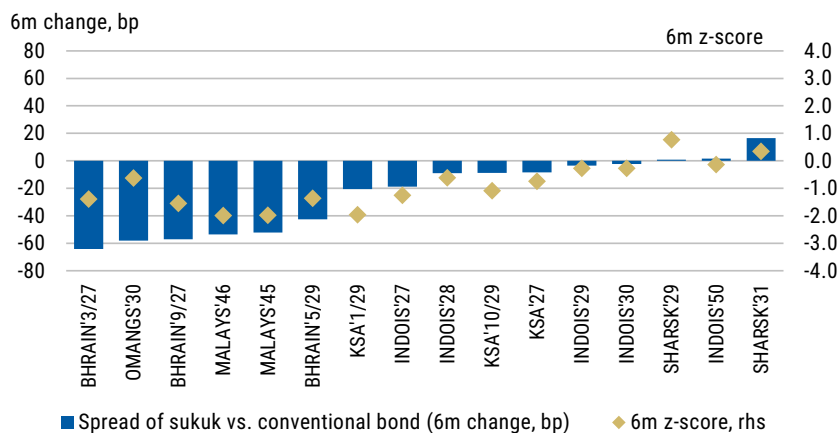
Exhibit 22: 10s30s bond slope (10s30s curve vs. 10y spread, bp)



Source: Bloomberg, Morgan Stanley Research

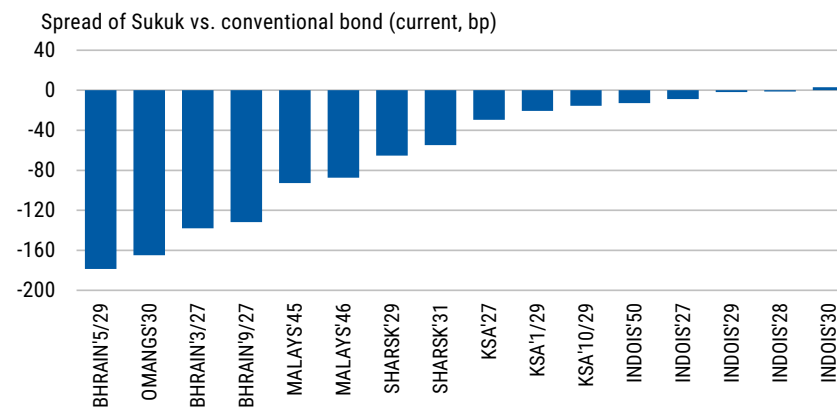
Sukuk Snapshot

Exhibit 23: Bond overview (6m change)*



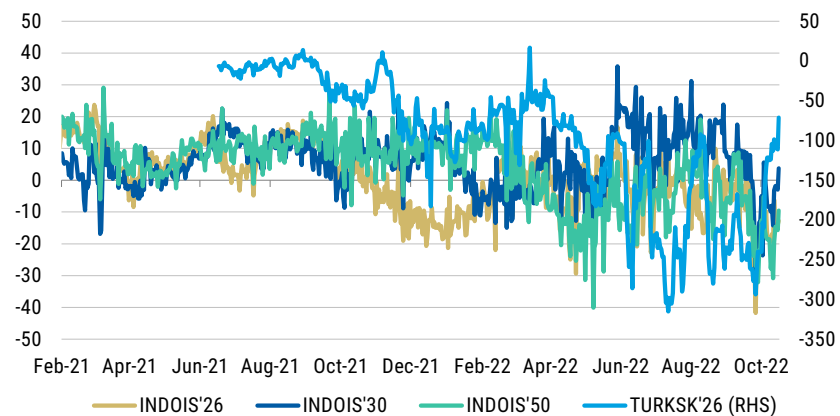
Source: Bloomberg, Morgan Stanley Research; *For Malaysian sukuk similar maturity Petronas bond is used as the conventional bond.

Exhibit 24: Bond overview (current, bp)*



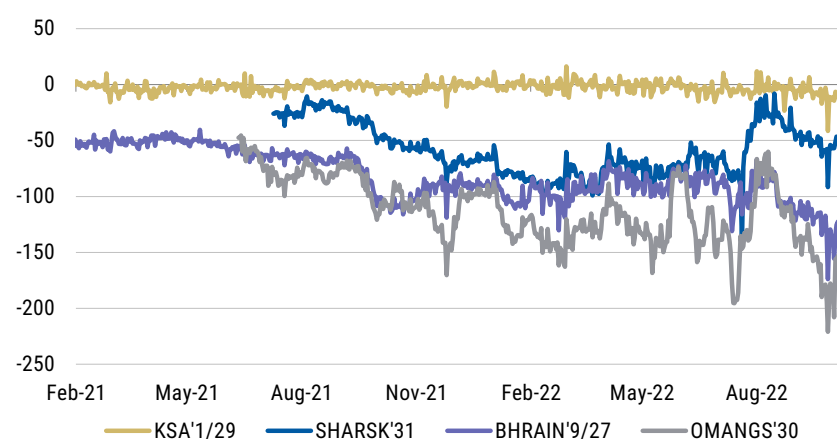
Source: Bloomberg, Morgan Stanley Research; *For Malaysian sukuk similar maturity Petronas bond is used as the conventional bond.

Exhibit 25: Indonesia and Turkey sukuk vs. conventional bond



Source: Bloomberg, Morgan Stanley Research

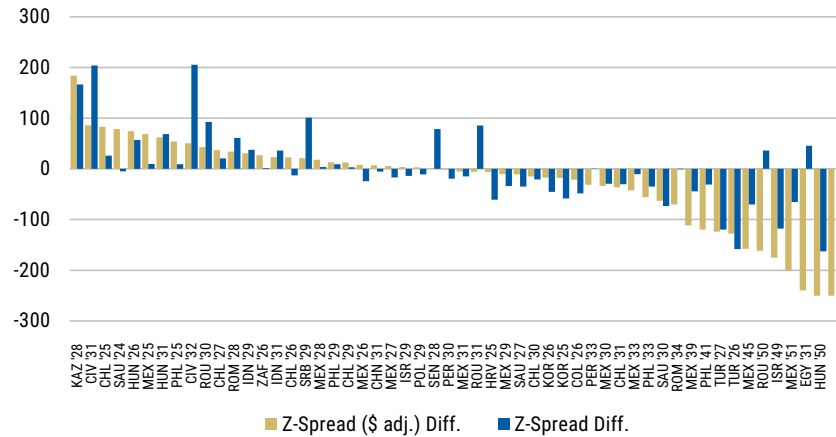
Exhibit 26: MENA sukuk vs. conventional bond



Source: Bloomberg, Morgan Stanley Research

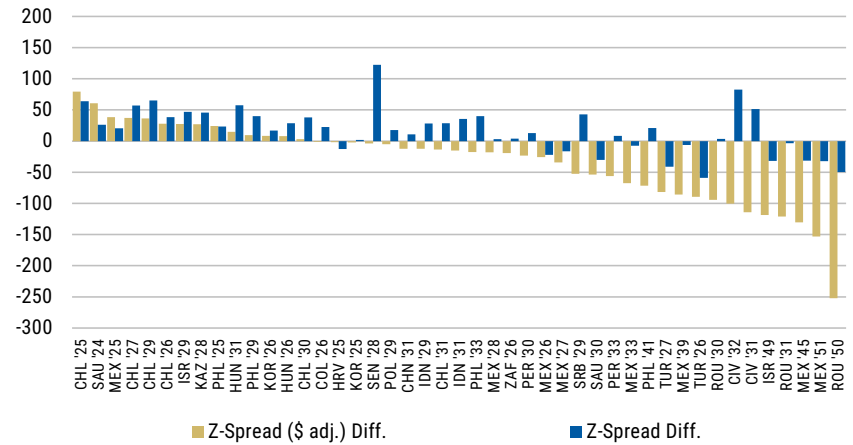
EUR vs. USD Bonds Snapshot

Exhibit 27: Current z-spread differentials by sovereign bond*



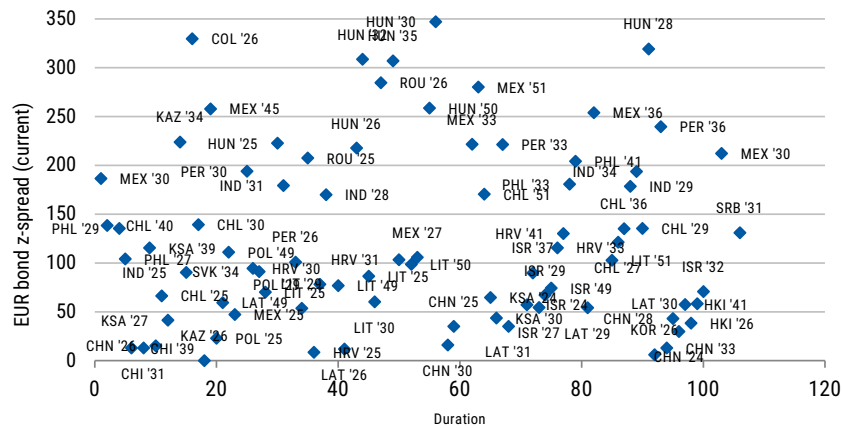
Source: Bloomberg, Morgan Stanley Research; *To compare IVYCSY'48 EUR bond the SENEGL'48 USD bond is used.

Exhibit 28: 6m change in z-spread differentials by sovereign bond**



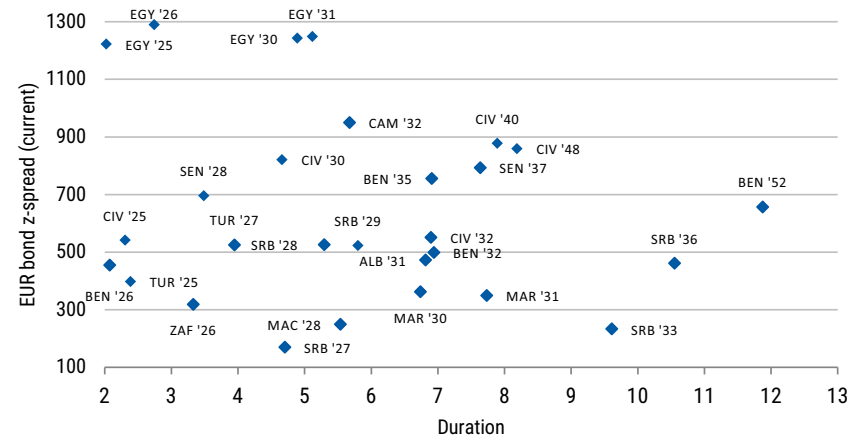
Source: Bloomberg, Morgan Stanley Research; **Chart shows 6m change or change since issue, whichever is closer.

Exhibit 29: Current EUR bond Z-spread vs. duration (IG)



Source: Bloomberg, Morgan Stanley Research

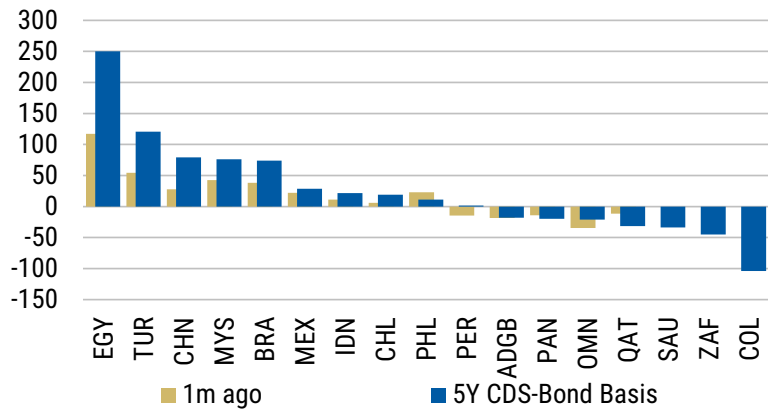
Exhibit 30: Current EUR bond Z-spread vs. duration (HY)



Source: Bloomberg, Morgan Stanley Research

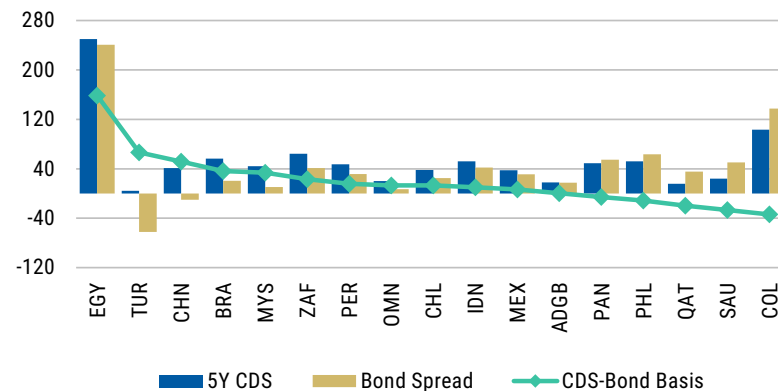
CDS Snapshot

Exhibit 31: Current CDS-bond basis (bp)



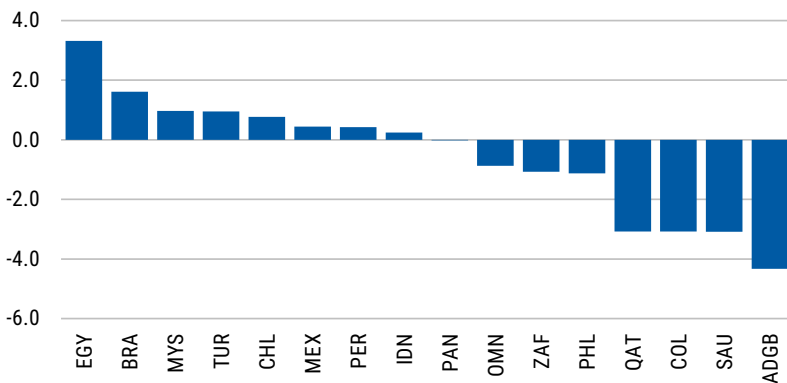
Source: Bloomberg, Morgan Stanley Research

Exhibit 32: CDS-bond basis 1m change (bp)



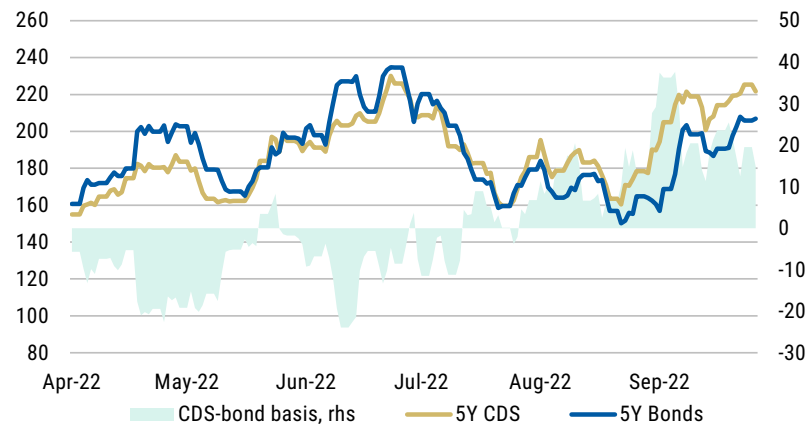
Source: Bloomberg, Morgan Stanley Research

Exhibit 33: CDS-bond basis 6m Z-score



Source: Bloomberg, Morgan Stanley Research

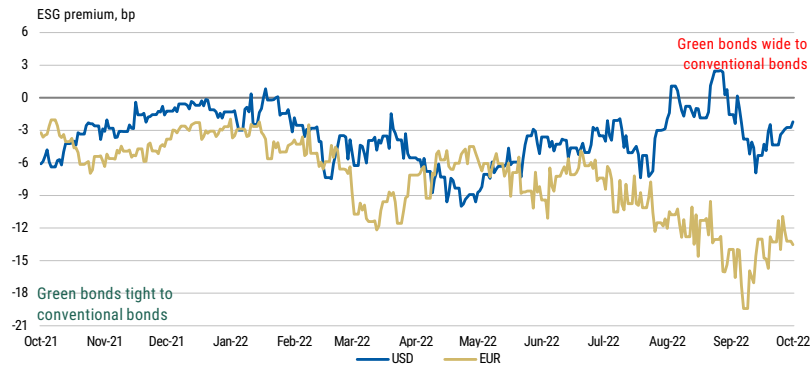
Exhibit 34: Aggregate CDS-bond basis (bp)*



Source: Bloomberg, Morgan Stanley Research; * Aggregate series uses BRAZIL, MALAYS, CHILE, COLOM, INDON, PANAMA, PERU, REPSOU, PHILIP, TURKEY, MEX, CHINA, KSA, QATAR and ADGB. Current basis uses an interpolated series if the CDS and bond maturities diverge by more than 6 months

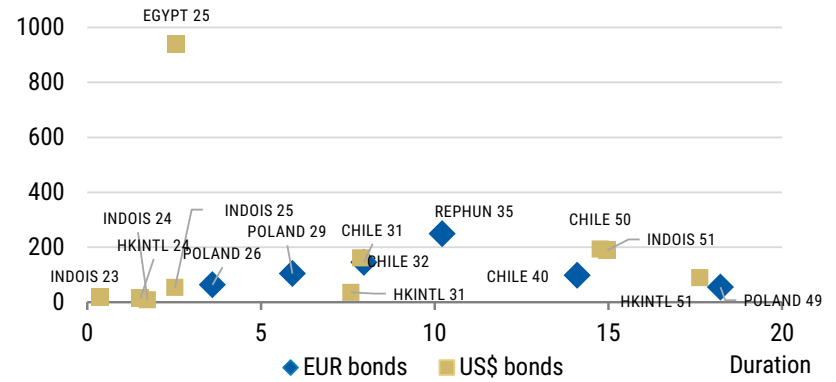
ESG Snapshot

Exhibit 35: EM sovereign greenium history (bp)



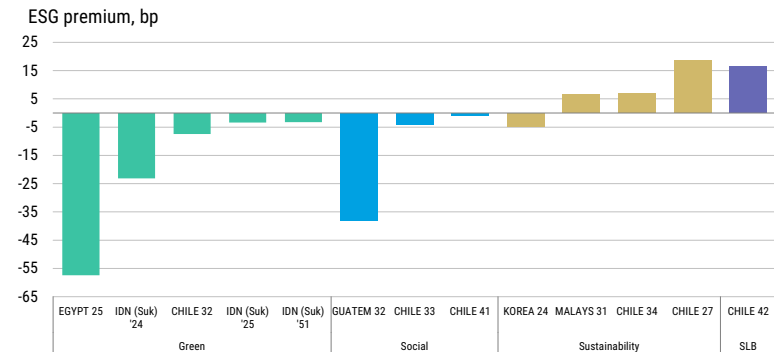
Source: Bloomberg, Morgan Stanley Research

Exhibit 36: Sovereign green bond G-spreads (xccc swapped, bp)



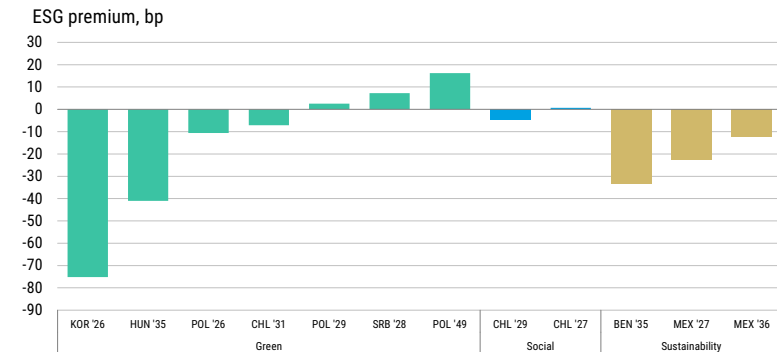
Source: Bloomberg, Morgan Stanley Research

Exhibit 37: USD-denominated ESG bonds G-spread differential* (bp)



Source: Bloomberg, Morgan Stanley Research; NOTE: We take the z-spread differential between a fitted curve of the issuer's conventional bonds and the ESG bond's actual z-spread or the distance to the closest comparable.

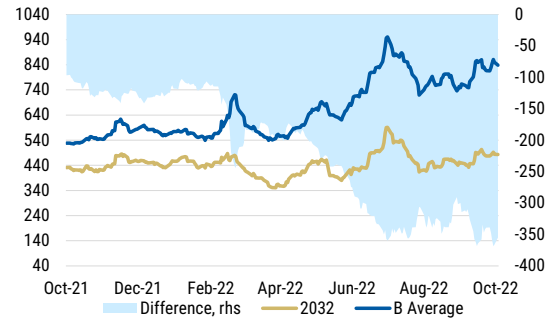
Exhibit 38: EUR-denominated ESG bond G-spread differential* (bp)



Source: Bloomberg, Morgan Stanley Research; NOTE: We take the z-spread differential between a fitted curve of the issuer's conventional bonds and the ESG bond's actual z-spread or the distance to the closest comparable.

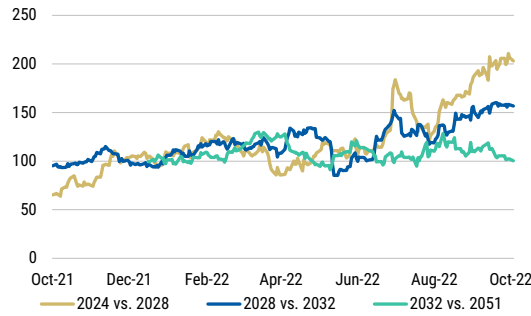
Bahrain

Exhibit 39: 10y bond spreads vs. ratings (bp)



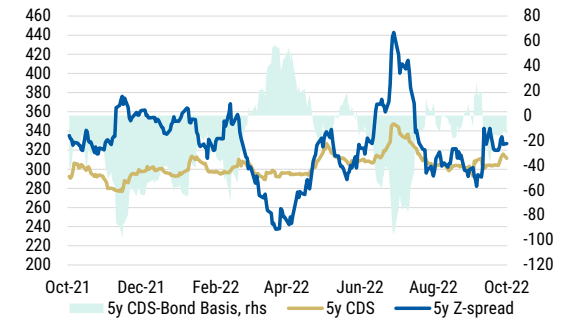
Source: Bloomberg, Morgan Stanley Research

Exhibit 40: Bond spread curves (bp)



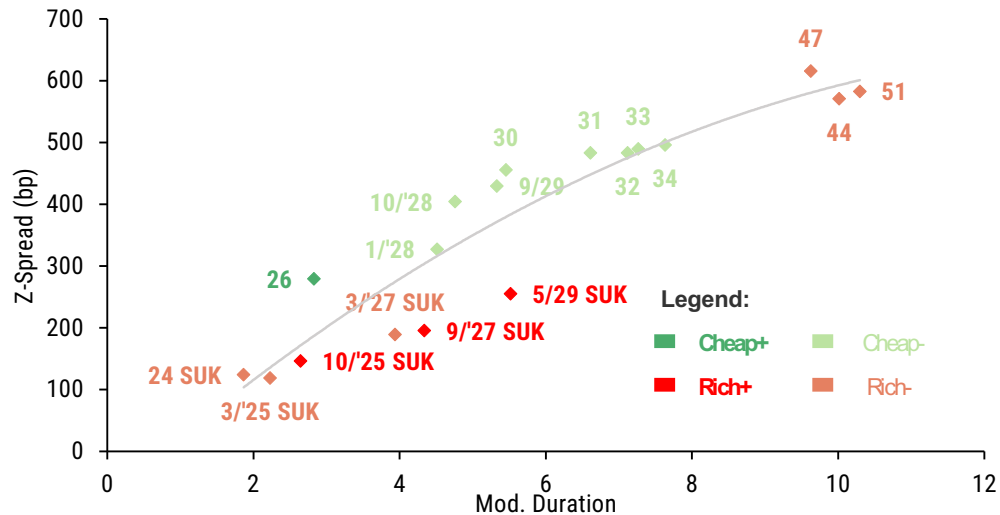
Source: Bloomberg, Morgan Stanley Research

Exhibit 41: 5Y CDS-bond basis (bp)



Source: Bloomberg, Morgan Stanley Research

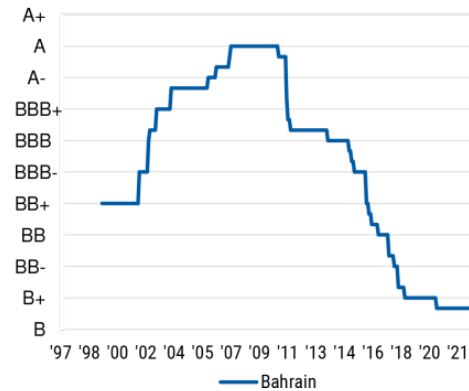
Exhibit 42: Rich & cheap bonds



Source: Bloomberg, Morgan Stanley Research

Exhibit 43: Current and historical rating

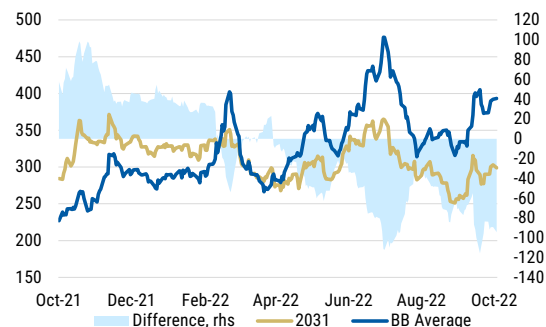
Agency	Rating	Outlook
S&P	B+	Stable
Moody's	B2	Stable
Fitch	B+	Stable



Source: Bloomberg, Morgan Stanley Research

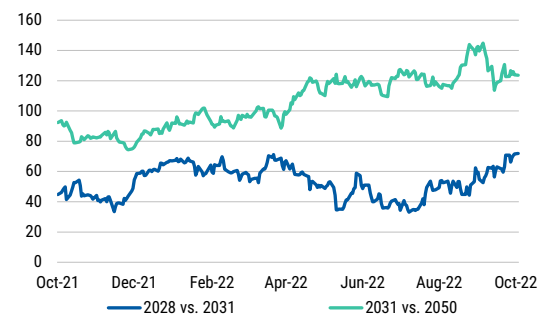
Brazil

Exhibit 44: 10y bond spreads vs. ratings (bp)



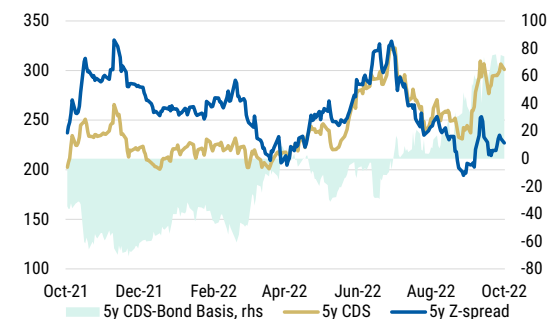
Source: Bloomberg, Morgan Stanley Research

Exhibit 45: Bond spread curves (bp)



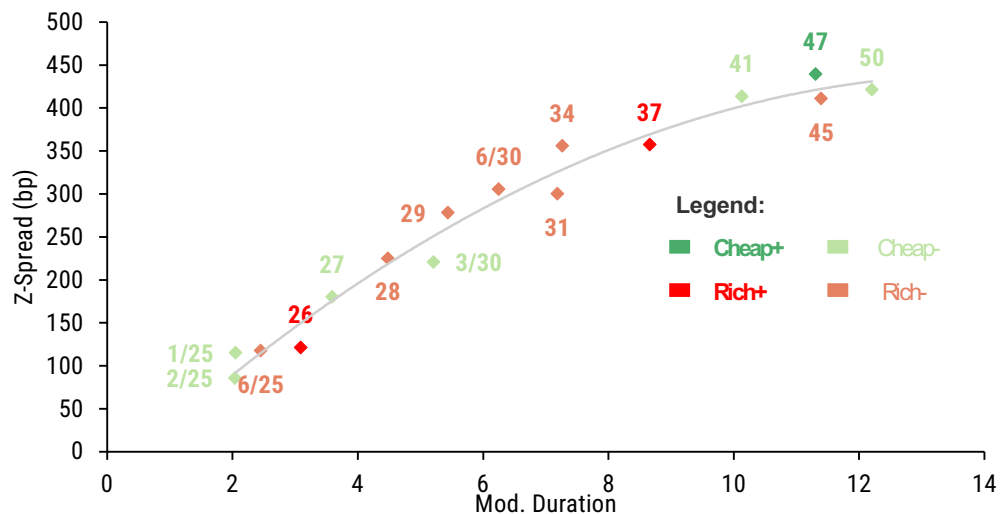
Source: Bloomberg, Morgan Stanley Research

Exhibit 46: 5Y CDS-bond basis (bp)



Source: Bloomberg, Morgan Stanley Research

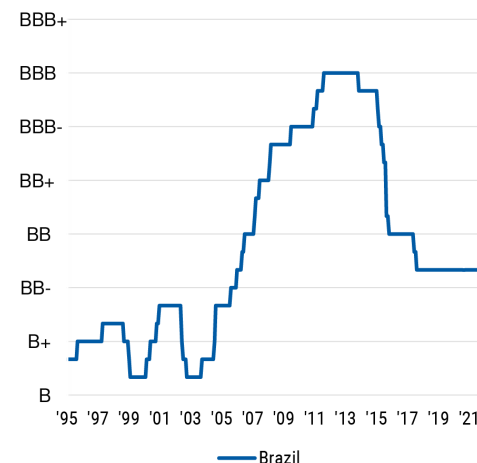
Exhibit 47: Rich & cheap bonds



Source: Bloomberg, Morgan Stanley Research

Exhibit 48: Current and historical rating

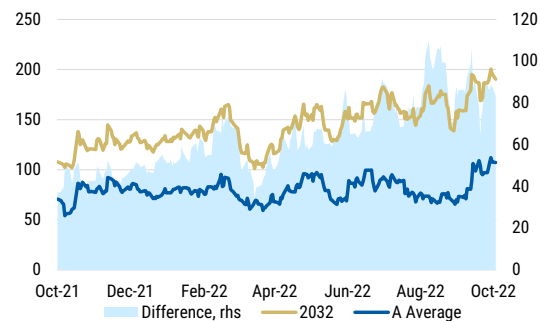
Agency	Rating	Outlook
S&P	BB-	Stable
Moody's	Ba2	Stable
Fitch	BB-	Stable



Source: Bloomberg, Morgan Stanley Research

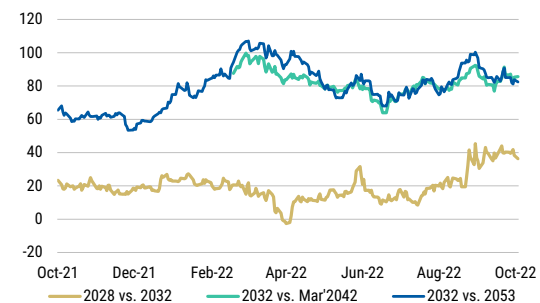
Chile

Exhibit 49: 10y spreads (bp)



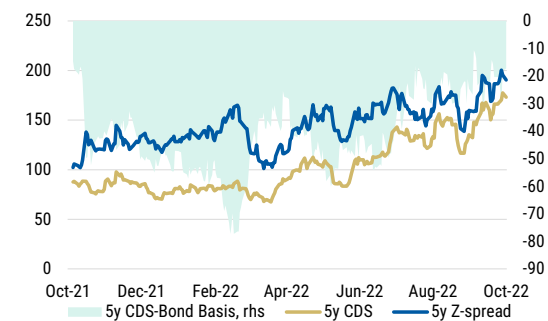
Source: Bloomberg, Morgan Stanley Research

Exhibit 50: Bond spread curves (bp)



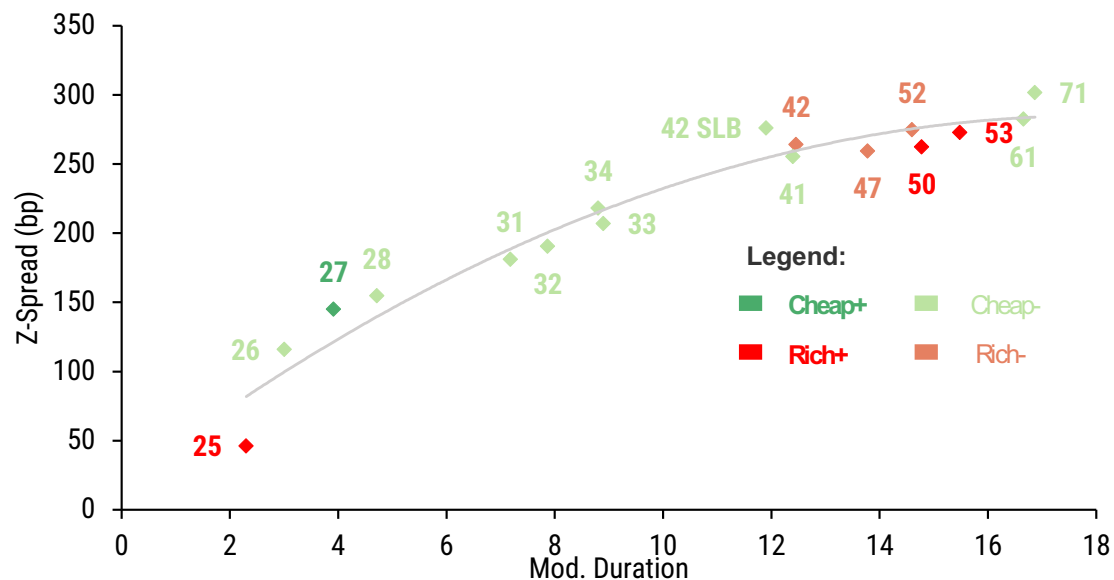
Source: Bloomberg, Morgan Stanley Research

Exhibit 51: 5Y CDS-bond basis (bp)



Source: Bloomberg, Morgan Stanley Research

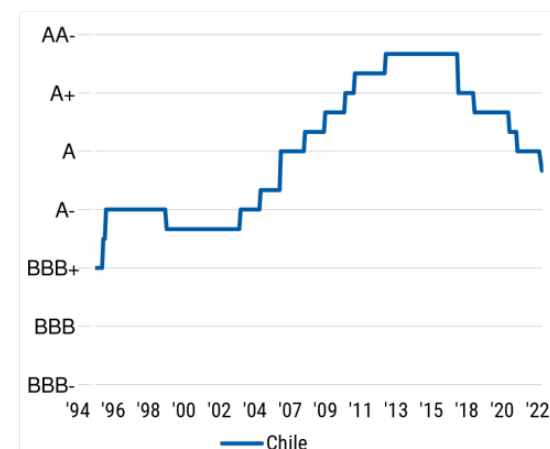
Exhibit 52: Rich & cheap bonds



Source: Bloomberg, Morgan Stanley Research

Exhibit 53: Current and historical rating

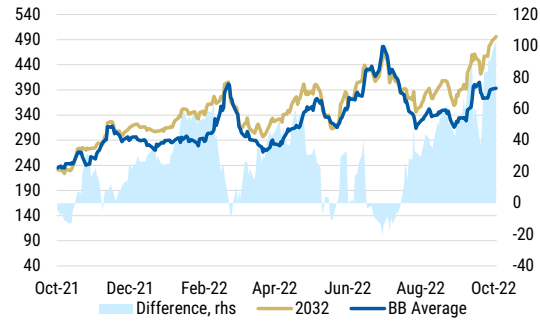
Agency	Rating	Outlook
S&P	A	Stable
Moody's	A2	Stable
Fitch	A-	Stable



Source: Bloomberg, Morgan Stanley Research

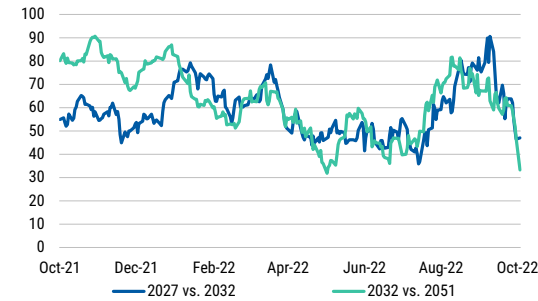
Colombia

Exhibit 54: 10y bond spreads vs. ratings (bp)



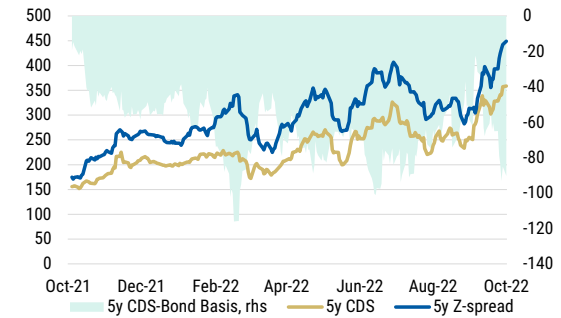
Source: Bloomberg, Morgan Stanley Research

Exhibit 55: Bond spread curves (bp)



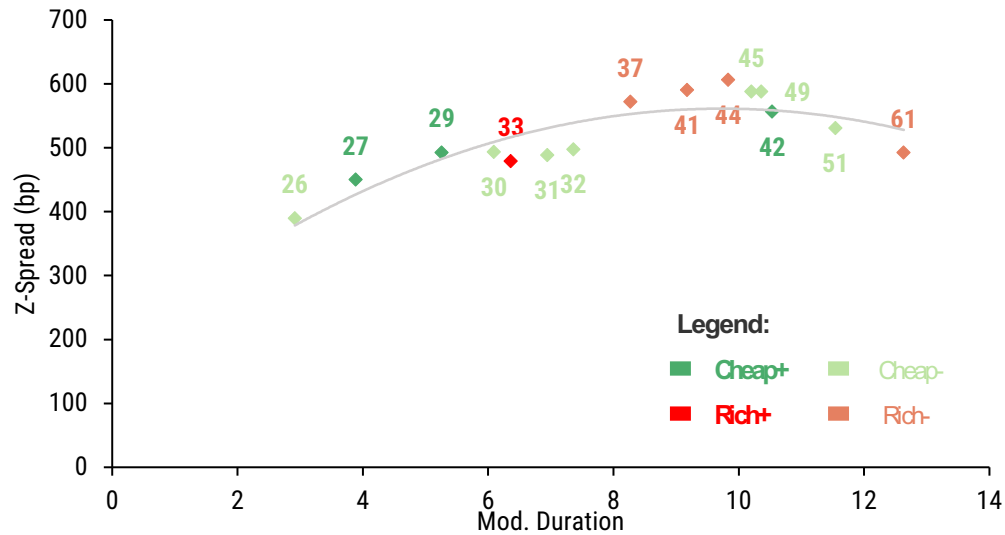
Source: Bloomberg, Morgan Stanley Research

Exhibit 56: 5Y CDS-bond basis (bp)



Source: Bloomberg, Morgan Stanley Research

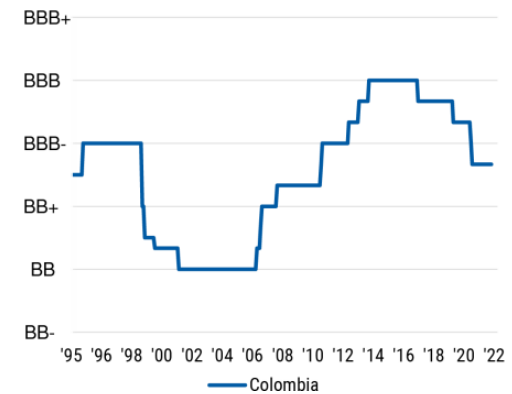
Exhibit 57: Rich & cheap bonds



Source: Bloomberg, Morgan Stanley Research

Exhibit 58: Current and historical rating

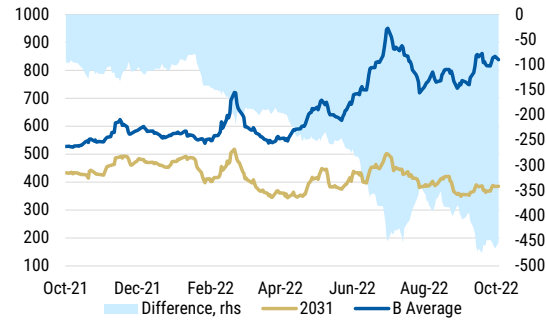
Agency	Rating	Outlook
S&P	BB+	Stable
Moody's	Baa2	Stable
Fitch	BB+	Stable



Source: Bloomberg, Morgan Stanley Research

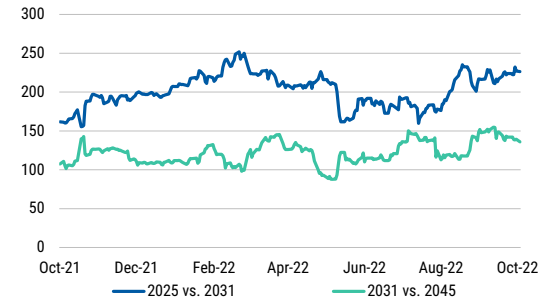
Costa Rica

Exhibit 59: 10y bond spreads vs. ratings (bp)



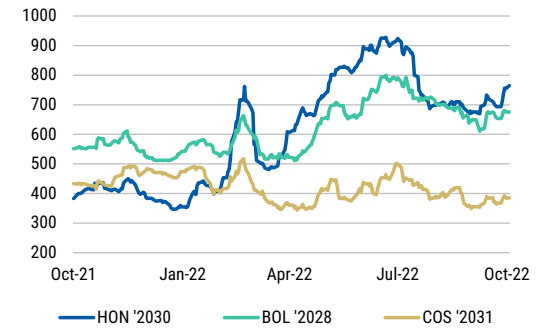
Source: Bloomberg, Morgan Stanley Research

Exhibit 60: Bond spread curves (bp)



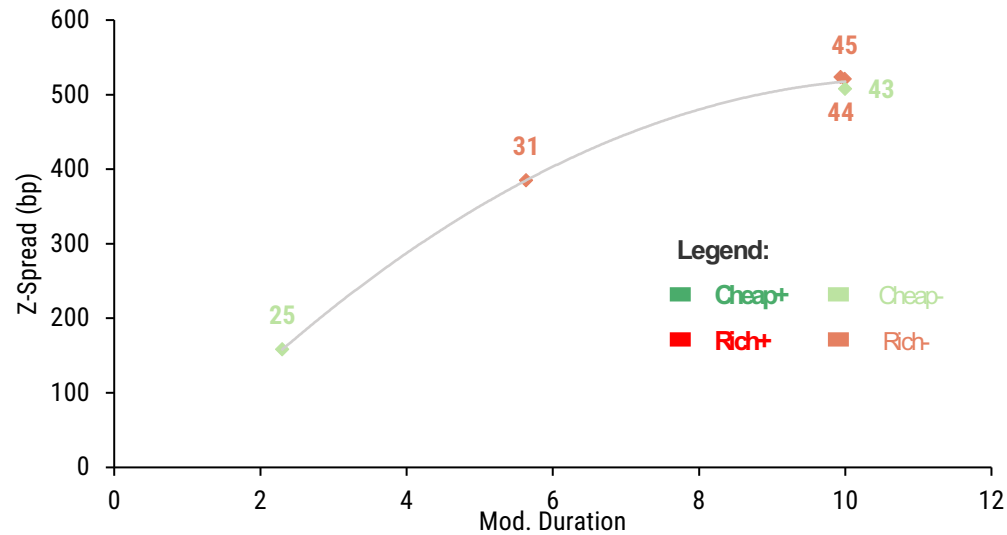
Source: Bloomberg, Morgan Stanley Research

Exhibit 61: 10y bond spreads (bp)



Source: Bloomberg, Morgan Stanley Research

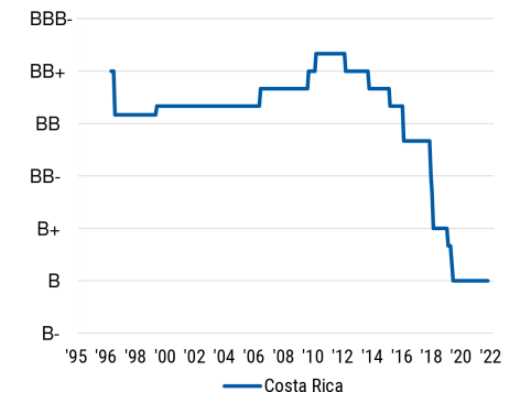
Exhibit 62: Rich & cheap bonds



Source: Bloomberg, Morgan Stanley Research

Exhibit 63: Current and historical rating

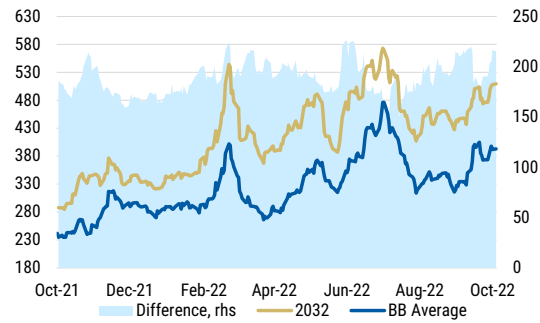
Agency	Rating	Outlook
S&P	B	Stable
Moody's	B2	Stable
Fitch	B	Stable



Source: Bloomberg, Morgan Stanley Research

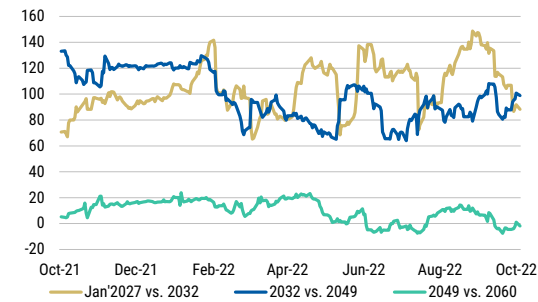
Dominican Republic

Exhibit 64: 10y bond spreads vs. ratings (bp)



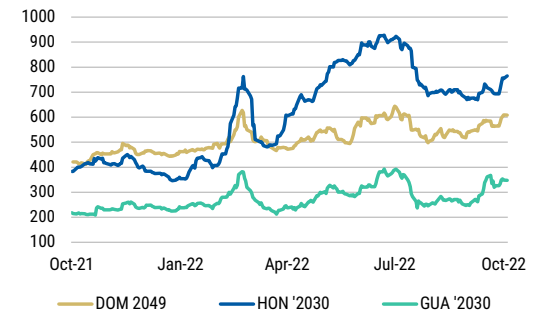
Source: Bloomberg, Morgan Stanley Research

Exhibit 65: Bond spread curves (bp)



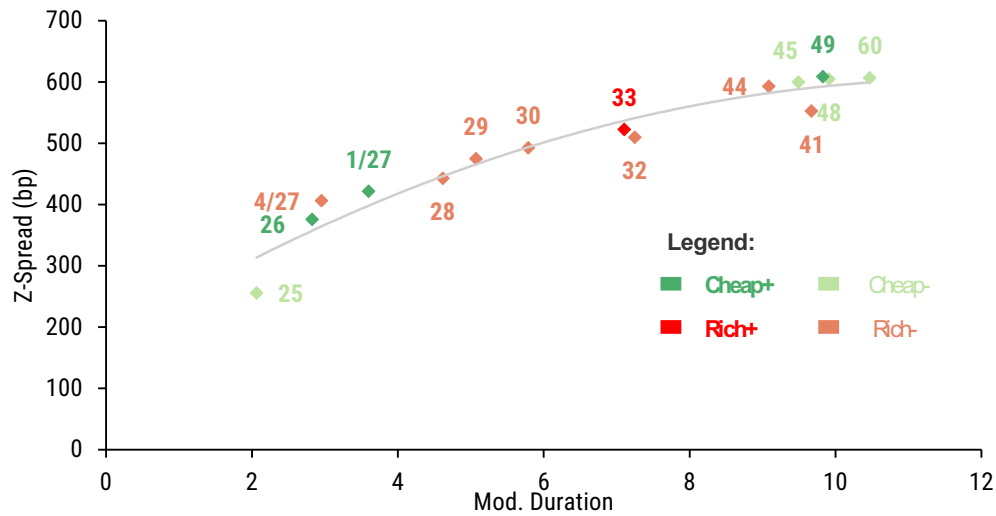
Source: Bloomberg, Morgan Stanley Research

Exhibit 66: 10y bond spreads (bp)



Source: Bloomberg, Morgan Stanley Research

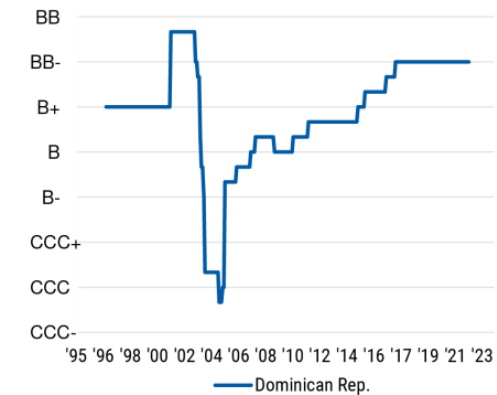
Exhibit 67: Rich & cheap bonds



Source: Bloomberg, Morgan Stanley Research

Exhibit 68: Current and historical rating

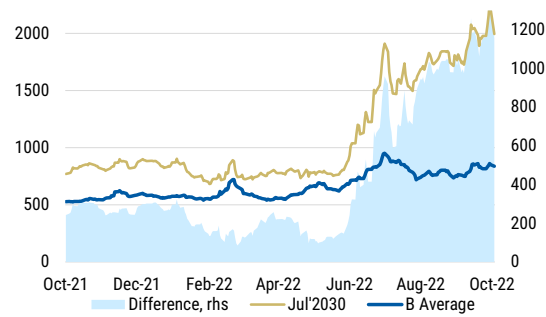
Agency	Rating	Outlook
S&P	BB-	Stable
Moody's	Ba3	Stable
Fitch	BB-	Stable



Source: Bloomberg, Morgan Stanley Research

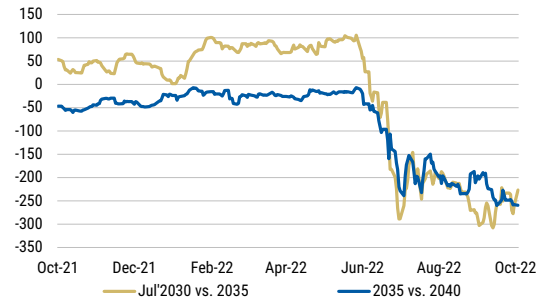
Ecuador

Exhibit 69: 10y bond spreads vs. ratings (bp)



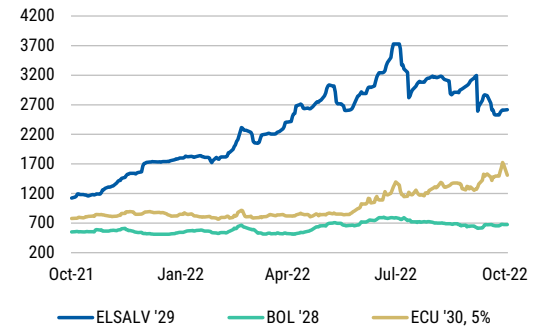
Source: Bloomberg, Morgan Stanley Research

Exhibit 70: Ecuador bond spread curves (bp)



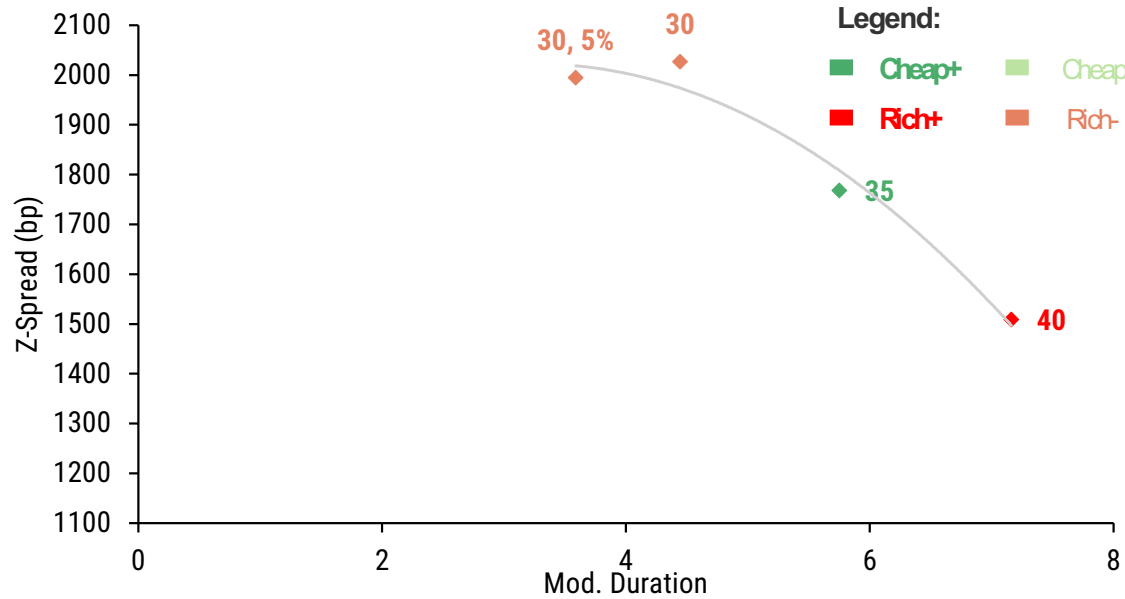
Source: Bloomberg, Morgan Stanley Research

Exhibit 71: 10 yr bond spreads (bp)



Source: Bloomberg, Morgan Stanley Research

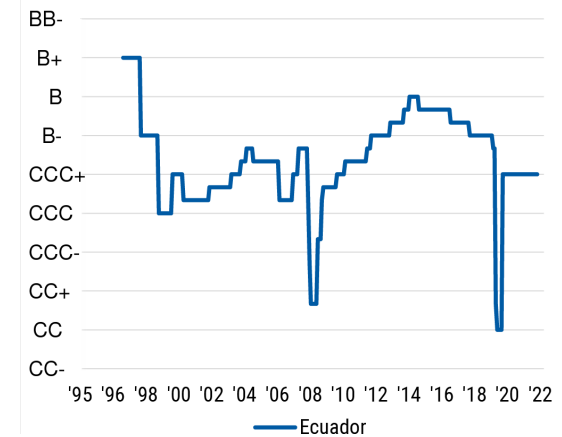
Exhibit 72: Rich & cheap bonds



Source: Bloomberg, Morgan Stanley Research

Exhibit 73: Current and historical rating

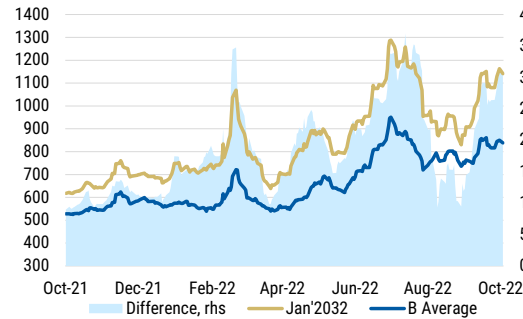
Agency	Rating	Outlook
S&P	B-	Stable
Moody's	Caa3	Stable
Fitch	B-	Stable



Source: Bloomberg, Morgan Stanley Research

Egypt and Jordan

Exhibit 74: Egypt 10y bond spreads vs. ratings (bp)



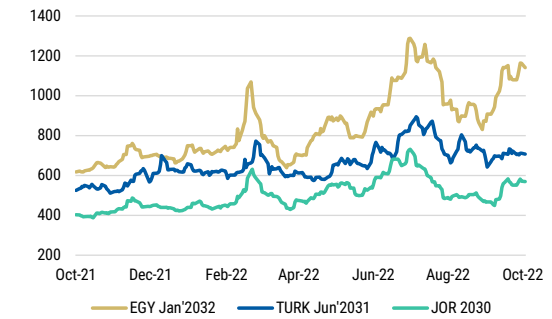
Source: Bloomberg, Morgan Stanley Research

Exhibit 75: Egypt bond spread curves (bp)



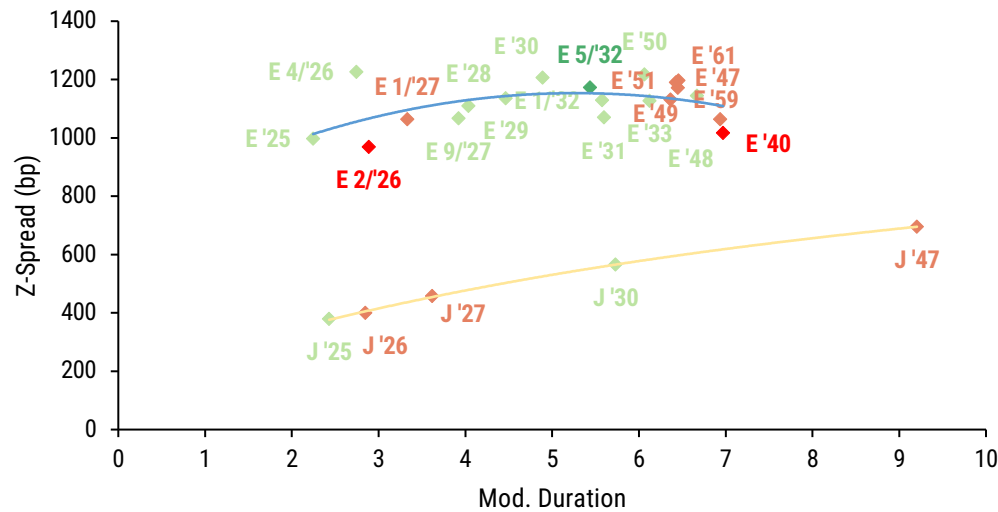
Source: Bloomberg, Morgan Stanley Research

Exhibit 76: 10y bond spreads (bp)



Source: Bloomberg, Morgan Stanley Research

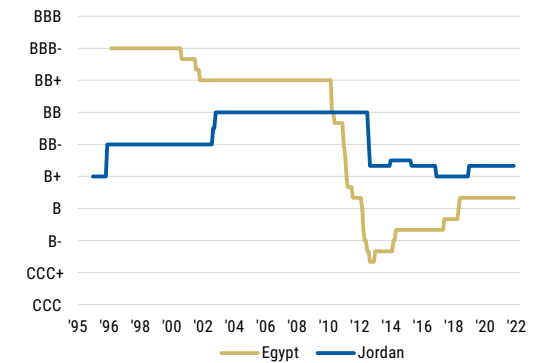
Exhibit 77: Egypt (E) and Jordan (J) rich & cheap bonds*



Source: Bloomberg, Morgan Stanley Research; *E represents Egypt and J represents Jordan. The rich and cheap models for Egypt and Jordan are independent of one another.

Exhibit 78: Current and historical rating

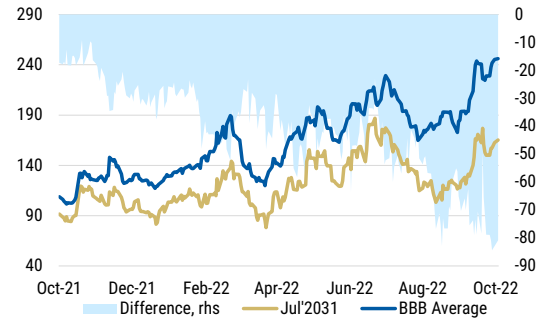
Agency	Egypt		Jordan	
	Rating	Outlook	Rating	Outlook
S&P	B	Stable	B+	Stable
Moody's	B2	Negative	B1	Stable
Fitch	B+	Stable	BB-	Stable



Source: Bloomberg, Morgan Stanley Research

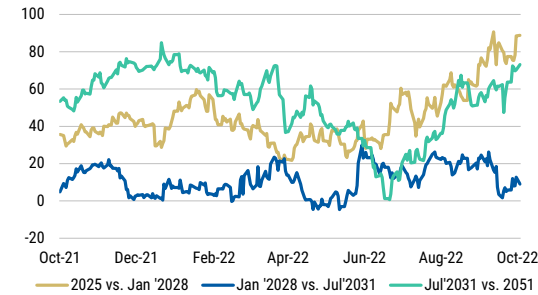
Indonesia

Exhibit 79: 10y bond spreads vs. ratings (bp)



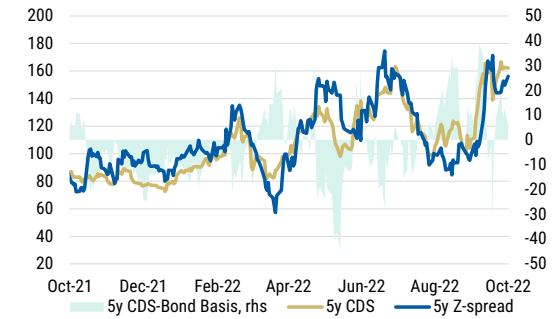
Source: Bloomberg, Morgan Stanley Research

Exhibit 80: Bond spread curves (bp)



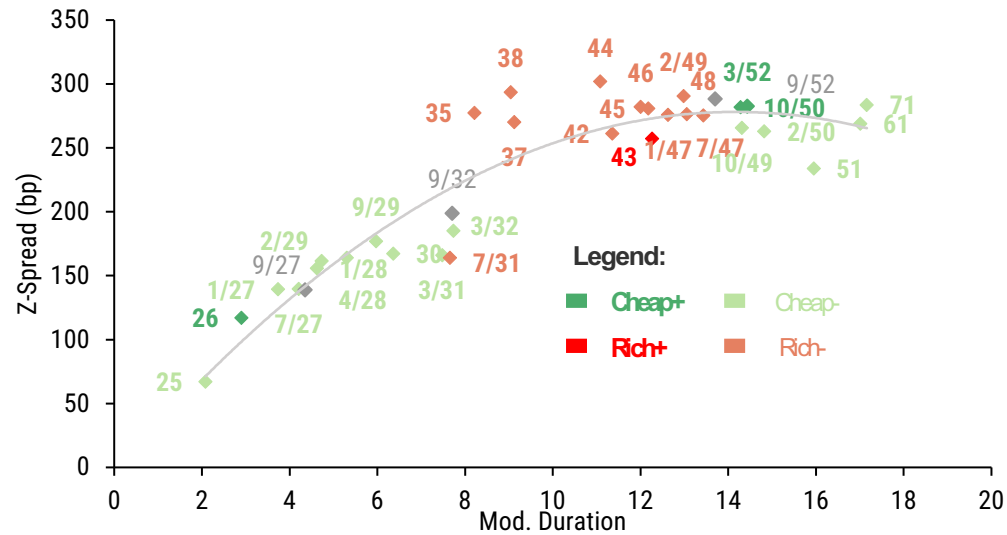
Source: Bloomberg, Morgan Stanley Research

Exhibit 81: 5y CDS-bond basis (bp)



Source: Bloomberg, Morgan Stanley Research

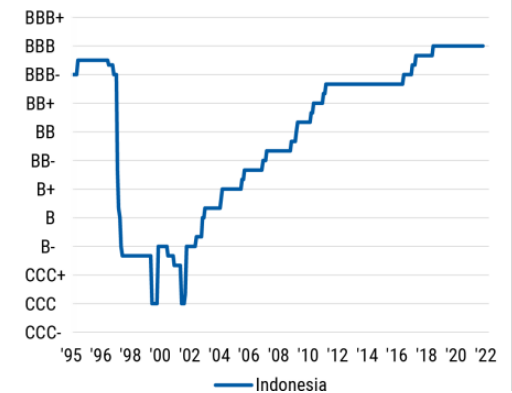
Exhibit 82: Rich & cheap bonds



Source: Bloomberg, Morgan Stanley Research

Exhibit 83: Current and historical rating

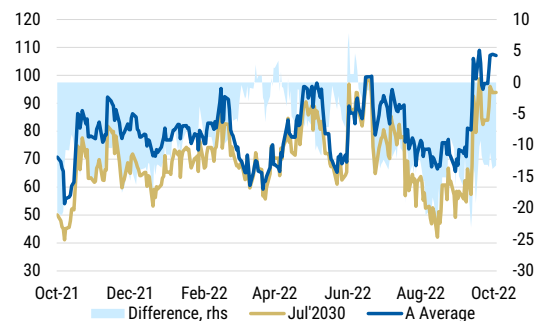
Agency	Rating	Outlook
S&P	BBB	Stable
Moody's	Baa2	Stable
Fitch	BBB	Stable



Source: Bloomberg, Morgan Stanley Research

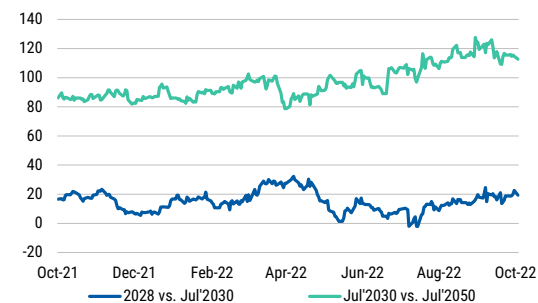
Israel

Exhibit 84: 10y bond spreads vs. ratings (bp)



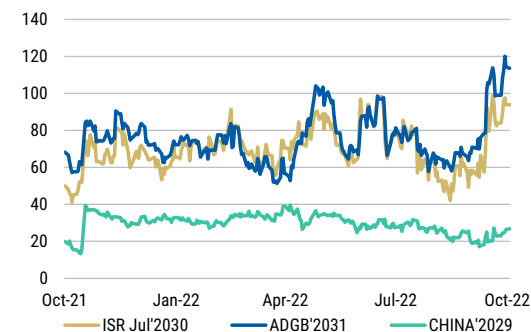
Source: Bloomberg, Morgan Stanley Research

Exhibit 85: Bond spread curves (bp)



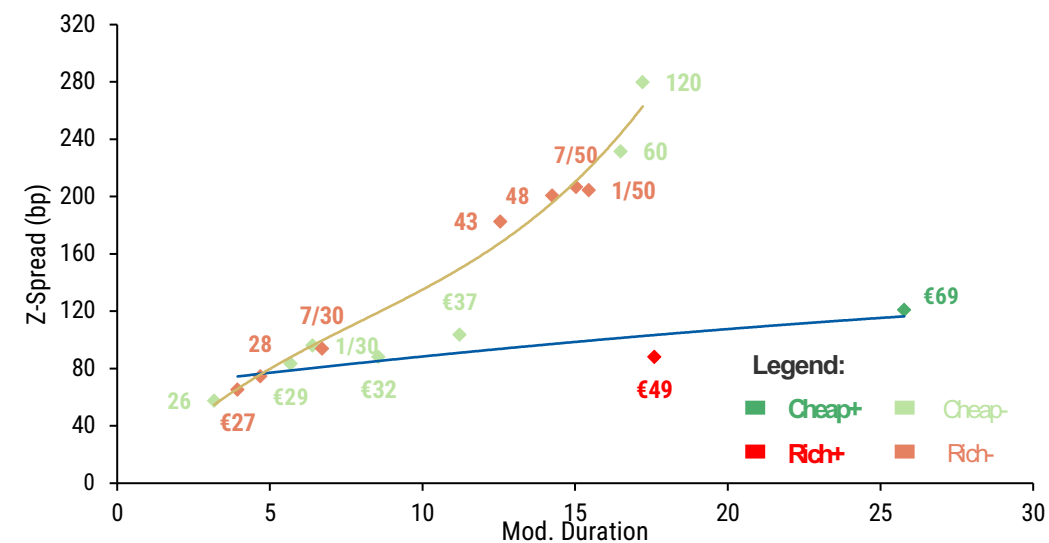
Source: Bloomberg, Morgan Stanley Research

Exhibit 86: 10y bond spreads



Source: Bloomberg, Morgan Stanley Research

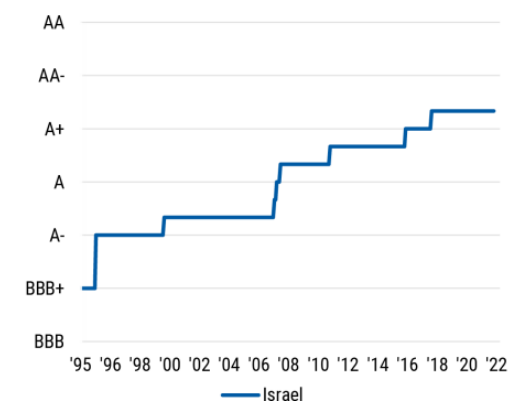
Exhibit 87: Rich & cheap bonds



Source: Bloomberg, Morgan Stanley Research

Exhibit 88: Current and historical rating

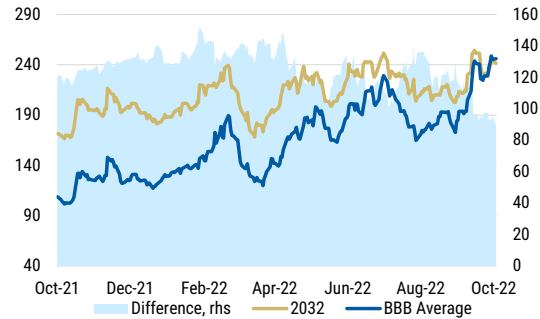
Agency	Rating	Outlook
S&P	AA-	Stable
Moody's	A1	Positive
Fitch	A+	Stable



Source: Bloomberg, Morgan Stanley Research

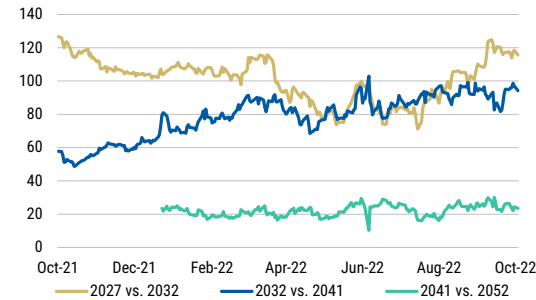
Mexico

Exhibit 89: 10y bond spreads vs. ratings (bp)



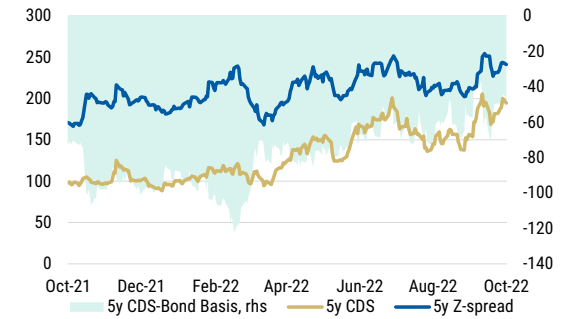
Source: Bloomberg, Morgan Stanley Research

Exhibit 90: Bond spread curves (bp)



Source: Bloomberg, Morgan Stanley Research

Exhibit 91: 5Y CDS-bond basis (bp)



Source: Bloomberg, Morgan Stanley Research

Exhibit 92:

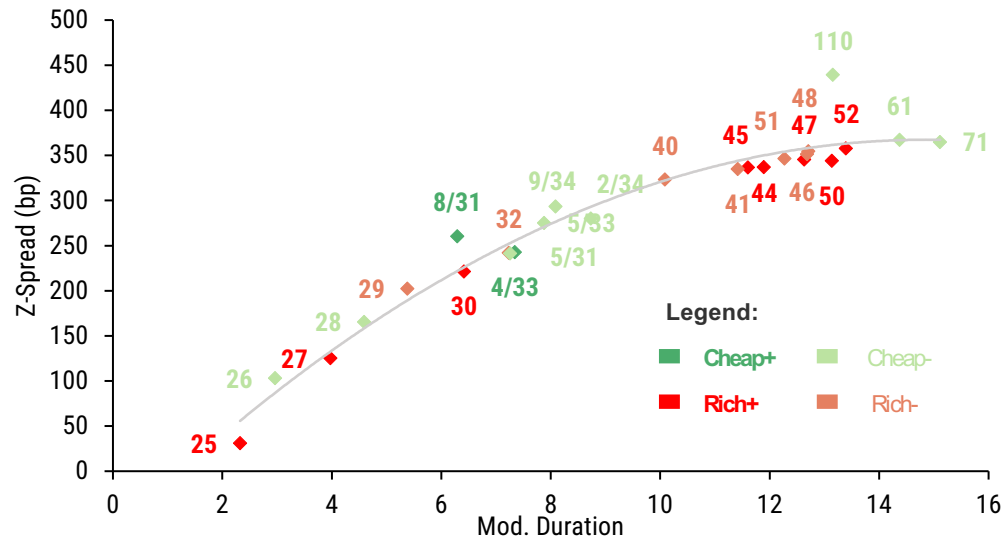
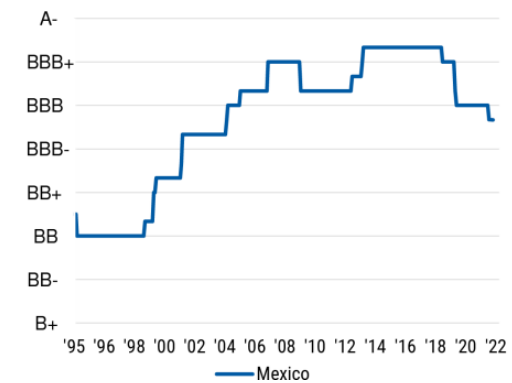


Exhibit 93: Current and historical rating

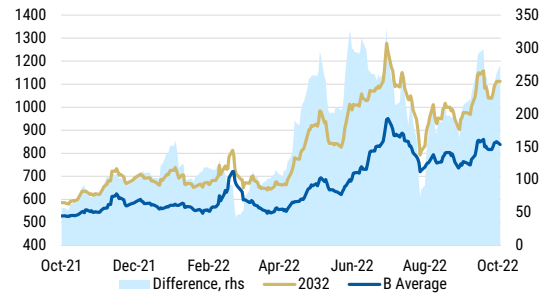
Agency	Rating	Outlook
S&P	BBB	Stable
Moody's	Baa2	Stable
Fitch	BBB-	Stable



Source: Bloomberg, Morgan Stanley Research

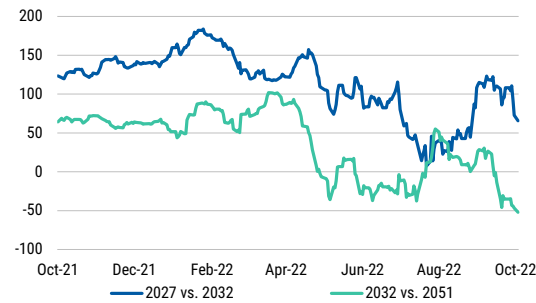
Nigeria, Ghana, and Angola

Exhibit 94: Nigeria 10y bond spreads vs. ratings (bp)



Source: Bloomberg, Morgan Stanley Research

Exhibit 95: Nigeria bond spread curves (bp)



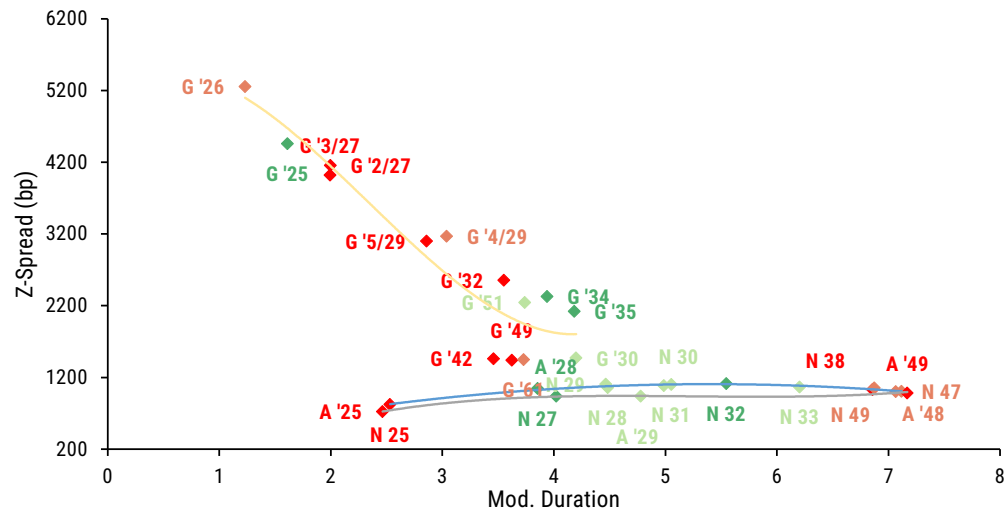
Source: Bloomberg, Morgan Stanley Research

Exhibit 96: 10y bond spreads (bp)



Source: Bloomberg, Morgan Stanley Research

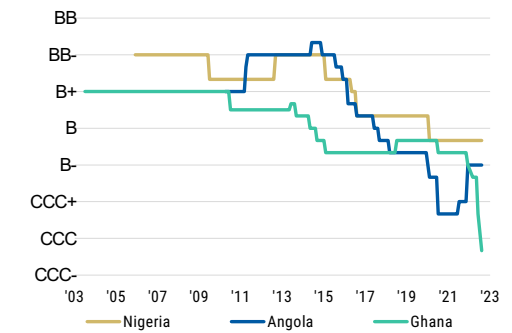
Exhibit 97: Nigeria (N), Ghana (G) and Angola (A) rich & cheap bonds*



Source: Bloomberg, Morgan Stanley Research; *N represents Nigeria and A represents Angola. The rich and cheap models for Nigeria and Angola are independent of one another.

Exhibit 98: Current and historical rating

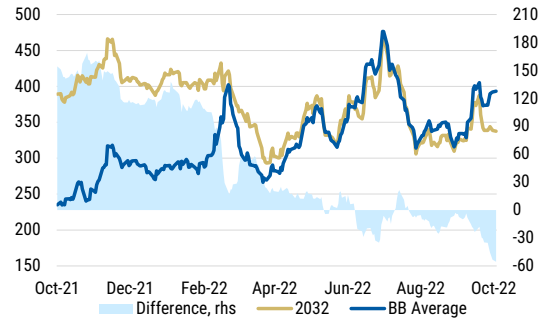
Agency	Nigeria		Angola		Ghana	
	Rating	Outlook	Rating	Outlook	Rating	Outlook
S&P	B-	Stable	B-	Stable	CCC+	Negative
Moody's	B2	Stable	B3	Stable	Caa2 *	-
Fitch	B	Stable	B-	Positive	CC	-



Source: Bloomberg, Morgan Stanley Research

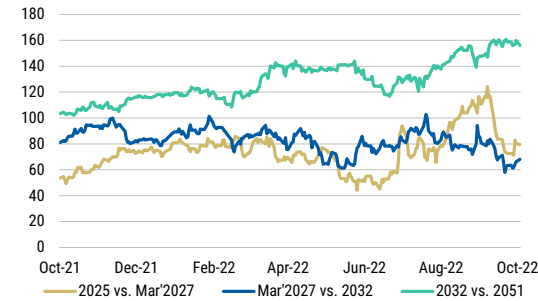
Oman

Exhibit 99: 10y bond spreads vs. ratings (bp)



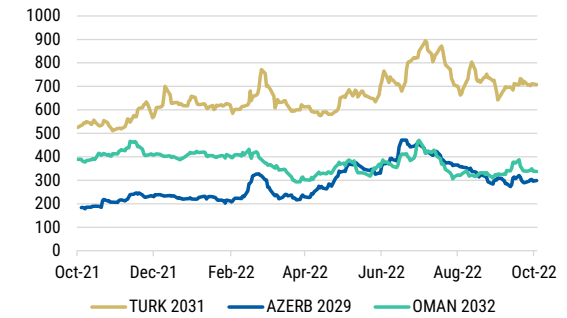
Source: Bloomberg, Morgan Stanley Research

Exhibit 100: Bond spread curves (bp)



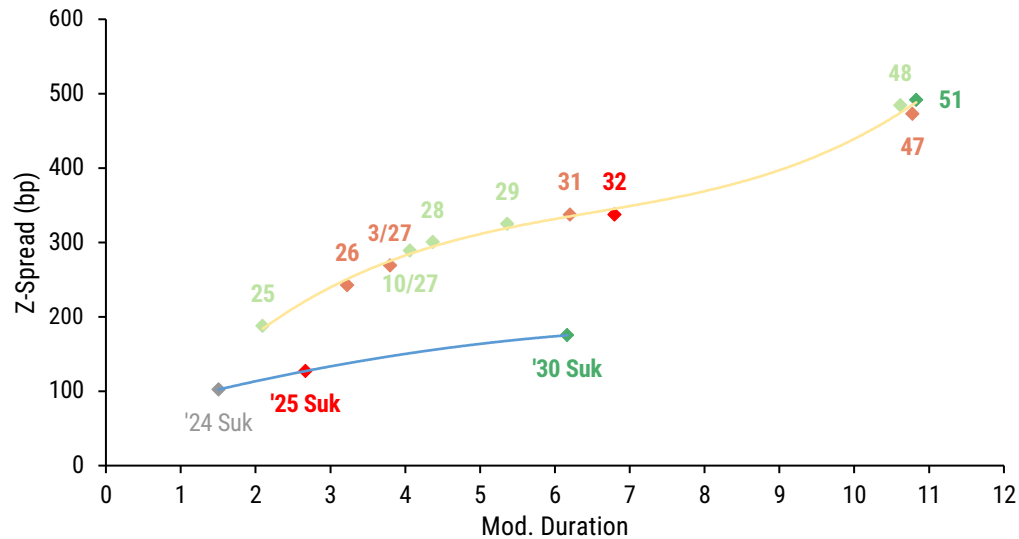
Source: Bloomberg, Morgan Stanley Research

Exhibit 101: 10y bond spreads



Source: Bloomberg, Morgan Stanley Research

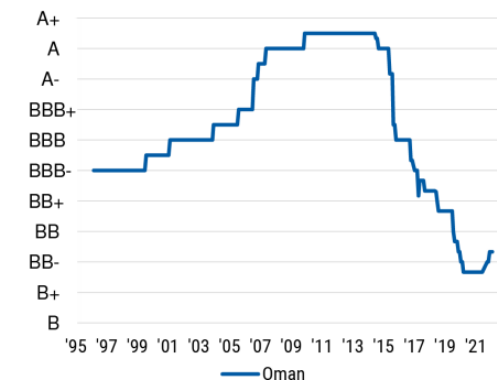
Exhibit 102: Rich & cheap bonds



Source: Bloomberg, Morgan Stanley Research

Exhibit 103: Current and historical rating

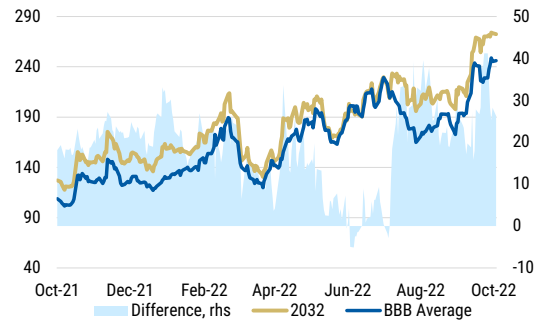
Agency	Rating	Outlook
S&P	BB-	Stable
Moody's	Ba3	Positive
Fitch	BB	Stable



Source: Bloomberg, Morgan Stanley Research

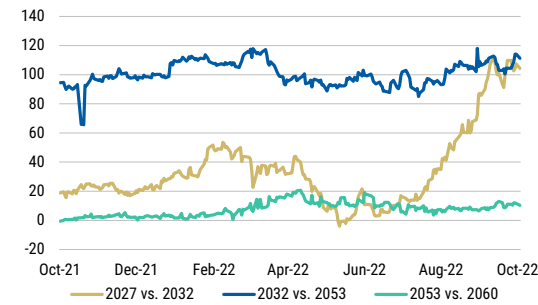
Panama

Exhibit 104: 10y bond spreads vs. ratings (bp)



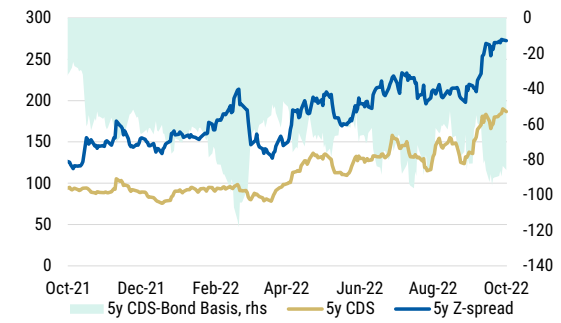
Source: Bloomberg, Morgan Stanley Research

Exhibit 105: Bond spread curves (bp)



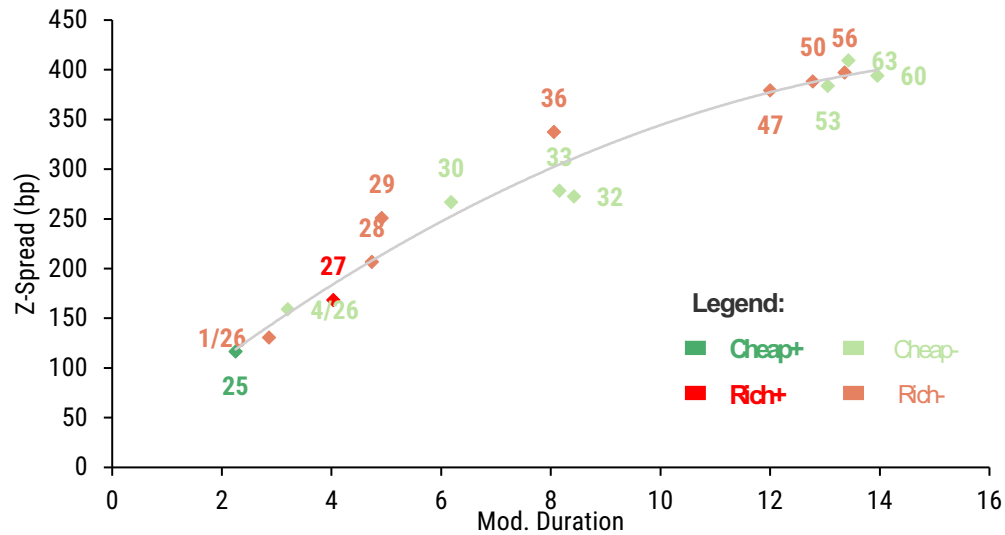
Source: Bloomberg, Morgan Stanley Research

Exhibit 106: 5Y CDS-bond basis (bp)



Source: Bloomberg, Morgan Stanley Research

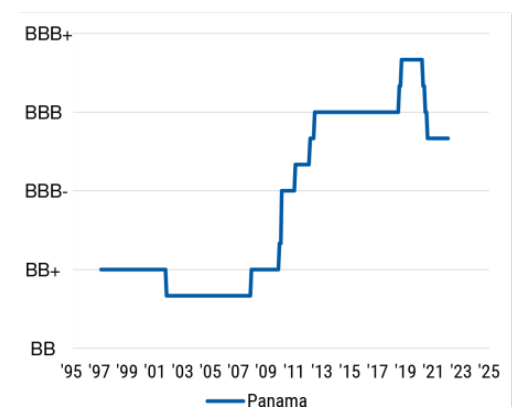
Exhibit 107: Rich & cheap bonds



Source: Bloomberg, Morgan Stanley Research

Exhibit 108: Current and historical rating

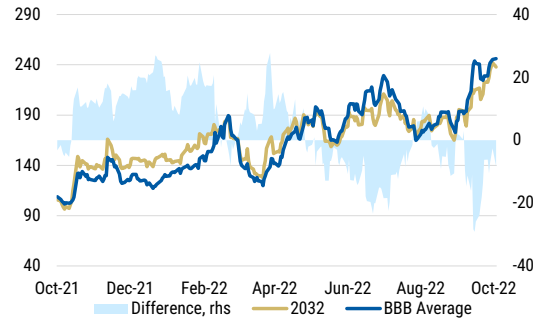
Agency	Rating	Outlook
S&P	BBB	Negative
Moody's	Baa2	Stable
Fitch	BBB-	Stable



Source: Bloomberg, Morgan Stanley Research

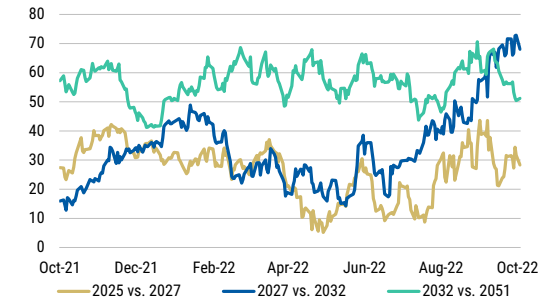
Peru

Exhibit 109: 10y bond spreads vs. ratings (bp)



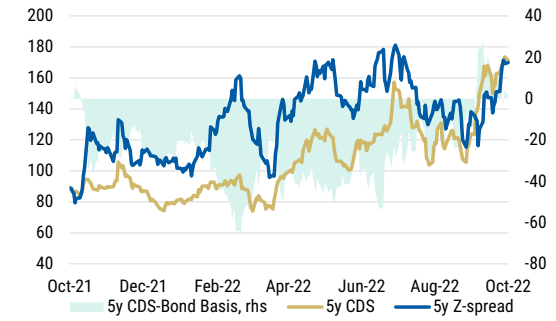
Source: Bloomberg, Morgan Stanley Research

Exhibit 110: Bond spread curves (bp)



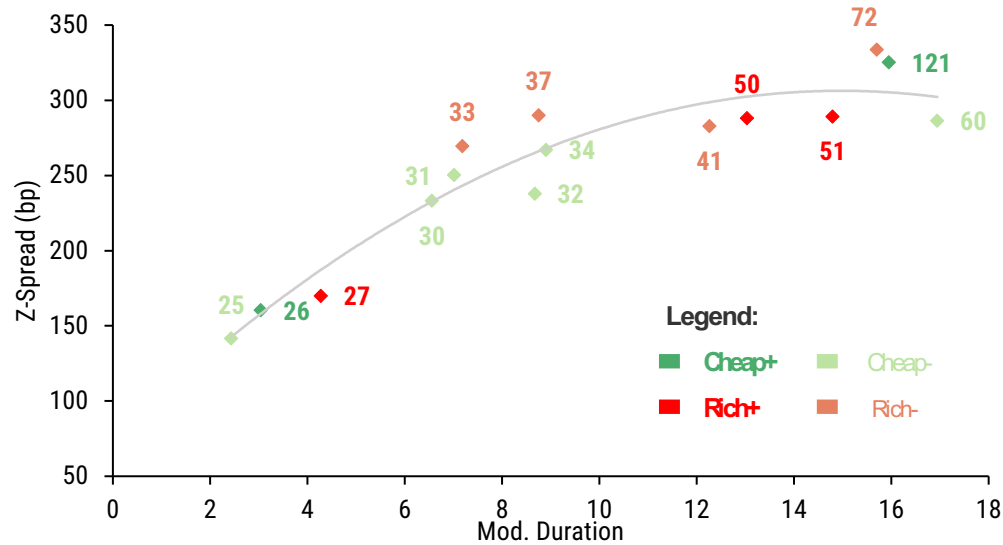
Source: Bloomberg, Morgan Stanley Research

Exhibit 111: 5Y CDS-bond basis (bp)



Source: Bloomberg, Morgan Stanley Research

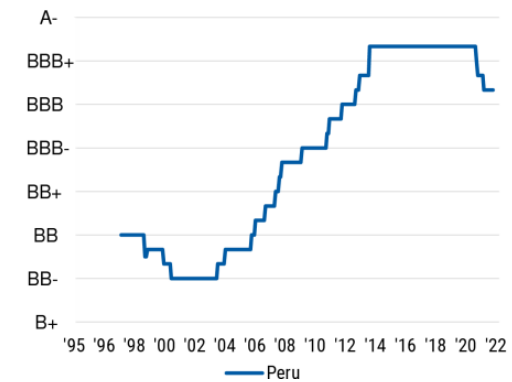
Exhibit 112: Rich & cheap bonds



Source: Bloomberg, Morgan Stanley Research

Exhibit 113: Current and historical rating

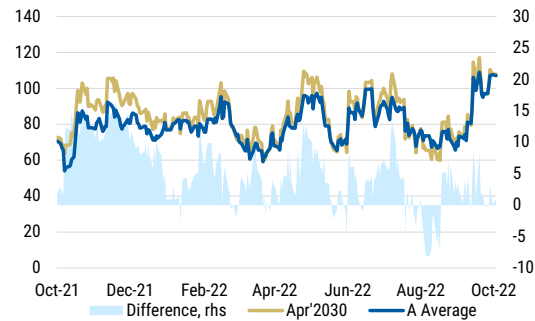
Agency	Rating	Outlook
S&P	BBB	Stable
Moody's	Baa1	Stable
Fitch	BBB	Stable



Source: Bloomberg, Morgan Stanley Research

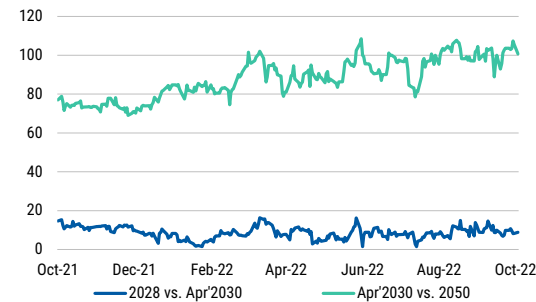
Qatar

Exhibit 114: 10y bond spreads vs. ratings (bp)



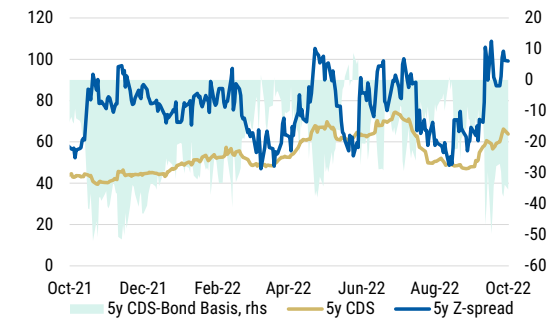
Source: Bloomberg, Morgan Stanley Research

Exhibit 115: Bond spread curves (bp)



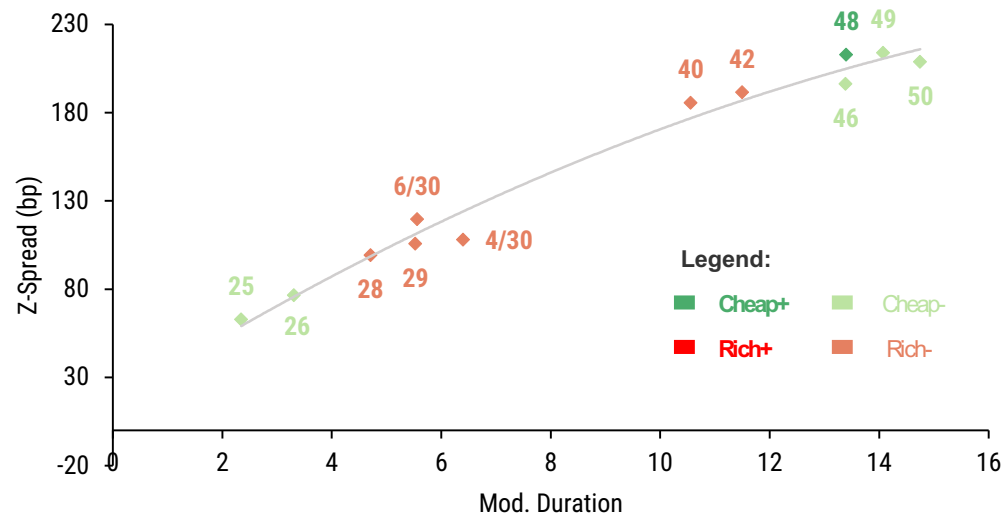
Source: Bloomberg, Morgan Stanley Research

Exhibit 116: 5Y CDS-bond basis (bp)



Source: Bloomberg, Morgan Stanley Research

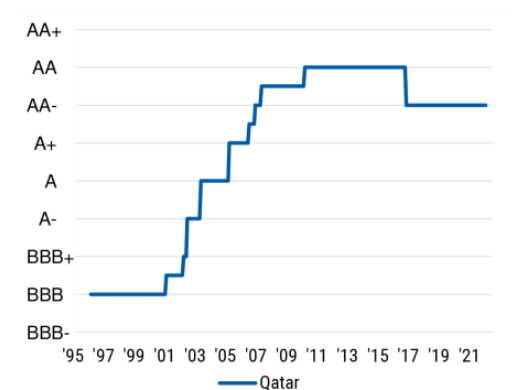
Exhibit 117: Rich & cheap bonds



Source: Bloomberg, Morgan Stanley Research

Exhibit 118: Current and historical rating

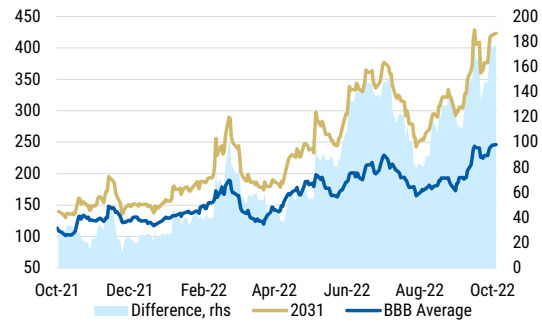
Agency	Rating	Outlook
S&P	AA-	Stable
Moody's	Aa3	Stable
Fitch	AA-	Stable



Source: Bloomberg, Morgan Stanley Research

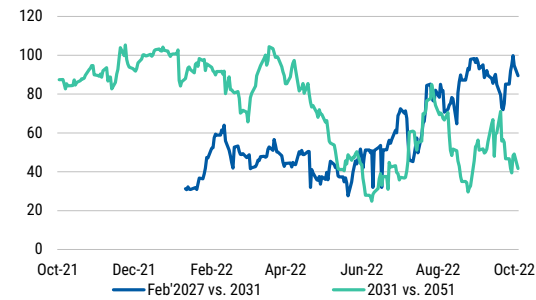
Romania

Exhibit 119: 10y bond spreads vs. ratings (bp)



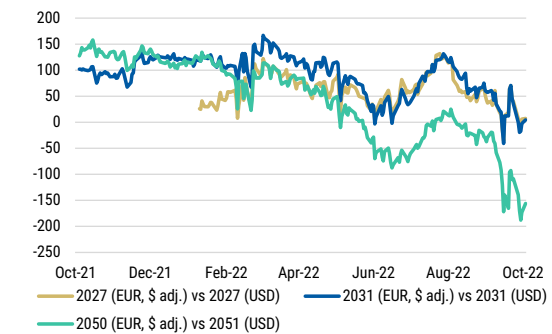
Source: Bloomberg, Morgan Stanley Research

Exhibit 120: Bond spread curves (bp)



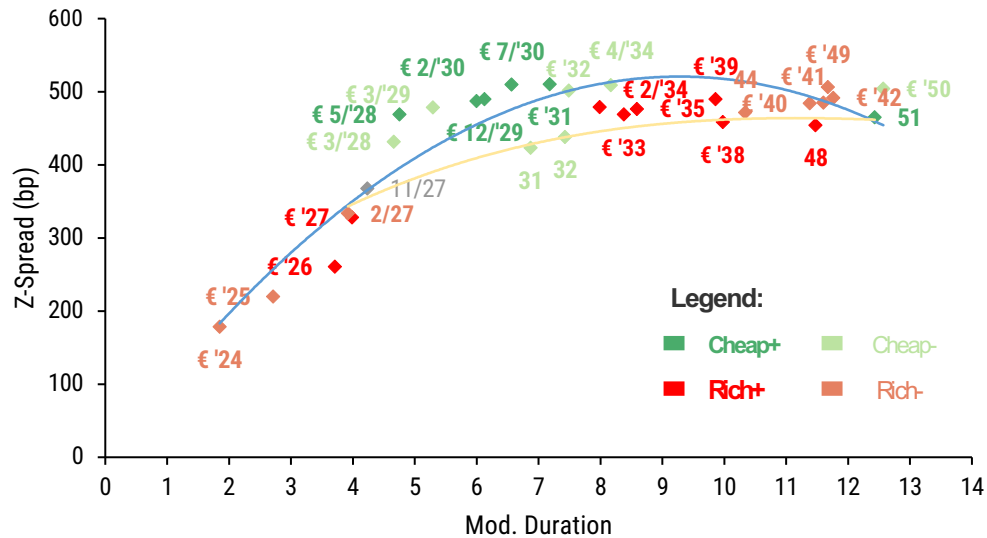
Source: Bloomberg, Morgan Stanley Research

Exhibit 121: EUR vs. USD z-spread differentials (\$ adj.)



Source: Bloomberg, Morgan Stanley Research

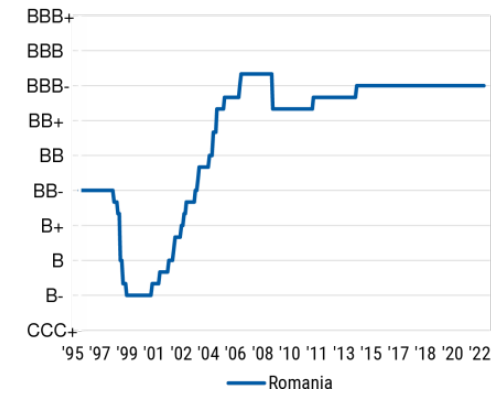
Exhibit 122: Rich & cheap bonds



Source: Bloomberg, Morgan Stanley Research

Exhibit 123: Current and historical rating

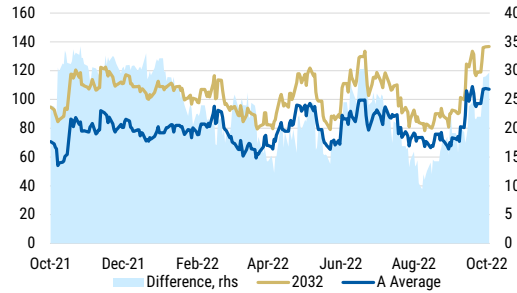
Agency	Rating	Outlook
S&P	BBB-	Stable
Moody's	Baa3	Stable
Fitch	BBB-	Negative



Source: Bloomberg, Morgan Stanley Research

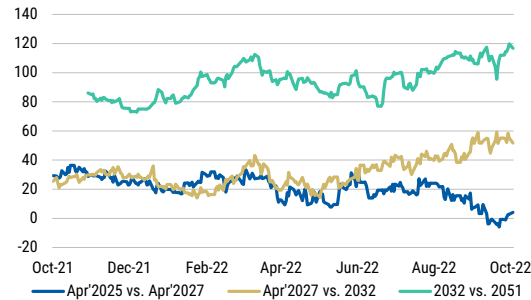
Saudi Arabia

Exhibit 124: 10y bond spreads vs. ratings (bp)



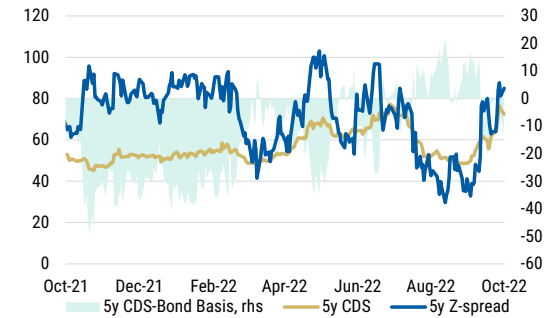
Source: Bloomberg, Morgan Stanley Research

Exhibit 125: Bond spread curves (bp)



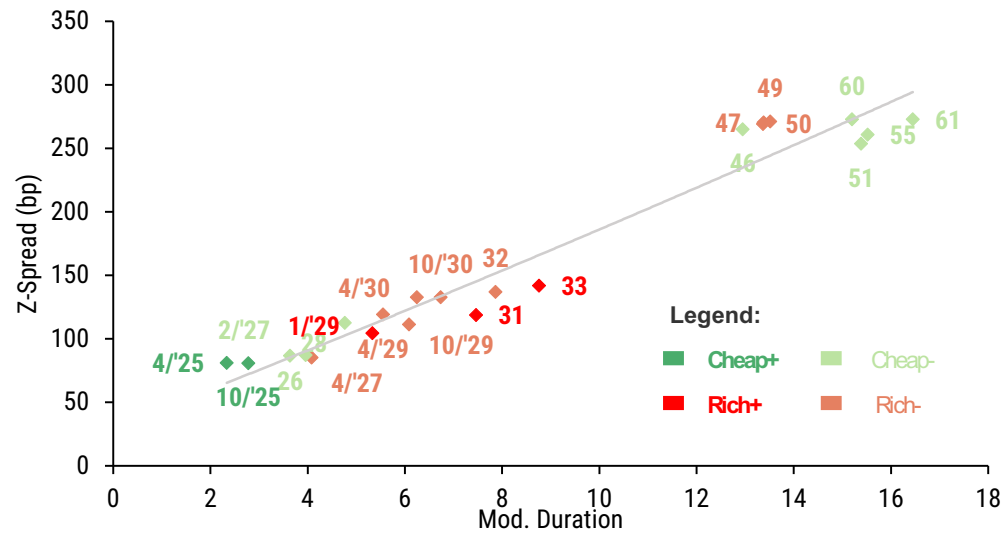
Source: Bloomberg, Morgan Stanley Research

Exhibit 126: 5Y CDS-bond basis (bp)



Source: Bloomberg, Morgan Stanley Research

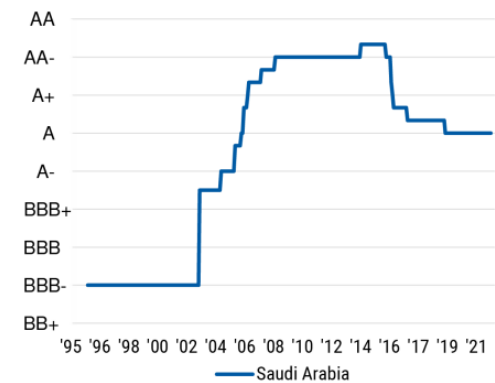
Exhibit 127: Rich & cheap bonds



Source: Bloomberg, Morgan Stanley Research

Exhibit 128: Current and historical rating

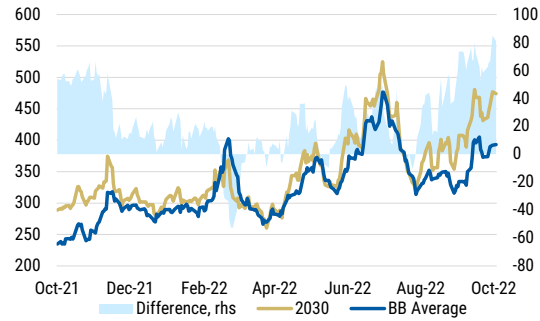
Agency	Rating	Outlook
S&P	A-	Positive
Moody's	A1	Stable
Fitch	A	Positive



Source: Bloomberg, Morgan Stanley Research

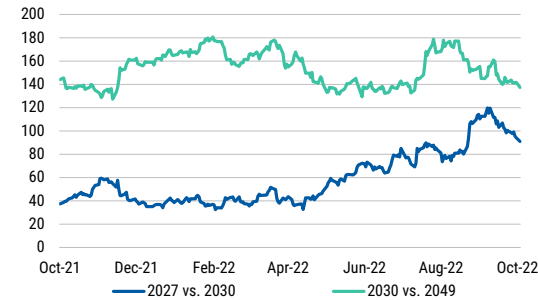
South Africa

Exhibit 129: 10y bond spreads vs. ratings (bp)



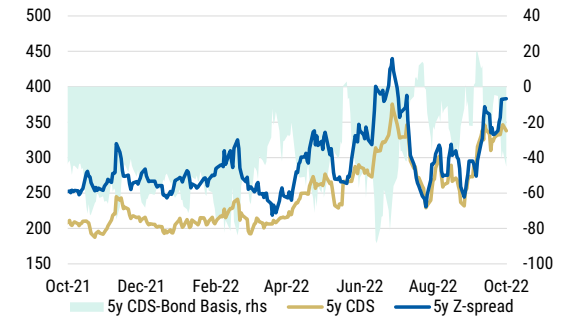
Source: Bloomberg, Morgan Stanley Research

Exhibit 130: Bond spread curves (bp)



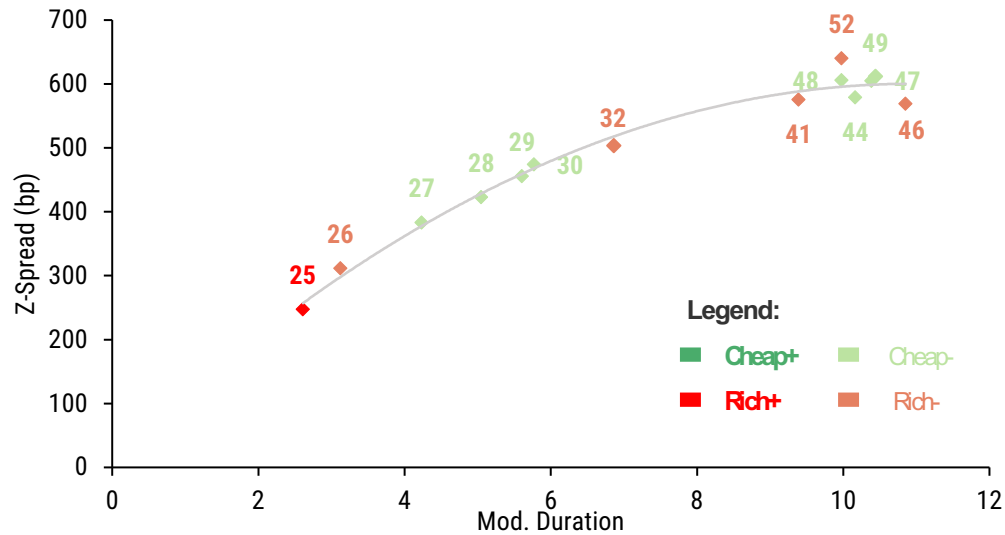
Source: Bloomberg, Morgan Stanley Research

Exhibit 131: 5Y CDS-bond basis (bp)



Source: Bloomberg, Morgan Stanley Research

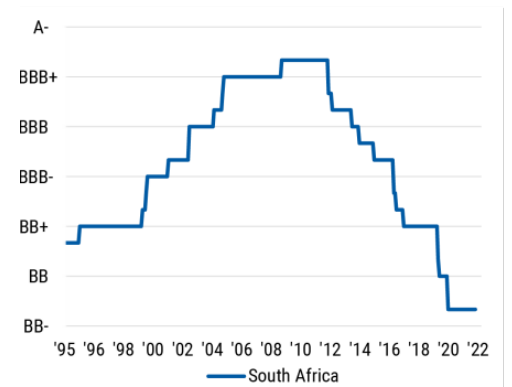
Exhibit 132: Rich & cheap bonds



Source: Bloomberg, Morgan Stanley Research

Exhibit 133: Current and historical rating

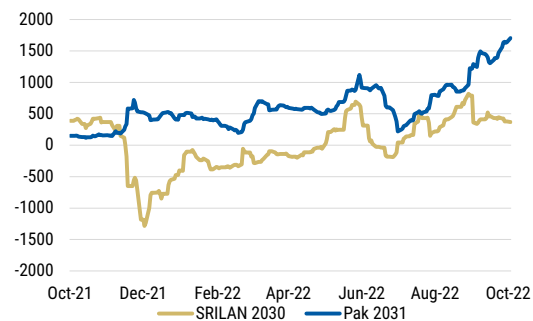
Agency	Rating	Outlook
S&P	BB-	Positive
Moody's	Ba2	Stable
Fitch	BB-	Stable



Source: Bloomberg, Morgan Stanley Research

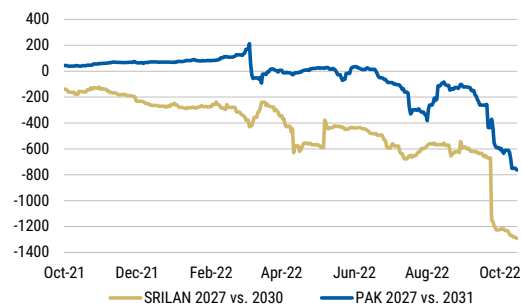
Sri Lanka and Pakistan

Exhibit 134: 10y bond spreads vs. ratings (bp)



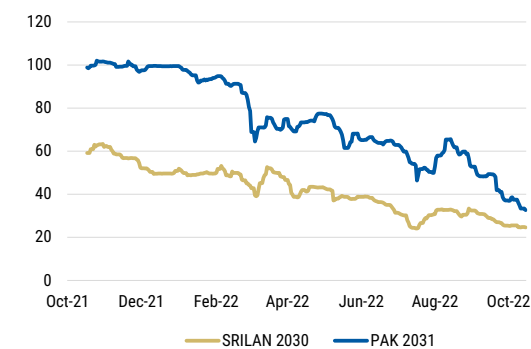
Source: Bloomberg, Morgan Stanley Research

Exhibit 135: Pakistan bond spread curves (bp)



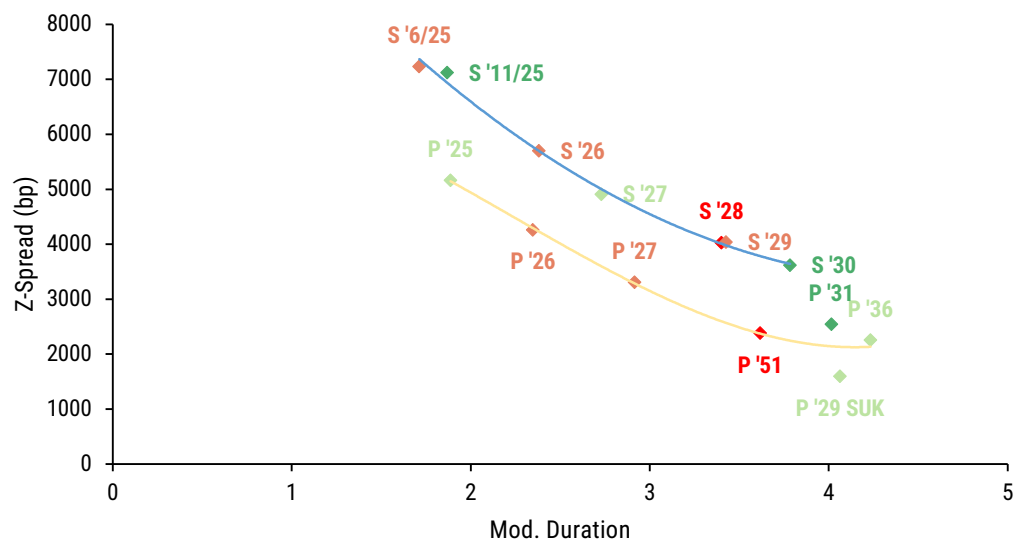
Source: Bloomberg, Morgan Stanley Research

Exhibit 136: 10Y bond prices



Source: Bloomberg, Morgan Stanley Research

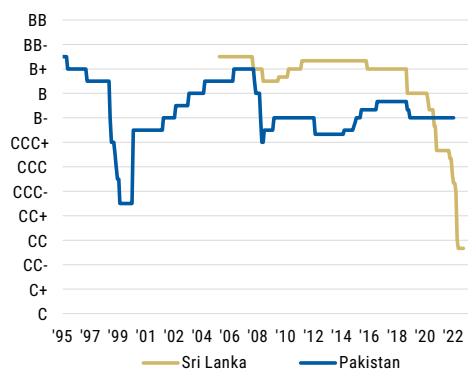
Exhibit 137: Sri Lanka (S) and Pakistan (P) rich & cheap bonds*



Source: Bloomberg, Morgan Stanley Research; *S represents Sri Lanka and P represents Pakistan. The rich and cheap models for Sri Lanka and Pakistan are independent of one another.

Exhibit 138: Current and historical rating

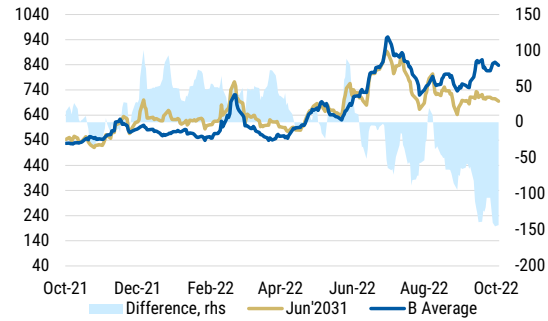
Agency	Sri Lanka		Pakistan	
	Rating	Outlook	Rating	Outlook
S&P	SD	Negative	B-	Negative
Moody's	Ca	Stable	Caa1	Negative
Fitch	D	Stable	B-	Negative



Source: Bloomberg, Morgan Stanley Research

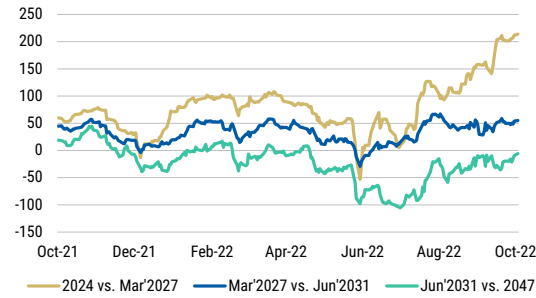
Turkey

Exhibit 139: 10y bond spreads vs. ratings (bp)



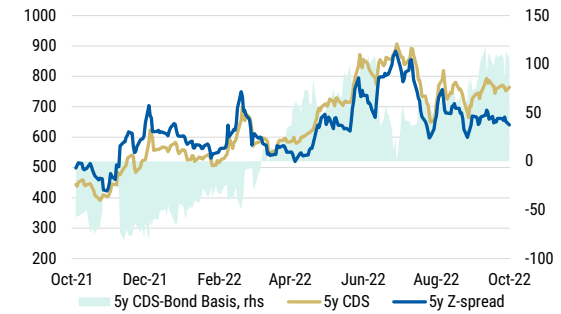
Source: Bloomberg, Morgan Stanley Research

Exhibit 140: Bond spread curves (bp)



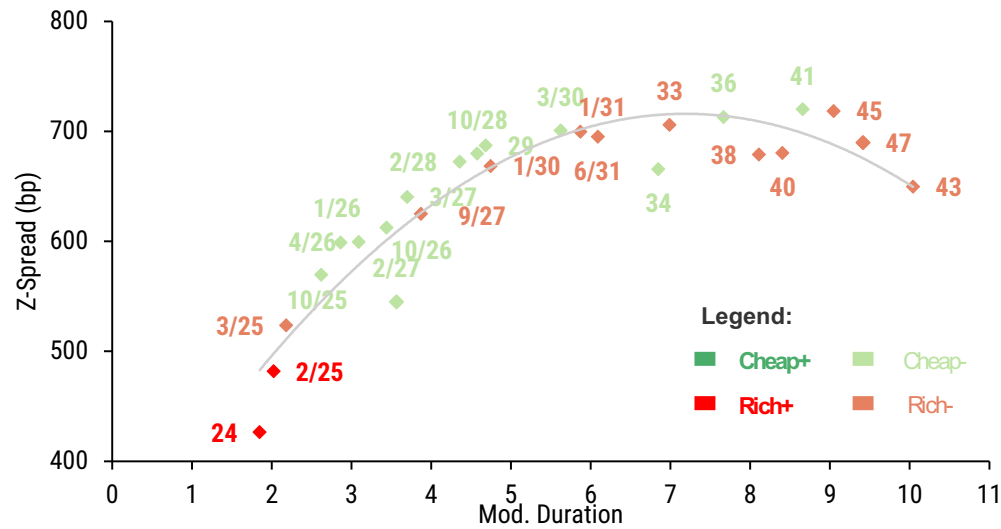
Source: Bloomberg, Morgan Stanley Research

Exhibit 141: 5Y CDS-bond basis (bp)



Source: Bloomberg, Morgan Stanley Research

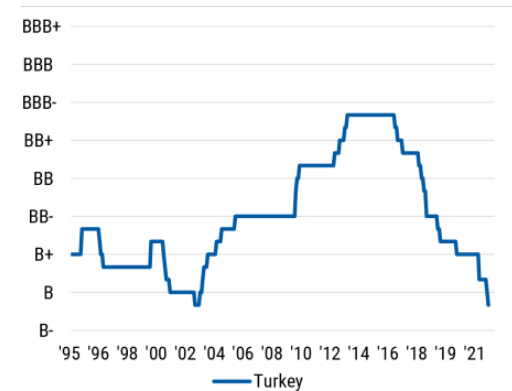
Exhibit 142: Rich & cheap bonds



Source: Bloomberg, Morgan Stanley Research

Exhibit 143: Current and historical rating

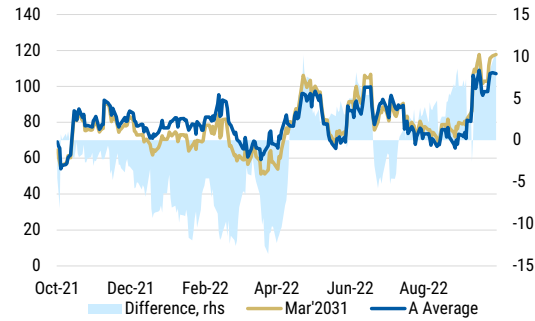
Agency	Rating	Outlook
S&P	Bu	Stable
Moody's	B3	Stable
Fitch	B	Negative



Source: Bloomberg, Morgan Stanley Research

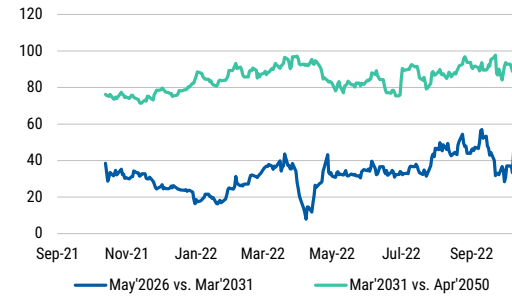
United Arab Emirates

Exhibit 144: Abu Dhabi 10y bond spreads vs. ratings (bp)



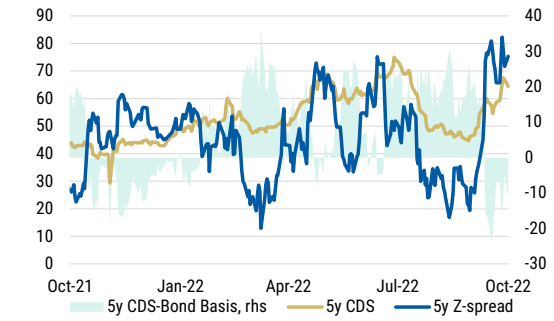
Source: Bloomberg, Morgan Stanley Research

Exhibit 145: Abu Dhabi bond spread curves (bp)



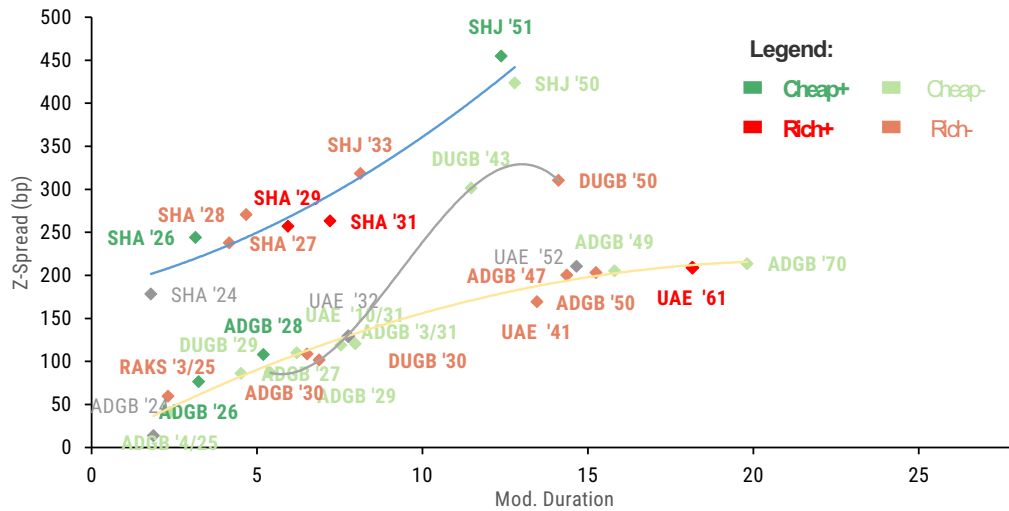
Source: Bloomberg, Morgan Stanley Research

Exhibit 146: Abu Dhabi 5Y CDS-bond basis (bp)



Source: Bloomberg, Morgan Stanley Research

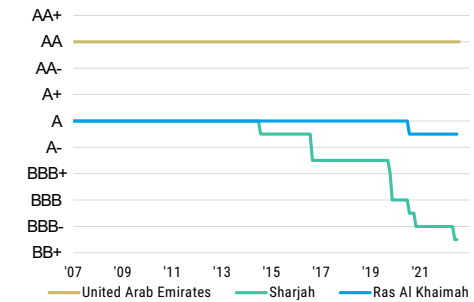
Exhibit 147: Rich & cheap bonds



Source: Bloomberg, Morgan Stanley Research

Exhibit 148: Current and historical rating

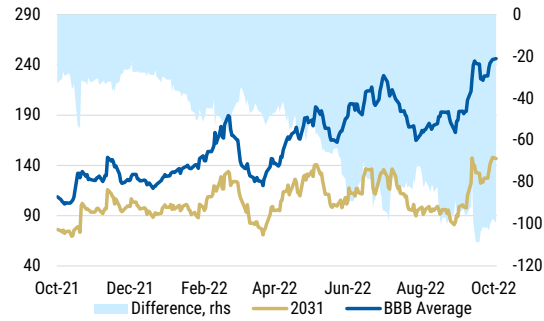
Agency	Abu Dhabi		Sharjah		Ras Al Khaimah	
	Rating	Outlook	Rating	Outlook	Rating	Outlook
S&P	AA	Stable	BBB-	Negative	NR	Stable
Moody's	Aa2	Stable	Ba1	Stable	-	-
Fitch	AA	Stable	-	-	A	Stable



Source: Bloomberg, Morgan Stanley Research

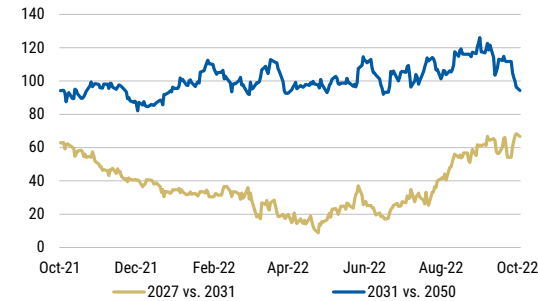
Uruguay

Exhibit 149: 10y bond spreads vs. ratings (bp)



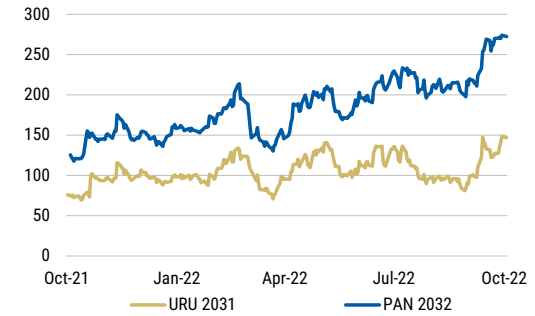
Source: Bloomberg, Morgan Stanley Research

Exhibit 150: Bond spread curves (bp)



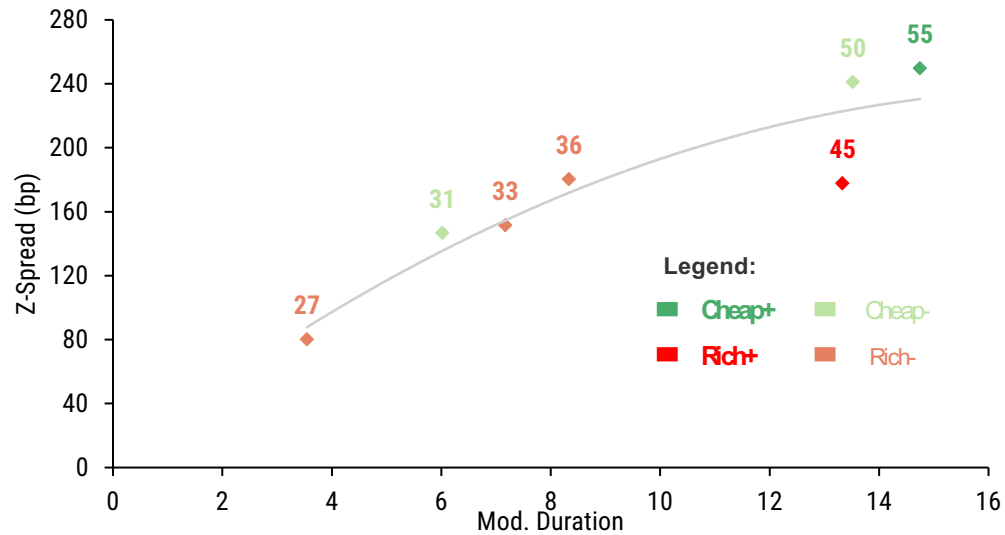
Source: Bloomberg, Morgan Stanley Research

Exhibit 151: 10y bond spreads (bp)



Source: Bloomberg, Morgan Stanley Research

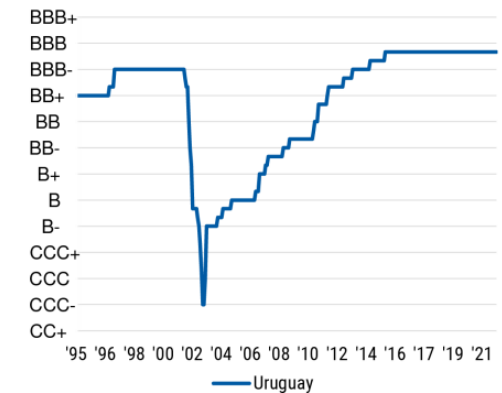
Exhibit 152: Rich & cheap bonds



Source: Bloomberg, Morgan Stanley Research

Exhibit 153: Current and historical rating

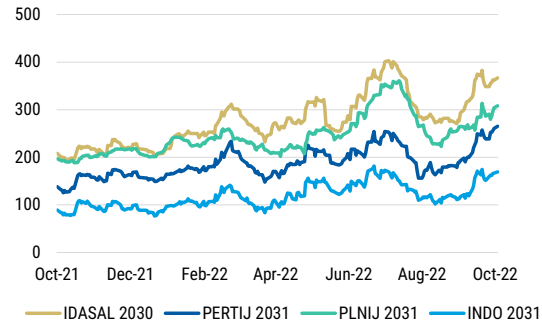
Agency	Rating	Outlook
S&P	BBB	Stable
Moody's	Baa2	Stable
Fitch	BBB-	Stable



Source: Bloomberg, Morgan Stanley Research

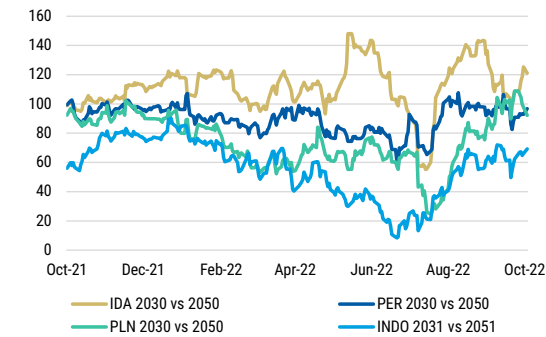
Indonesia Quasi-sovereigns

Exhibit 154: 10y spreads (bp)



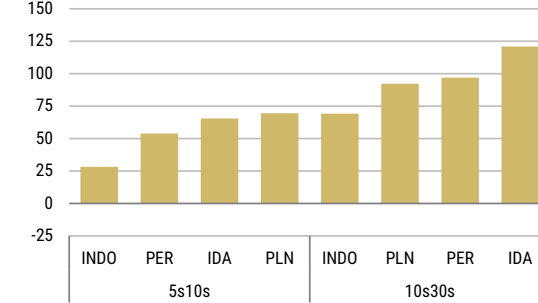
Source: Bloomberg, Morgan Stanley Research

Exhibit 155: Bond spread curves (bp)



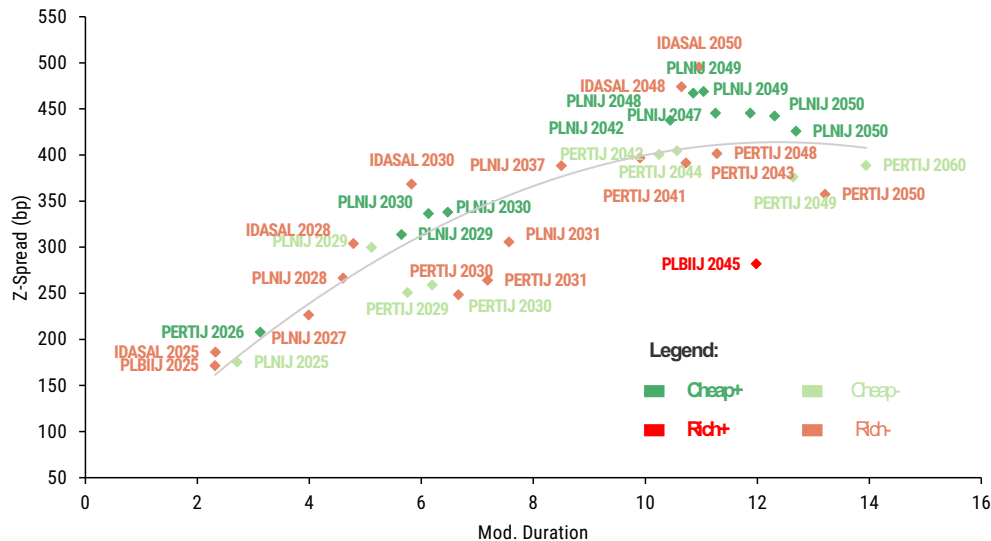
Source: Bloomberg, Morgan Stanley Research

Exhibit 156: Bond spread curves (bp)



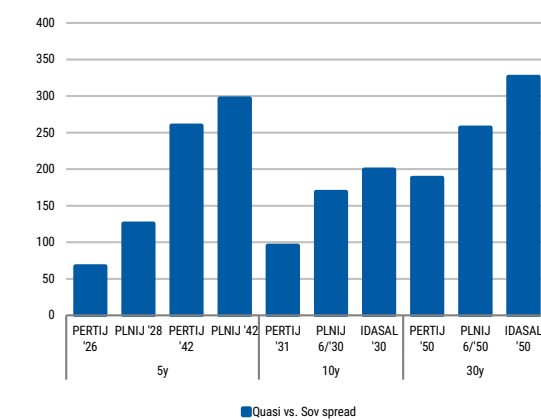
Source: Bloomberg, Morgan Stanley Research

Exhibit 157: Rich & cheap bonds



Source: Bloomberg, Morgan Stanley Research

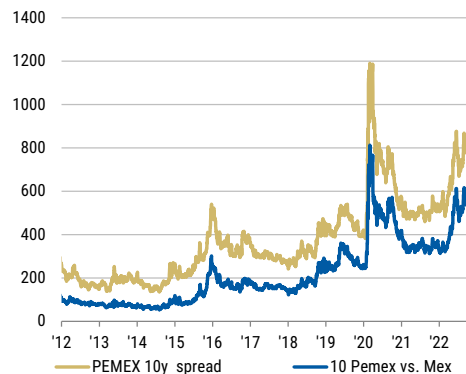
Exhibit 158: Spreads vs. sovereign



Source: Bloomberg, Morgan Stanley Research

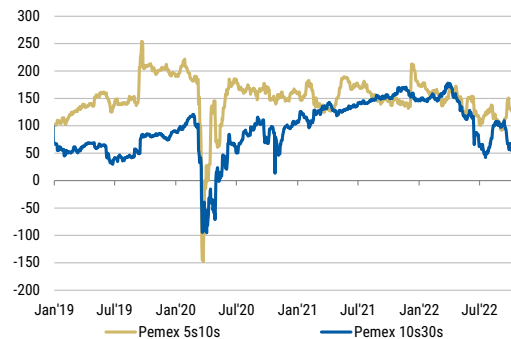
Mexico Quasi-sovereigns: Pemex

Exhibit 159: Pemex versus sovereign spread (bp)



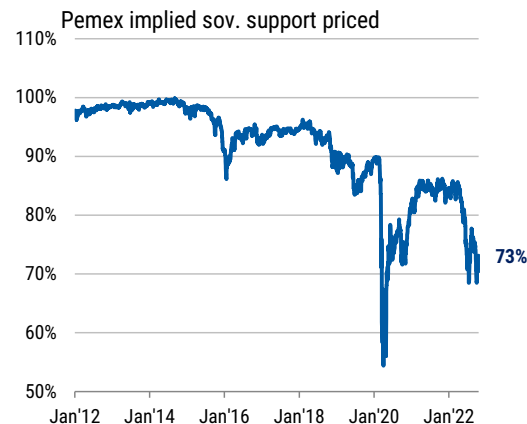
Source: Bloomberg, Morgan Stanley Research

Exhibit 160: Bond spread curves (bp)



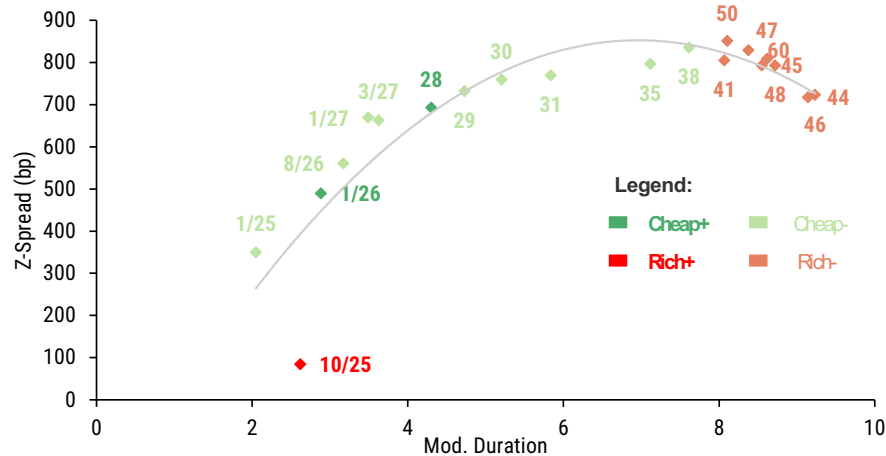
Source: Bloomberg, Morgan Stanley Research

Exhibit 161: Implied sovereign support



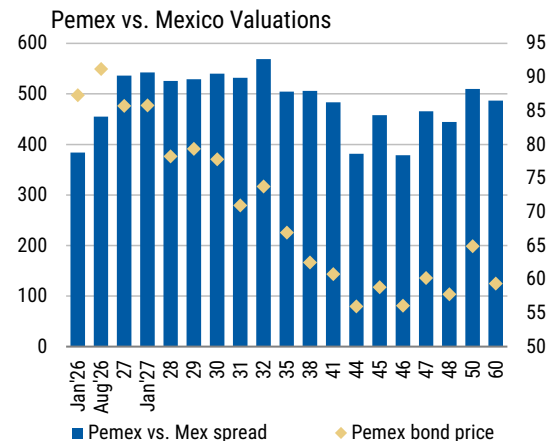
Source: Bloomberg, Morgan Stanley Research. The implied probability using a lower bound of the sovereign +50bp and the upper bound of a cash price of 40 (equivalent of default)

Exhibit 162: Rich & cheap bonds



Source: Bloomberg, Morgan Stanley Research

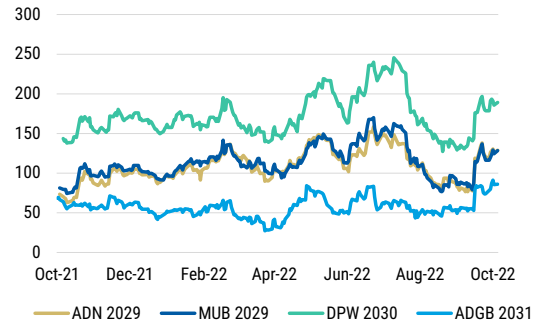
Exhibit 163: Spreads vs. sovereign



Source: Bloomberg, Morgan Stanley Research

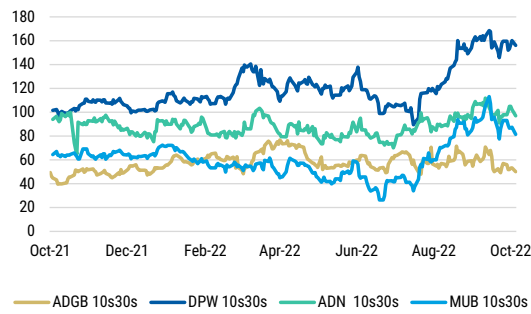
United Arab Emirates Quasi-sovereigns

Exhibit 164: 10y spreads (bp)



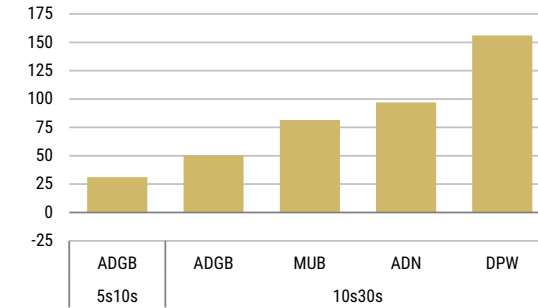
Source: Bloomberg, Morgan Stanley Research

Exhibit 165: Bond spread curves (bp)



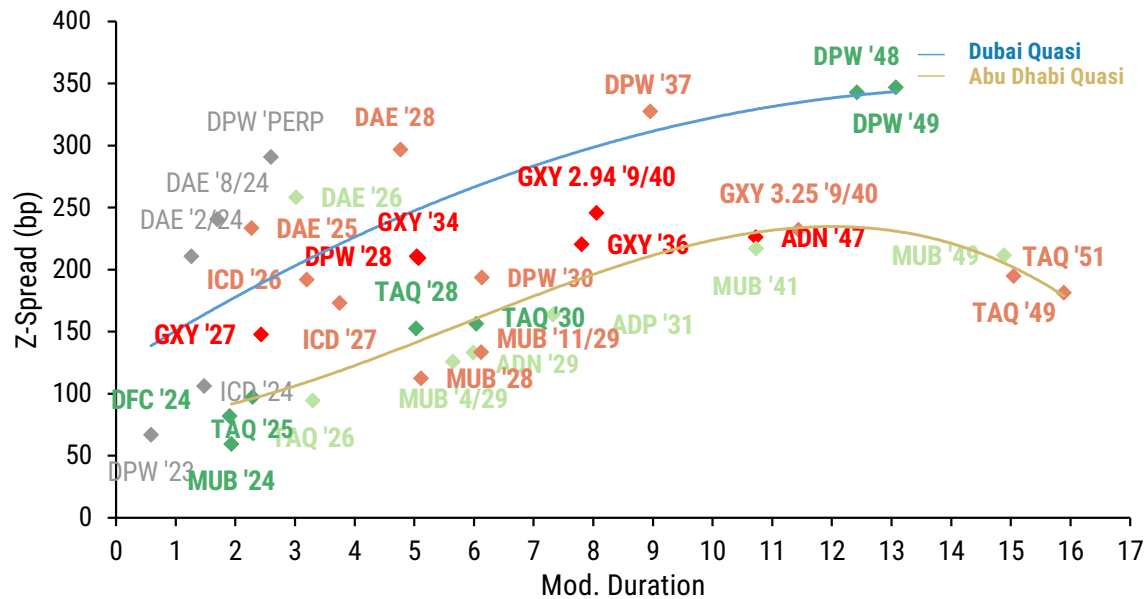
Source: Bloomberg, Morgan Stanley Research

Exhibit 166: Bond spread curves (bp)



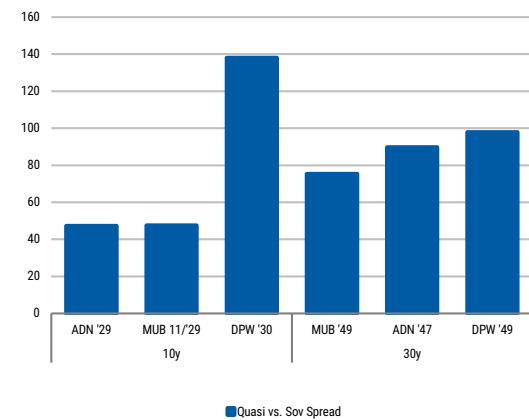
Source: Bloomberg, Morgan Stanley Research

Exhibit 167: Rich & cheap bonds



Source: Bloomberg, Morgan Stanley Research

Exhibit 168: Spreads vs. sovereign



Source: Bloomberg, Morgan Stanley Research

Appendix

Rich & Cheap Bond Model: For each bond, we calculate the difference between market yield and fair value on the fitted curve (i.e., the regression line). As we keep an historical of this spread, a Z-score indicator is computed to gauge how far each bond is trading relative to its average spread versus the curve. Depending on their Z-score level, bonds are then assessed as "cheap" or "rich" with a certain degree, as follows:

- The 'Cheap+' status (very cheap) is given for bonds which meet two conditions simultaneously: 1.) their current spread (in absolute terms) trades above the fitted curve and 2.) their current spread trades more than 1.5 standard deviation above their average level versus the regression line.
- A 'Cheap-' (cheap) status is given for bonds which Z-score indicator is positive but does not meet the previous two conditions.
- Symmetrically, the 'Rich+' status (very expensive) is given for bonds whenever they meet two conditions: 1.) their current spread (in absolute terms) trades below the fitted curve and 2.) their current spread trades less than -1.5 standard deviation below their average level versus the regression line.
- Bonds are given the 'Rich-' status (expensive) when their Z-score indicator is negative but it does not meet the previous two conditions.

It is important to stress that the model is linear. Although this can appear as an imperfect fit compared to other types of regressions (such as a logarithmic or a polynomial), the linear regression is intended to capture the changes in the shape of the curves (i.e. changes in convexity) and the attractiveness of each bond for a given duration exposure. From this point of view, the regression line is more a reference point rather than an actual 'fit'. Note also that the liquidity and the high (or low) dollar price of a bond are taken indirectly into account to the extent that we do not consider the spread relative to the regression as the relevant variable (a bond can be systematically trading above or below the curve given its higher or lower coupon, or because of better or worse liquidity levels), but rather the spread versus historical average. By doing so, these particular features are neutralized to a large extent to only consider the volatility of the spread versus its average point.

Spreads versus rating: Spread of a country is compared versus average spread of all the other EM countries rated +/-neutral/- of the same rating as the former.

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	COUNT	% OF TOTAL	COUNT	% OF TOTAL IBC	% OF RATING CATEGORY	COUNT	% OF TOTAL OTHER MISC
Overweight/Buy	1342	38%	295	41%	22%	590	39%
Equal-weight/Hold	1582	45%	335	47%	21%	702	46%
Not-Rated/Hold	0	0%	0	0%	0%	0	0%
Underweight/Sell	610	17%	84	12%	14%	219	14%
TOTAL	3,534		714			1511	

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