

November 30, 2022 09:21 PM GMT

## EM Strategy | Global

## EM Technical Watch: Signs of Life

**Positioning less cautious:** In October, HY positioning rose for the first month since May, and cash balances as a weighted average declined for the first month since then. HY allocation is now at 4.65% OW, still below the four-year average of 6.57% OW. Cash balances reached 8.05% as a share of AUM and 7.27% outright, both still above their respective four-year averages of 6.75% and 5.73%, respectively. EM HY's outperformance of EM IG in November is reflected in the second highest monthly fund alpha this year (41bp versus 93bp in April) and the first month since July in which fund alpha moved in the same direction as HY relative performance versus IG. CDS net buying volume also dropped significantly, suggesting investors added risks via EM CDX in November.

**Higher HY allocation:** The higher HY allocation was via higher allocation to BB and B rated credits (+37bp to 5.17% OW and +41bp to 3.10% UW, respectively). Notable country allocation changes in October were large decreases in Colombia (-64bp to 1.01% OW), Chile (-50bp to 0.54% UW), and Peru (-35bp to 0.41 UW), while the three largest increases came from Oman (+38bp to 0.02% OW), China (+29bp to 4.90% UW), and Uruguay (+21bp to 0.106% UW).

**Supply slowed:** November supply was low versus October at US\$8.4bn versus US\$13.5bn, which has not been the case historically. Issuance this month was still primarily made up of IG sovereigns with issuances from a BB rated credit and one from a B rated credit. New issuance concessions remained high this month, with them especially increasing for IG credits. We still expect a max of US\$19.0bn in issuances in the next month, by China, Peru, Brazil, and Bahrain.

**In local markets:** EM foreign ownership through 2022 has declined by a market weighted 1.68pp to 15.55% from 17.23% at the end of 2021. Tightening of monetary policy has forced a reduction in allocation from foreign investors to EM local debt. The strong US dollar has also kept local currency performance under pressure, further reducing its appeal to foreigners' EM local currency debt. Looking ahead to 2023, the turn in global inflation pressures, a decline in global growth, a drop in core yields, a pivot toward a loosening of monetary policy, and a softer USD should help foreign ownership rise throughout the year.

**Flows update:** EM debt-dedicated outflows have moderated over the last month to US\$6.1bn, bringing YTD outflows to US\$83.4bn. The recovery of hard currency fund flows, which moderated to a four-week outflow of US\$1.4bn, has been key. These inflows were mostly driven by ETFs, except for one larger outflow for EM hard currency ETFs in early November. Over the past year, ETFs have also remained resilient, especially on the hard currency side, where cumulative ETF flows are now flat over the past year. This recovery continuing into December is dependent on the external environment remaining softer, which has been the key driver of returns. ESG flows turned positive, driven by hard currency.

MORGAN STANLEY &amp; CO. LLC

**Simon Waever**

STRATEGIST

Simon.Waever@morganstanley.com +1 212 296-8101

MORGAN STANLEY ASIA LIMITED+

**Min Dai**

STRATEGIST

Min.Dai@morganstanley.com +852 2239-7983

MORGAN STANLEY &amp; CO. LLC

**Emma C Cerda**

STRATEGIST

Emma.Cerda@morganstanley.com +1 212 761-2344

MORGAN STANLEY &amp; CO. INTERNATIONAL PLC+

**Pascal N Bode**

STRATEGIST

Pascal.Bode@morganstanley.com +44 20 7425-3282

MORGAN STANLEY &amp; CO. LLC

**Gilberto A Hernandez-Gomez**

STRATEGIST

Gilberto.Hernandez-Gomez@morganstanley.com +1 212 296-8940

MORGAN STANLEY ASIA LIMITED+

**Belle Chang**

STRATEGIST

Belle.Chang@morganstanley.com +852 3963-0668

Morgan Stanley does and seeks to do business with companies covered in Morgan Stanley Research. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of Morgan Stanley Research. Investors should consider Morgan Stanley Research as only a single factor in making their investment decision.

**For analyst certification and other important disclosures, refer to the Disclosure Section, located at the end of this report.**

+ = Analysts employed by non-U.S. affiliates are not registered with FINRA, may not be associated persons of the member and may not be subject to FINRA restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

## EM technicals overview

## Fund flows

Exhibit 1: EMDD flows summary

Fund Flows (US\$m)	Current Week	Last Week	Last 4w	YTD	YTD Δ '22 vs '21
<b>Hard Currency</b>	<b>788</b>	<b>304</b>	<b>-1,374</b>	<b>-29,913</b>	<b>-43,525</b>
Global Mandate	752	253	-1,168	-21,402	-22,231
Regional/Country	35	50	-206	-8,511	-21,294
ETF	726	151	158	-1,670	5,574
Non-ETF	62	153	-1,532	-28,242	-49,099
ESG	217	172	533	3,117	
<b>Local Currency</b>	<b>-1,362</b>	<b>-586</b>	<b>-4,305</b>	<b>-42,635</b>	<b>-55,235</b>
Global Mandate	219	195	-40	-7,740	-3,933
Regional/Country	-1,582	-781	-4,264	-34,896	-51,302
ETF	-779	-276	-1,467	-15,043	26,515
Non-ETF	-584	-310	-2,837	-27,593	-81,750
ESG	-1	45	-10	-281	
<b>Blended Currency</b>	<b>-114</b>	<b>20</b>	<b>-390</b>	<b>-10,826</b>	<b>-16,487</b>
ESG	6	-6	-294	-555	
<b>Global</b>	<b>868</b>	<b>462</b>	<b>-1,503</b>	<b>-38,132</b>	<b>-40,187</b>
<b>Regional/Country</b>	<b>-1,556</b>	<b>-724</b>	<b>-4,566</b>	<b>-45,429</b>	<b>-75,344</b>
AxJ	-1,541	-741	-4,328	-44,499	-76,867
LatAm	-17	-26	-34	-447	2,322
CEEMEA	2	43	-205	-484	-798
<b>ETF</b>	<b>-50</b>	<b>-124</b>	<b>-1,310</b>	<b>-16,663</b>	<b>-32,193</b>
<b>Non-ETF</b>	<b>-639</b>	<b>-139</b>	<b>-4,759</b>	<b>-66,711</b>	<b>-83,054</b>
<b>Total</b>	<b>-689</b>	<b>-262</b>	<b>-6,069</b>	<b>-83,374</b>	<b>-115,247</b>

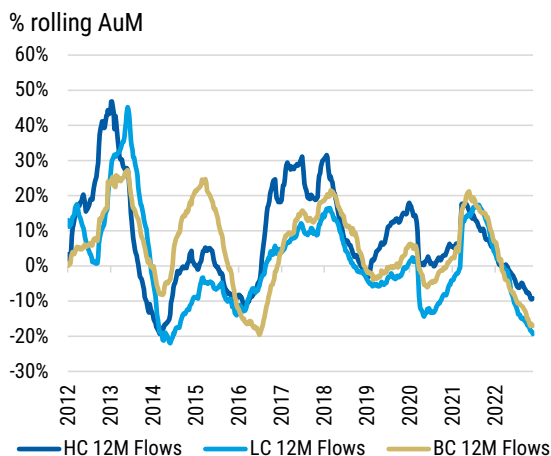
Source: EPFR, Morgan Stanley Research

EM debt-dedicated outflows have moderated over the last four weeks to US\$6.1bn versus US\$10.8bn in the prior four-week period. YTD outflows rose further to US\$83.4bn versus US\$31.9bn in inflows in 2021 and US\$3.9bn in outflows in 2020.

One of the key trends over the past four weeks has been the recovery of hard currency fund flows, which moderated to a four-week outflow of US\$1.4bn (versus US\$3.6bn in the prior four-week period) as flows turned positive over the last two weeks. Inflows were mostly driven by ETFs except for the beginning of November, when EM hard currency ETFs faced a large one-off outflow. Local currency fund flows at US\$4.3bn over the past four weeks, conversely, have struggled to match the recovery. This was mostly on account of the re-acceleration of regional-mandated outflows (at US\$1.6bn in the last week), which dragged on aggregate flows.

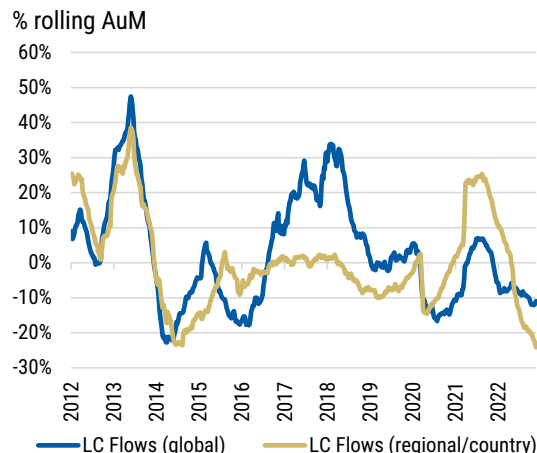
Looking back at this year, nominal year-to-date outflows at more than US\$80bn are the single largest EM outflow period on record. Given that the asset class has grown markedly, we instead look at outflows as a percentage of AuM. On this metric, 12-month rolling outflows are now at the highest level since early 2016 for hard currency (at 9.2% of AuM), and since early 2014 for local currency (at 19.3% of AuM). Whilst local outflows look comparatively larger from this perspective, the figure has been distorted by regional/country outflows over the past year, in particular out of Asia. At 24.1% of AuM, these flows are at their lowest level in more than a decade. Global-mandated local currency outflows, conversely, are only at around 10% of AuM, considerably less than the peak of outflows in 2020. Having said that, global-mandated local currency funds have also now lost all of the cumulative inflows accumulated over the past decade.

**Exhibit 2:** HC and LC outflows are now the largest since 2016 and 2014, respectively



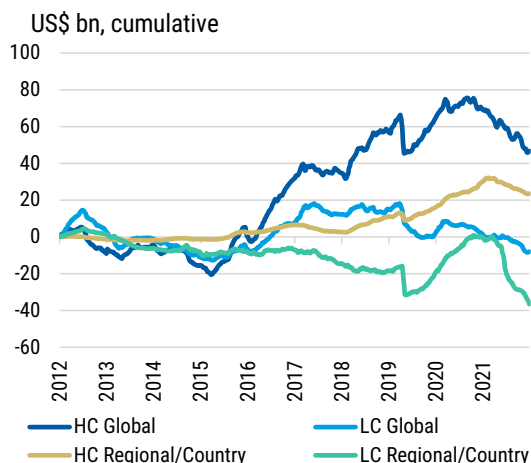
Source: EPFR, Morgan Stanley Research

**Exhibit 3:** The magnitude of local currency outflows is mainly driven by large outflows in regional/country-mandated funds



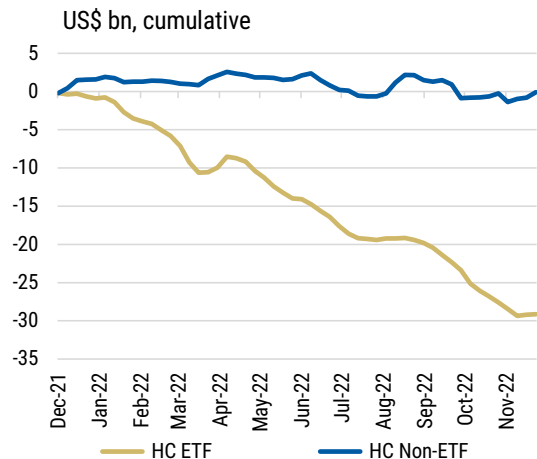
Source: EPFR, Morgan Stanley Research

**Exhibit 4:** Both global and regional/country local currency flows are now net negative over the past decade



Source: EPFR, Morgan Stanley Research

**Exhibit 5:** Hard currency ETFs have largely managed to avoid broader EM outflows



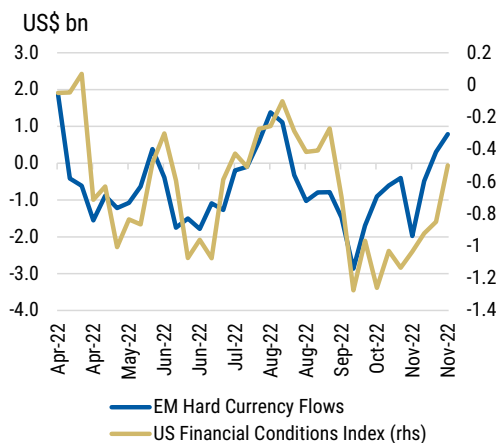
Source: EPFR, Morgan Stanley Research

The past year has also brought divergence between ETF and non-ETF flows, especially on the hard currency side. Non-ETF hard currency funds have for the most part swung between large outflows and net flat flows as conditions improved. Flows to ETF peers, conversely, remained more resilient, and ETFs have managed to attract inflows over periods of relative strength during the last year. In fact, cumulative hard currency ETF flows are now net flat over the past year, versus nearly US\$30bn in outflows for non-ETF hard currency funds.

One key question into year-end is whether EM hard-currency markets and EM ex-China local currency markets manage to find a more stable flows profile as trading activity subsides into year-end. Before the current episode, EM only saw two such periods of relative flows recovery, in April and August, during which aggregate EM debt-dedicated flows turned positive for only two weeks and three weeks, respectively. In the latest recovery post-CPI, aggregate EM debt-dedicated flows have not yet turned positive again, but EM hard currency flows and global-mandated local flows have. The

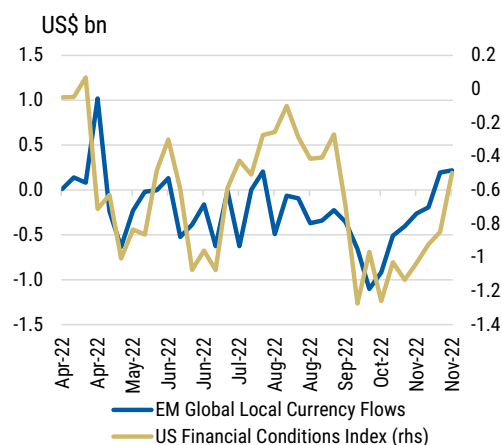
endurance of this recovery into December is, in our view, dependent on the external environment (we proxy via US financial conditions below) continuing to remain softer, given that externals have been the key driver of returns and, therefore, flows this year. This is especially the case for hard currency, where externals are more directly linked to flows.

**Exhibit 6:** EM hard currency flows are closely related to changes in US financial conditions



Source: EPFR, Bloomberg, Morgan Stanley Research

**Exhibit 7:** EM local-currency flows to global-mandated funds also show some relation, though regional flows are more idiosyncratic



Source: EPFR, Bloomberg, Morgan Stanley Research

In the ESG space, flows turned positive once again, driven by hard currency, with inflows reaching US\$523mn. YTD ESG inflows are at US\$2.3bn, all on account of hard currency ESG fund inflows.

See [EM debt-dedicated fund flows](#).

## Hard currency technicals

**Issuance slower than history:** EM sovereign credit supply stands at US\$91.5bn YTD. This compares to US\$182.4bn having been issued at this point last year and is the slowest pace since 2016. EM gross supply, i.e., including both sovereign and corporates, stands at US\$317.5bn (see below, [EM credit primary market – aggregate overview](#)). In November, total sovereign supply stood at US\$8.4bn, with the majority (60%) still being from IG issuers, suggesting that markets are still closed for lower rated issuers.

- **By Issuer**, there were issuances by Turkey (2028 US\$1.5bn), Poland (2027 US\$1.5bn and 2032 US\$1.5bn), Hungary (2027 US\$1.0bn), Panama (2035 US\$1.5bn), and Colombia (2033 US\$1.4bn).
- **By Currency**, the majority of issues (83%) were denominated in USD and the remainder in EUR.
- **By Region**, the majority (67%) were issued from CEEMEA, and the remainder from LatAm.
- **Eight quasi-sovereign issuers** came to market in November.
- **New issue concessions** have stayed high for HY issues (46bp in November versus

20bp in October) and declined slightly for IG issues (42bp in November versus 60bp in October and 40bp in August and September) ([Exhibit 41](#)).

**Redemptions higher in December:** EM sovereign and quasi-sovereign amortisations (maturities and interest payments) stand at US\$11.7bn in December 2022, versus US\$11.5bn in amortisations in November. December sovereign redemptions amount to US\$4.4bn, versus US\$4.0bn quasi-sovereign maturities. Morocco (US\$1.5bn), China (US\$1.5bn), and Pakistan (US\$1.0bn) face larger sovereign redemptions in November (see [EM credit amortisations](#)).

**Potential sovereign issuers:** Potential issuers include China and Peru in the IG space. In the BB space, Brazil could issue, although this now looks less likely given recent volatility. Single Bs and below include Bahrain. Yet clearly overall any issuance will remain dependent on broader risk conditions.

#### **HY allocation increases while cash balances stabilize:**

- Fund cash balances as of end-October calculated on a simple average basis were 7.27%, rising 0.07pp compared to end-September, to stand well above the 4-year average of 5.73%. This is the second highest level in 5 years, after August levels, and still above early 2020. Cash balances on an AUM weighted-average basis declined by 0.21pp, to 8.05% OW.
- **By rating**, the aggregate HY overweight increased by 0.12pp in October to stand at 4.65% OW, below the four-year average of 6.57% OW. Aggregate IG positioning decreased by 0.32pp to 18.49% UW, above the four-year average of 17.11% UW.
- Within IG credits, exposure to A credits decreased by 0.07pp to 13.73% UW, and exposure to BBB credits decreased by 0.45pp to 5.90% UW. Within HY, BB rated credits rose by 0.37pp to 5.17% OW, B credits rose by 0.41pp to 3.10% UW, and CCC and lower-rated credits decreased by 0.56pp to 2.23% OW (see [EM credit fund exposures](#)).
- **By region**, exposure decreased for LatAm (-1.03pp to 0.38% OW) and Asia (-0.34pp to 8.41% UW), and increased for CEEMEA (+1.17pp to 5.74% UW), while cash was up 0.07pp, to 7.27%. LatAm continues to be the largest overweight region and Asia continues to be the largest underweight region.
- **By country**, exposure to Oman (+0.38pp to 0.02% OW), China (+0.29pp to 4.90% UW), and Uruguay (+0.21pp to 0.106% OW) increased the most in October. The largest country reductions came from Colombia (-0.64pp to 1.01% OW), Chile (-0.50pp to 0.54% UW), and Peru (-0.35pp to 0.41 UW).
- Colombia is the largest overweight country, (-0.64pp to 1.01% OW), followed by Ivory Coast (+0.05pp to 0.84% OW) and India (-0.30pp to 0.76% OW). China (+0.29pp to 4.90% UW) remains the largest underweight country, followed by the United Arab Emirates (+0.13pp to 2.85% UW) and Turkey (-0.01pp to 2.71% UW).

**Technical outlook:** This year, tighter financing conditions and poor performance have contributed to low supply and more cautious positioning versus history in EM credit this year. Looking forward, we expect both supply and positioning to begin to reflect a more constructive EM credit outlook throughout 2023.

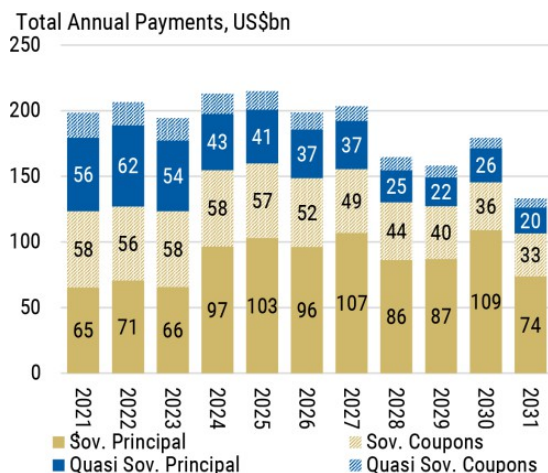
### 1) Supply

**This year has had the lowest supply YTD since 2016 and the lowest net issuance since 2008 due to restrained market access, which should pick up over the course of next year.** IG and BB rated credits should be able to come to market despite higher costs versus history in the nearer term. However, lower-rated sovereigns, with the exception of oil exporters, will still have to pay up in the coming months. As outlined in our [2023 EM Fixed Income Outlook](#), this will require these credits to seek alternative financing sources via multilaterals or bilaterals. Overall, we expect to see higher issuance driven by higher-rated credits and for it to remain low for B rated and below credits.

**Net issuance should also increase as amortisations decline and financing needs for 2023 remain similar to those of this year.** Lower overall payments are expected next year, with lower debt maturities and marginally higher interest payments ([Exhibit 8](#)). Furthermore, the IMF expects fiscal deficits of IG credits to remain large, while those of energy importing lower-rated credits to slightly improve and energy exporting lower-rated credits to slightly worsen in 2023.

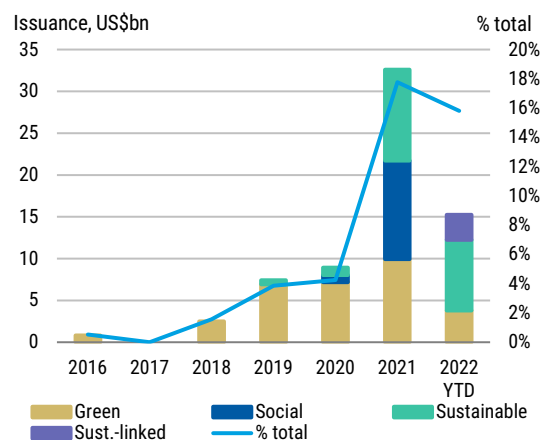
**An issuance trend we expect to see next year is a higher share of issuances coming in the form of ESG-labeled bonds.** This is a trend we have seen over the past few years but, with financing conditions remaining difficult, it could be an opportunity for sovereigns to take advantage of lower-cost financing with these instruments ([Exhibit 9](#)).

**Exhibit 8:** Total bond payments should decline next year



Source: Bloomberg, Morgan Stanley Research

**Exhibit 9:** We expect to see a greater share of issuance in the form of ESG-labeled bonds



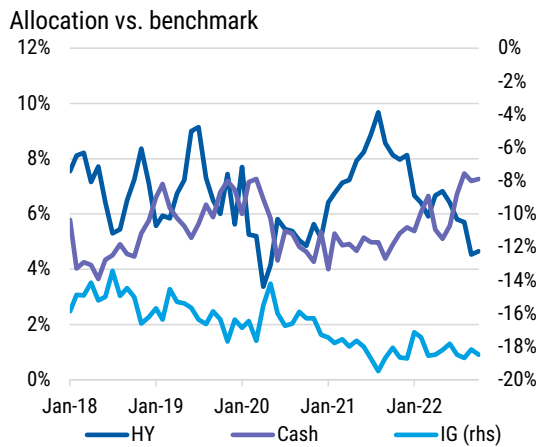
Source: Bondradar, Morgan Stanley Research

### 2) Positioning

**This year, fund positioning has reflected the market's reduction in risk appetite, which we expect this trend to reverse into and through the new year as HY credits continue to outperform EM IG.** So far this year, funds have noticeably increased their cash allocation (+1.51pp from December 2021 to 8.05% OW in October) while consistently decreasing that to HY credits (-3.48pp from December 2021 to 4.65% OW in October) and keeping allocation to IG credits fairly consistent (+0.23pp from December 2021 to 18.49% UW in October). This suggests a relative preference for higher-rated credits this year ([Exhibit 10](#)), particularly of BBB credits.

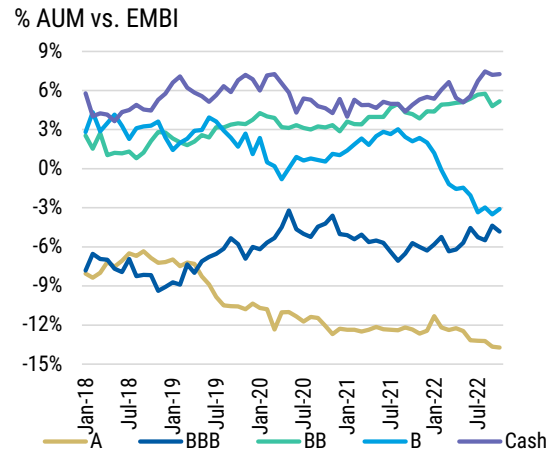
**We expect EM HY outperformance of EM IG to be led by B rated credits throughout the next year, as well as leading the increase in HY positioning.** Allocation into B rated credits has seen the largest reduction in positioning over the past year (-5.11pp from December 2021 to 3.10% UW in October) and drove the decline in HY positioning (Exhibit 10). On the other hand, funds have built up positioning in BB credits (+0.76pp from December 2021 to 5.17% OW in October). Notably, these credits make up 5 of the top 7 OW fund allocations. Given BB richness versus EM BBB and EM B, we would expect positioning in BB to reduce over the coming months in favor of cheaper and less-held B rated and below credits.

**Exhibit 10:** Allocation to HY and cash have reflected a lower risk appetite



Source: EPFR, Morgan Stanley Research

**Exhibit 11:** Reduced HY allocation has been led by B rated credits



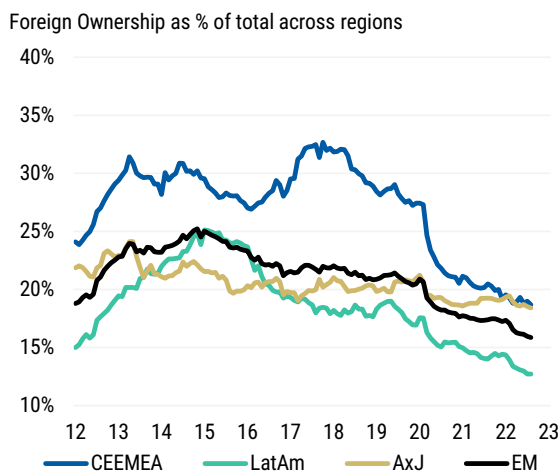
Cash is outright, while by rating is relative to benchmark.

Source: EPFR, Morgan Stanley Research

## EM local bonds flows and ownership

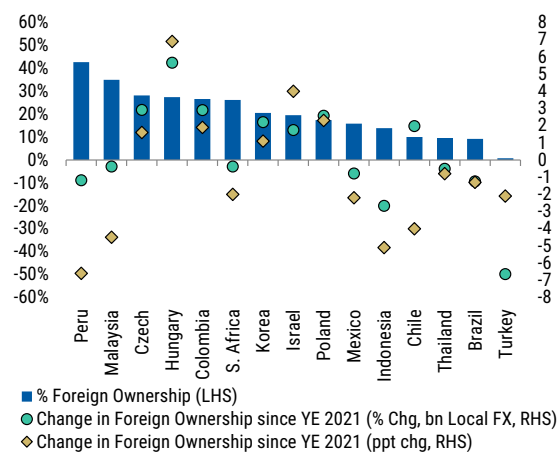
**Our broad portfolio debt flow measure**, which tracks foreign portfolio debt flows in India, Indonesia, Thailand, Mexico, South Africa, Hungary, and Turkey, shows roughly US\$6.7bn of inflows in the past month (October 28 to November 28), improving from US\$7bn of outflows in the previous month (September 26 to October 27). Inflows were seen mainly from Mexico (US\$4.3bn), Thailand (US\$1.7bn), Hungary (US\$1.5bn), and Indonesia (US\$1.3bn). Outflows were seen from just South Africa (US\$1.7bn) and India (US\$398m). Overall, YTD net portfolio debt flows have seen outflows of just over US\$24.5bn.

**Exhibit 12: Foreign ownership in EM per region (% of total)**



Source: Haver Analytics, Bloomberg, Finance Ministry, Morgan Stanley Research

**Exhibit 13: Foreign ownership by country and changes since end-2021 (% outstanding)**



Source: Haver Analytics, Bloomberg, Finance Ministry, Morgan Stanley Research

**EM foreign ownership:** EM foreign ownership through 2022 has declined by a market weighted 1.68pp to 15.55% from 17.23% at the end of 2021. Tightening of monetary policy, off the back of higher inflation globally and rising core yields, have forced a reduction in allocation from foreign investors to EM local debt. The strong US dollar environment has also kept local currency performance under pressure, further reducing the appeal for foreigners to own EM local currency debt. Looking ahead to 2023, the turn in global inflation pressures, a decline in global growth, a drop in core yields a pivot toward a loosening of monetary policy, and a softer USD environment should help foreigner ownership rise throughout the year.

LatAm contributed the most to this decline in foreigner ownership, with the region seeing a market weighted decline of 1.78pp to 12.64% from 14.43%. CEEMEA saw the most shallow drop, seeing just a -0.76pp change to 18.39% from 19.16%. AxJ saw a 1.17pp decline in foreign ownership to 17.96% from 19.14%.

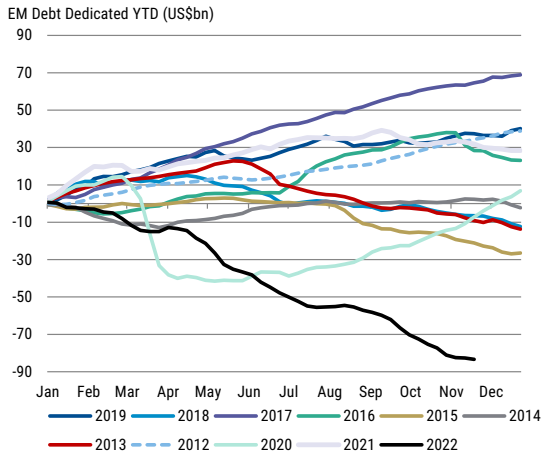
The largest percentage point of ownership decline in foreigner ownership so far through 2023 on a country level has been seen in Peru, with a decline of 6.6pp to 42.8%. This is followed by Indonesia with 5.1pp to 13.9% and Malaysia with 4.5pp down to 35.0%.

So far, Hungary has seen the largest percentage point increase, with foreigner ownership increasing by 6.9pp to 27.4%, with much of the foreign ownership increase coming in October amid a large decline in m/m CPI from 4.0% in September to 2.0% in October and a [stabilization of financial market conditions](#). HUF also saw a rally of nearly 4% versus USD and 3.2% versus the EUR during the month of October. Israel has seen the 2nd largest increase in foreign ownership, at 4pp to 19.6% from 15.6%.



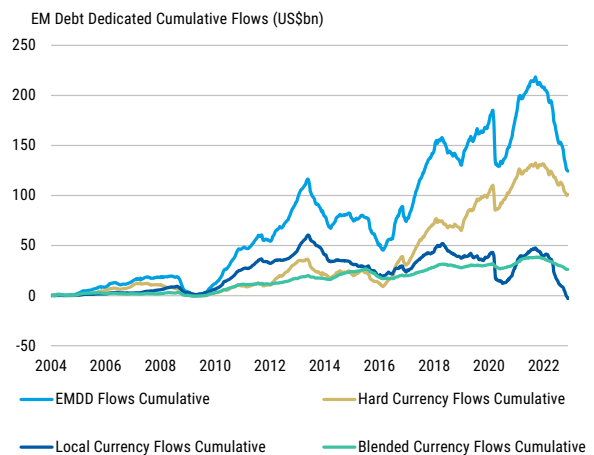
# EM debt-dedicated fund flows

**Exhibit 14:** EM debt-dedicated fund flows YTD – until November 23



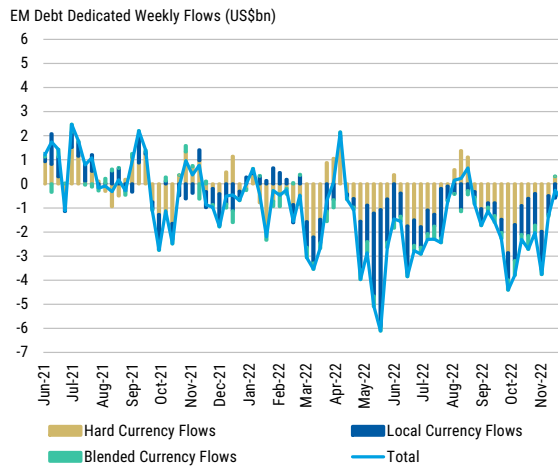
Source: EPFR, Bloomberg, Morgan Stanley Research

**Exhibit 15:** EM debt-dedicated fund flows – until November 23



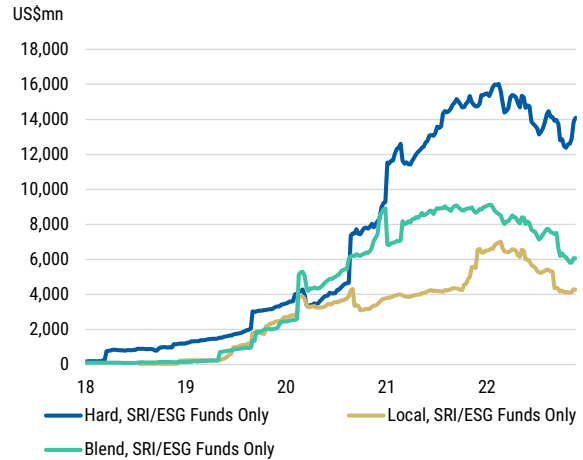
Source: EPFR, Morgan Stanley Research

**Exhibit 16:** EM debt-dedicated fund flows by asset class – until November 23



Source: EPFR, Bloomberg, Morgan Stanley Research

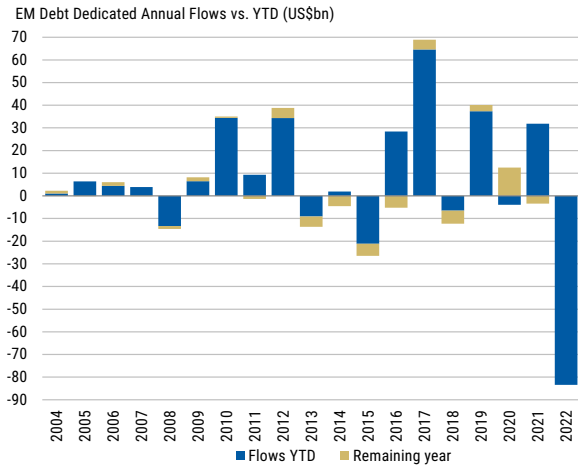
**Exhibit 17:** Flows into ESG/SRI funds – until November 23



Source: EPFR, Bloomberg, Morgan Stanley Research

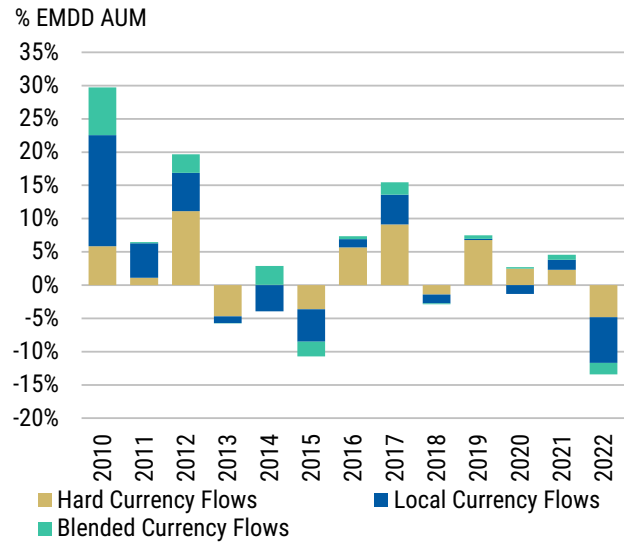
# EM debt-dedicated fund flows (cont.)

**Exhibit 18:** EM annual flows vs. YTD – until November 23



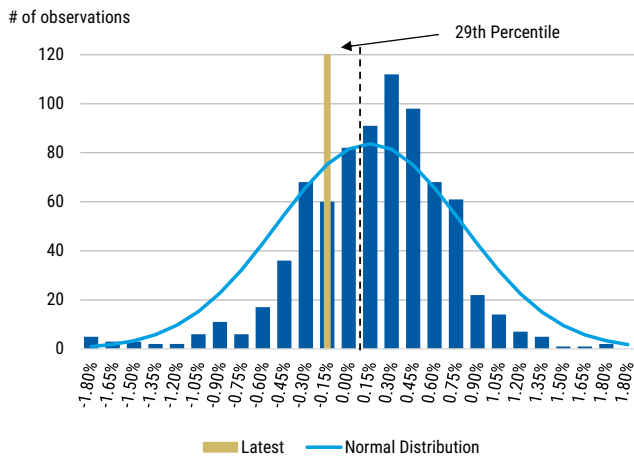
Source: EPFR, Morgan Stanley Research

**Exhibit 19:** Breakdown of 2022 inflows (% of AUM) vs. history



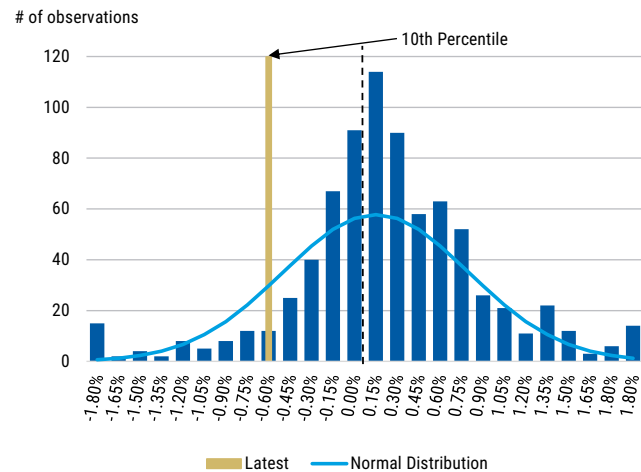
Source: EPFR, Morgan Stanley Research

**Exhibit 20:** 4w average hard currency flows (% of AUM)



Source: EPFR, Morgan Stanley Research

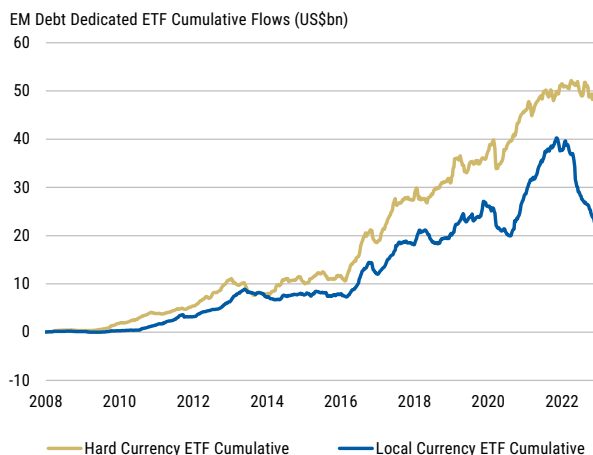
**Exhibit 21:** 4w average local currency flows (% of AUM)



Source: EPFR, Morgan Stanley Research

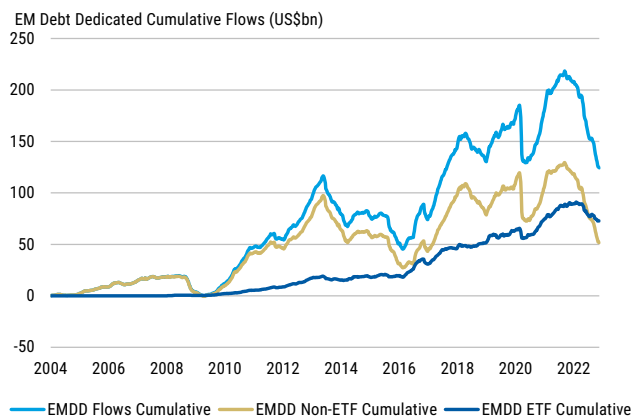
# EM debt-dedicated fund flows – ETF focus

**Exhibit 22:** Hard and local currency ETF flows until November 23



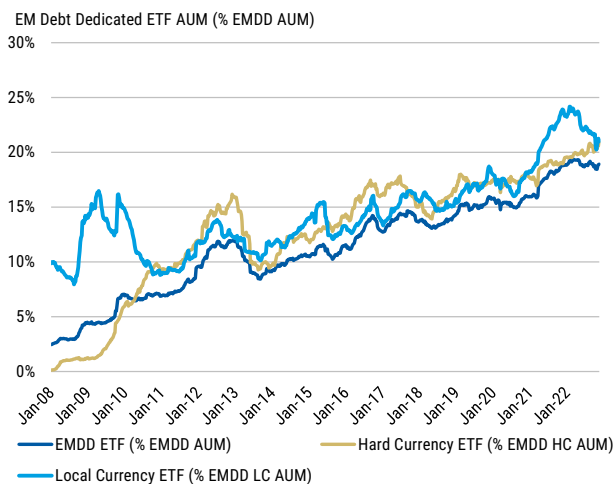
Source: EPFR, Morgan Stanley Research

**Exhibit 23:** ETF vs. non-ETF flows – until November 23



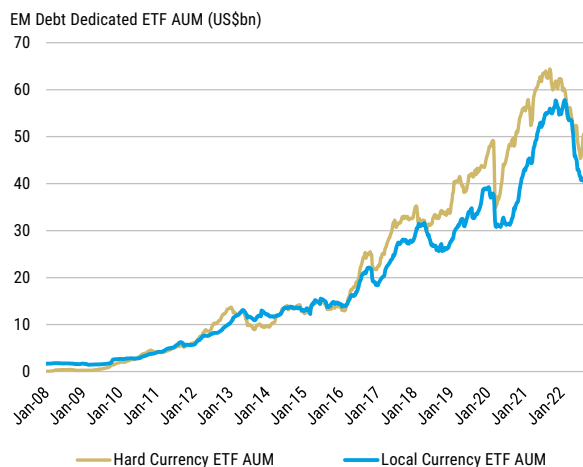
Source: EPFR, Bloomberg, Morgan Stanley Research

**Exhibit 24:** ETF AUM as a proportion of total EM debt-dedicated AUM\* – November 23



Source: EPFR, Bloomberg, Morgan Stanley Research. \*The chart uses AUM of funds where weekly data is available, hence the ETF % AUM is likely overestimated in the above chart.

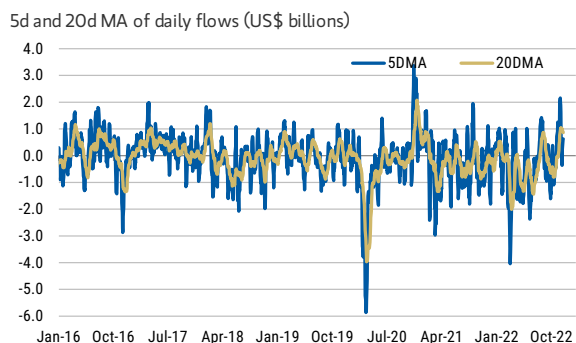
**Exhibit 25:** Hard currency and local currency ETF AUM – November 23



Source: EPFR, Bloomberg, Morgan Stanley Research

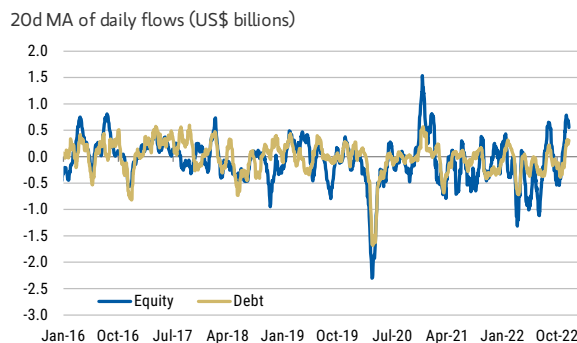
# EM portfolio flows and foreign ownership of local bonds

**Exhibit 26:** Daily EM portfolio flows\* (equity + debt) (now available on Matrix)



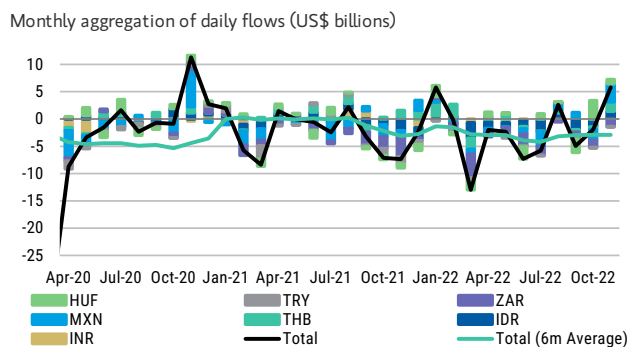
Source: Bloomberg, Morgan Stanley Research. Note: \*Shows the portfolio flows of countries that report data on daily basis, which includes Turkey, South Africa, Hungary, Mexico, Thailand, Korea and India.

**Exhibit 27:** Daily EM portfolio flows\* (equity vs. debt)



Source: Bloomberg, Morgan Stanley Research. Note: \*Shows the portfolio flows of countries that report data on daily basis, which includes Turkey, South Africa, Hungary, Mexico, Thailand, Korea and India.

**Exhibit 28:** EM portfolio flows\* (debt)



Source: Bloomberg, Morgan Stanley Research Note: \*Shows the portfolio flows of countries that report data on daily basis, which includes Turkey, South Africa, Hungary, Mexico, Thailand, Korea and India.

**Exhibit 29:** Foreign-ownership of EM local government securities

Country	Month	% Foreign Owned	in bn local FX	Change in Foreign	Change in Foreign	Change in Foreign
				Ownership since YE 2021	Ownership since YE 2021	Ownership since
				(% Chg, bn Local FX)	(ppt chg)	March 2020 (ppts)
Czech	Sep-22	28.2%	741	21.9%	1.6	-12.6
Hungary	Oct-22	27.4%	5,914	42.5%	6.9	-3.3
Israel	Sep-22	19.6%	137.6	13.0%	4.0	13.2
Poland	Oct-22	17.5%	149	19.3%	2.3	-5.5
S. Africa	Oct-22	26.2%	857	-2.9%	-2.0	-10.7
Turkey	Oct-22	0.8%	23	-49.9%	-2.1	-7.3
Brazil	Oct-22	9.3%	512	-9.4%	-1.3	-1.7
Colombia	Oct-22	26.6%	120,021	21.8%	1.9	2.9
Mexico	Oct-22	15.9%	1,537	-5.9%	-2.2	-12.8
Chile	Oct-22	10.0%	9,134	14.8%	-4.0	-7.8
Peru	Oct-22	42.8%	58	-8.8%	-6.6	-8.9
Indonesia	Oct-22	13.9%	713,230	-20.0%	-5.1	-23.2
Korea	Oct-22	20.5%	191,179	16.5%	1.1	4.4
Malaysia	Oct-22	35.0%	188	-2.8%	-4.5	-5.3
Thailand	Oct-22	9.5%	974	-3.8%	-0.8	-0.9

Source: Finance Ministry Websites, Haver Analytics, Bloomberg, Morgan Stanley Research

# EM 2022 sovereign financing needs

Exhibit 30: Hard currency (as of November 28, 2022)

Figures in USD (bn)	USD (bn) 2021		USD (bn) 2022				USD (bn) Change		2022 2022 Progress	
	Gross	Net	Gross	Maturities	Net	Net + Int.	Gross	Net	YTD Actual*	Remaining**
<b>Asia ex-Japan</b>	<b>39.9</b>	<b>28.0</b>	<b>19.5</b>	<b>11.7</b>	<b>7.8</b>	<b>1.1</b>	<b>-20.4</b>	<b>-20.2</b>	<b>14.1</b>	<b>5.4</b>
<b>Asia IG</b>	<b>34.9</b>	<b>25.5</b>	<b>18.5</b>	<b>9.0</b>	<b>9.5</b>	<b>3.9</b>	<b>-16.4</b>	<b>-16.0</b>	<b>13.1</b>	<b>5.4</b>
China	8.6	8.6	2.5	2.5	0.0	(0.4)	(6.1)	(8.6)	0.0	2.5
Hong Kong	5.5	5.5	0.0	0.0	0.0	(0.1)	(5.5)	(5.5)	0.0	0.0
Indonesia	12.2	6.9	10.0	5.9	4.1	0.8	(2.2)	(2.8)	8.3	1.7
Korea	1.3	0.9	0.0	0.0	0.0	0.0	(1.3)	(0.9)	0.0	0.0
Malaysia	1.3	0.5	0.0	0.0	0.0	0.0	(1.3)	(0.5)	0.0	0.0
Philippines	6.0	3.2	6.0	0.7	5.3	3.7	(0.0)	2.2	4.8	1.2
<b>Frontier Asia</b>	<b>4.5</b>	<b>2.4</b>	<b>1.0</b>	<b>2.6</b>	<b>-1.6</b>	<b>-2.8</b>	<b>-3.5</b>	<b>-4.0</b>	<b>1.0</b>	<b>0.0</b>
Mongolia	1.0	0.9	0.0	0.1	(0.1)	(0.3)	(1.0)	(1.0)	0.0	0.0
Pakistan	3.5	2.5	1.0	1.0	(0.0)	(0.1)	(2.5)	(2.5)	1.0	0.0
Papua New Guinea	0.0	0.0	0.0	0.0	0.0	(0.0)	0.0	0.0	0.0	0.0
Sri Lanka	0.0	(1.0)	0.0	1.5	(1.5)	(2.4)	0.0	(0.5)	0.0	0.0
Vietnam	0.0	(0.0)	0.0	0.0	(0.0)	(0.1)	0.0	0.0	0.0	0.0
<b>Others</b>	<b>0.5</b>	<b>0.2</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>-0.5</b>	<b>-0.2</b>	<b>0.0</b>	<b>0.0</b>
<b>CEEMEA</b>	<b>90.3</b>	<b>41.1</b>	<b>63.0</b>	<b>59.7</b>	<b>3.3</b>	<b>-30.0</b>	<b>-27.4</b>	<b>-37.8</b>	<b>52.9</b>	<b>10.0</b>
<b>Europe</b>	<b>29.5</b>	<b>7.9</b>	<b>33.0</b>	<b>18.1</b>	<b>14.9</b>	<b>5.9</b>	<b>3.5</b>	<b>6.9</b>	<b>29.4</b>	<b>3.5</b>
Croatia	2.4	0.9	1.4	1.4	(0.0)	(0.5)	(1.1)	(1.0)	1.4	0.0
Czech Rep.	0.0	(2.4)	0.0	3.1	(3.1)	(3.1)	0.0	(0.7)	0.0	0.0
Hungary	5.4	3.3	5.7	0.0	5.7	5.1	0.3	2.4	5.7	0.0
Poland	0.0	(8.5)	5.1	5.3	(0.2)	(1.3)	5.1	8.3	5.1	0.0
Romania	8.3	8.3	9.8	2.0	7.8	6.2	1.5	(0.5)	8.3	1.5
Serbia	3.3	2.6	0.0	0.0	0.0	(0.2)	(3.3)	(2.6)	0.0	0.0
Turkey	10.0	3.7	11.0	6.3	4.7	(0.3)	1.0	1.0	9.0	2.0
<b>Rus, Ukr &amp; CIS</b>	<b>4.2</b>	<b>1.5</b>	<b>1.8</b>	<b>3.8</b>	<b>-2.1</b>	<b>-6.6</b>	<b>-2.5</b>	<b>-3.5</b>	<b>0.0</b>	<b>1.8</b>
Azerbaijan	0.0	(0.2)	0.0	0.0	0.0	(0.1)	0.0	0.2	0.0	0.0
Belarus	0.0	0.0	0.0	0.0	0.0	(0.2)	0.0	0.0	0.0	0.0
Kazakhstan	0.0	0.0	1.0	0.0	1.0	0.5	1.0	1.0	0.0	1.0
Russia	1.8	1.2	0.0	2.7	(2.7)	(4.7)	(1.8)	(3.9)	0.0	0.0
Ukraine	1.8	(0.2)	0.0	1.1	(1.1)	(2.6)	(1.8)	(0.9)	0.0	0.0
Uzbekistan	0.6	0.6	0.8	0.0	0.8	0.6	0.1	0.1	0.0	0.8
<b>SSA</b>	<b>10.0</b>	<b>8.8</b>	<b>6.0</b>	<b>1.4</b>	<b>4.6</b>	<b>-0.2</b>	<b>-4.0</b>	<b>-4.2</b>	<b>6.0</b>	<b>0.0</b>
Angola	0.0	0.0	1.8	0.0	1.8	1.0	1.8	1.8	1.8	0.0
Ghana	3.0	3.0	0.0	0.0	(0.0)	(1.3)	(3.0)	(3.0)	0.0	0.0
Ivory Coast	1.0	1.0	0.0	0.1	(0.1)	(0.1)	(1.0)	(1.0)	0.0	0.0
Kenya	1.0	1.0	0.0	0.0	0.0	(0.5)	(1.0)	(1.0)	0.0	0.0
Nigeria	4.0	3.5	1.3	0.3	0.9	(0.1)	(2.8)	(2.6)	1.3	0.0
Senegal	0.9	0.6	0.0	0.0	0.0	(0.2)	(0.9)	(0.6)	0.0	0.0
South Africa	0.0	(0.3)	3.0	1.0	2.0	0.9	3.0	2.3	3.0	0.0
<b>MENA</b>	<b>36.8</b>	<b>19.3</b>	<b>15.3</b>	<b>29.7</b>	<b>-14.3</b>	<b>-27.3</b>	<b>-21.5</b>	<b>-33.6</b>	<b>11.6</b>	<b>3.7</b>
Bahrain	4.0	3.0	1.0	1.5	(0.5)	(1.4)	(3.0)	(3.5)	0.0	1.0
Egypt	6.8	6.8	0.5	2.5	(2.0)	(4.8)	(6.3)	(8.8)	0.5	0.0
Iraq	0.0	(0.3)	0.0	1.3	(1.3)	(1.5)	0.0	(1.0)	0.0	0.0
Israel	0.0	(1.0)	3.7	4.5	(0.8)	(1.5)	3.7	0.2	1.7	2.0
Jordan	0.0	0.0	0.7	1.0	(0.4)	(0.6)	0.7	(0.4)	0.7	0.0
Kuwait	0.0	0.0	0.0	3.5	(3.5)	(3.7)	0.0	(3.5)	0.0	0.0
Lebanon	0.0	0.0	0.0	2.0	(2.0)	(3.0)	0.0	(2.0)	0.0	0.0
Morocco	0.0	(0.0)	0.0	1.5	(1.5)	(1.8)	0.0	(1.5)	0.0	0.0
Oman	5.0	3.3	0.0	1.2	(1.2)	(3.1)	(5.0)	(4.5)	0.0	0.0
Qatar	0.0	(3.5)	0.0	2.0	(2.0)	(4.0)	0.0	1.5	0.0	0.0
Saudi Arabia	10.1	4.6	5.0	4.5	0.5	(1.9)	(5.1)	(4.1)	5.0	0.0
Tunisia	0.0	(1.3)	0.0	0.5	(0.5)	(0.7)	0.0	0.8	0.0	0.0
U.A.E.	11.0	7.7	4.5	3.7	0.9	0.9	(6.5)	(6.8)	3.8	0.8
<b>Others</b>	<b>9.8</b>	<b>3.6</b>	<b>6.9</b>	<b>6.7</b>	<b>0.2</b>	<b>-1.7</b>	<b>-2.9</b>	<b>-3.4</b>	<b>5.9</b>	<b>1.0</b>
<b>LatAm</b>	<b>52.1</b>	<b>43.5</b>	<b>28.9</b>	<b>3.5</b>	<b>25.4</b>	<b>10.1</b>	<b>-23.2</b>	<b>-18.1</b>	<b>25.4</b>	<b>3.5</b>
<b>LatAm IG</b>	<b>45.5</b>	<b>42.0</b>	<b>21.2</b>	<b>2.1</b>	<b>19.2</b>	<b>9.7</b>	<b>-24.3</b>	<b>-22.9</b>	<b>19.7</b>	<b>1.5</b>
Chile	15.6	15.2	6.0	0.4	5.6	4.7	(9.6)	(9.6)	6.0	0.0
Colombia	6.1	4.6	1.4	0.0	1.4	(0.3)	(4.7)	(3.2)	1.4	0.0
Mexico	9.9	9.4	7.4	1.2	6.2	2.8	(2.6)	(3.3)	7.4	0.0
Panama	3.2	2.8	4.0	0.0	4.0	2.9	0.8	1.2	4.0	0.0
Peru	10.1	10.1	1.5	0.0	1.5	0.2	(8.6)	(8.6)	0.0	1.5
Uruguay	0.5	(0.1)	1.0	0.5	0.5	(0.6)	0.5	0.7	1.0	0.0
<b>LatAm HY</b>	<b>6.6</b>	<b>1.5</b>	<b>7.7</b>	<b>1.4</b>	<b>6.3</b>	<b>0.4</b>	<b>1.1</b>	<b>4.8</b>	<b>5.7</b>	<b>2.0</b>
Argentina	0.0	(0.0)	0.0	0.0	(0.0)	(1.5)	0.0	0.0	0.0	0.0
Bahamas	0.0	0.0	0.3	0.0	0.3	0.1	0.3	0.3	0.3	0.0
Bolivia	0.0	0.0	0.9	0.5	0.4	0.3	0.9	0.4	0.9	0.0
Brazil	2.3	(1.7)	2.0	0.0	2.0	(0.1)	(0.3)	3.7	0.0	2.0
Costa Rica	0.0	(1.0)	0.0	0.0	0.0	(0.4)	0.0	1.0	0.0	0.0
Dominican Rep.	2.5	2.4	3.6	0.0	3.6	3.6	1.1	1.2	3.6	0.0
El Salvador	0.0	0.0	0.0	0.0	0.0	(0.6)	0.0	0.0	0.0	0.0
Ecuador	0.0	0.0	0.0	0.0	0.0	(0.3)	0.0	0.0	0.0	0.0
Guatemala	1.0	1.0	0.5	0.7	(0.2)	(0.5)	(0.5)	(1.2)	0.5	0.0
Honduras	0.0	0.0	0.0	0.2	(0.2)	(0.3)	0.0	(0.2)	0.0	0.0
Paraguay	0.8	0.8	0.5	0.0	0.5	0.2	(0.3)	(0.3)	0.5	0.0
Trinidad & Tobago	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Others</b>	<b>0.0</b>	<b>0.0</b>	<b>0.3</b>	<b>0.0</b>	<b>0.3</b>	<b>0.0</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.1</b>
<b>Total</b>	<b>182.4</b>	<b>112.6</b>	<b>111.4</b>	<b>74.8</b>	<b>36.5</b>	<b>-18.8</b>	<b>-71.0</b>	<b>-76.1</b>	<b>92.4</b>	<b>19.0</b>

Source: Bond Radar, national sources, Morgan Stanley Research estimates; Other sovereigns include sovereigns not explicitly listed in the table. \*YTD actual is how much has been issued so far in 2022. \*\*How much remains of the 2022 issuance plan.

# EM 2022 sovereign external bond maturities

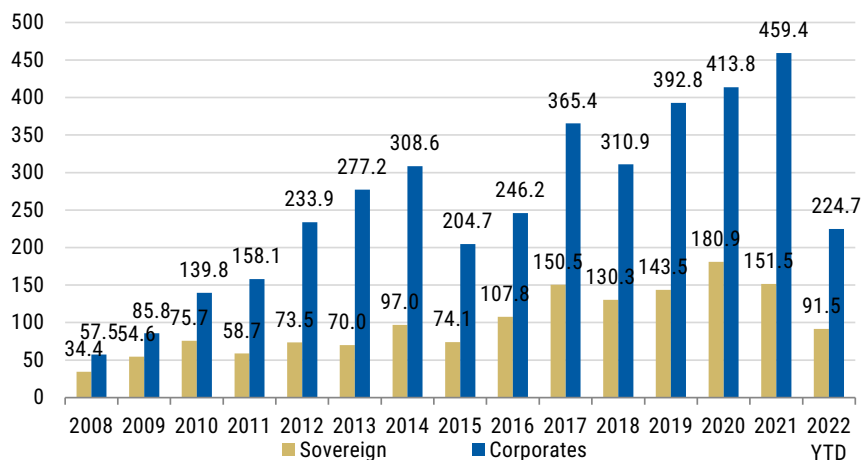
**Exhibit 31: 2022 amortisations by country – sovereign and quasi-sovereigns (US\$bn)**

Country	Sov./Quasi Sov.	2022	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Albania	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Angola	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Argentina	S	0.0	-	-	-	-	-	-	-	-	0.0	-	-	-
Armenia	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Azerbaijan	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Bahamas	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Bahrain	S	1.5	-	-	-	-	-	-	1.5	-	-	-	-	-
Belarus	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Benin	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Bolivia	S	0.5	-	-	-	-	-	-	-	-	-	0.5	-	-
Brazil	S	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Q</b>	<b>Q</b>	<b>0.5</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.5</b>	<b>-</b>
Bulgaria	S	1.4	-	-	1.4	-	-	-	-	-	-	-	-	-
Cameroon	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Chile	S	0.4	-	-	-	-	-	-	-	-	-	0.4	-	-
<b>Q</b>	<b>Q</b>	<b>0.8</b>	<b>-</b>	<b>0.5</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.3</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
China	S	2.5	-	-	-	-	-	-	-	-	-	-	1.0	1.5
<b>Q</b>	<b>Q</b>	<b>40.3</b>	<b>3.5</b>	<b>1.1</b>	<b>4.3</b>	<b>3.6</b>	<b>7.2</b>	<b>7.0</b>	<b>2.9</b>	<b>2.1</b>	<b>4.1</b>	<b>0.9</b>	<b>1.9</b>	<b>1.8</b>
Colombia	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Costa Rica	S	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Q</b>	<b>Q</b>	<b>0.1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Croatia	S	1.4	-	-	-	-	1.4	-	-	-	-	-	-	-
<b>Q</b>	<b>Q</b>	<b>0.6</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.6</b>	<b>-</b>	<b>-</b>
Czech Republic	S	3.1	-	-	-	-	3.1	-	-	-	-	-	-	-
Dominican Republic	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecuador	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Egypt	S	2.5	2.5	-	-	-	-	-	-	-	-	-	-	-
El Salvador	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Estonia	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethiopia	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Gabon	S	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0
Georgia	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Ghana	S	0.0	-	-	-	-	-	-	-	-	0.0	-	-	-
Guatemala	S	0.7	-	-	-	-	-	0.7	-	-	-	-	-	-
Honduras	S	0.2	-	-	0.2	-	-	-	-	-	-	-	-	-
Hong Kong	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Hungary	S	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Q</b>	<b>Q</b>	<b>0.1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Indonesia	S	5.9	0.8	-	1.0	1.5	0.7	0.4	-	-	-	0.0	1.5	-
<b>Q</b>	<b>Q</b>	<b>1.3</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1.2</b>	<b>-</b>	<b>-</b>	<b>0.0</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Iraq	S	1.3	1.2	-	-	-	-	-	0.2	-	-	-	-	-
Israel	S	4.5	-	0.1	0.1	-	0.1	1.5	2.3	0.1	0.1	-	0.1	-
Ivory Coast	S	0.1	-	-	-	-	-	0.0	-	-	-	-	-	0.0
Jordan	S	1.0	-	-	-	-	-	1.0	-	-	-	-	-	-
Kazakhstan	S	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Q</b>	<b>Q</b>	<b>1.3</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1.3</b>
Kenya	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Korea	S	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Q</b>	<b>Q</b>	<b>0.9</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.4</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.5</b>	<b>-</b>	<b>-</b>
Kuwait	S	3.5	-	-	3.5	-	-	-	-	-	-	-	-	-
Latvia	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Laos	S	0.0	-	-	-	-	-	-	-	-	-	0.0	-	-
Lebanon	S	2.0	-	-	-	-	0.5	-	-	-	-	-	-	-
Lithuania	S	1.5	-	1.5	-	-	-	-	-	-	-	-	-	-
Macedonia	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Malaysia	S	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Q</b>	<b>Q</b>	<b>2.0</b>	<b>-</b>	<b>-</b>	<b>0.8</b>	<b>-</b>	<b>1.0</b>	<b>-</b>	<b>0.1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.2</b>	<b>-</b>
Mexico	S	1.2	-	-	-	-	-	-	0.6	-	0.6	-	-	-
<b>Q</b>	<b>Q</b>	<b>4.2</b>	<b>0.6</b>	<b>0.1</b>	<b>1.1</b>	<b>1.1</b>	<b>-</b>	<b>0.5</b>	<b>-</b>	<b>0.0</b>	<b>-</b>	<b>-</b>	<b>0.7</b>	<b>0.2</b>
Mongolia	S	0.1	-	-	-	-	-	-	-	-	-	-	-	0.1
Montenegro	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Morocco	S	1.5	-	-	-	-	-	-	-	-	-	-	-	1.5
Mozambique	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Namibia	S	0.1	-	-	-	-	-	-	-	-	-	-	0.1	-
Nigeria	S	0.3	0.0	-	-	-	-	0.3	-	-	-	-	-	-
Oman	S	1.2	-	-	1.0	-	-	-	0.2	-	-	-	-	-
Pakistan	S	1.0	-	-	-	-	-	-	-	-	-	-	-	1.0
Panama	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Paraguay	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Papua New Guinea	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Peru	S	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Q</b>	<b>Q</b>	<b>0.1</b>	<b>-</b>	<b>0.1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Philippines	S	0.7	-	0.0	-	-	0.4	-	-	0.3	-	-	-	-
Poland	S	5.2	1.7	0.6	3.0	-	-	-	-	-	-	-	-	-
Qatar	S	2.0	2.0	-	-	-	-	-	-	-	-	-	-	-
Romania	S	2.0	-	2.0	-	-	-	-	-	-	-	-	-	-
Russia	S	2.7	-	-	0.4	2.0	-	-	-	-	0.4	-	-	-
<b>Q</b>	<b>Q</b>	<b>2.2</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.6</b>	<b>-</b>	<b>-</b>	<b>1.0</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.6</b>
Saudi Arabia	S	4.5	-	-	-	4.5	-	-	-	-	-	-	-	-
Senegal	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Serbia	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Slovakia	S	1.5	-	-	-	-	1.5	-	-	-	-	-	-	-
Slovenia	S	0.3	-	-	-	-	-	-	-	-	-	0.3	-	-
South Africa	S	1.0	-	-	-	-	1.0	-	-	-	-	-	-	-
<b>Q</b>	<b>Q</b>	<b>1.0</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1.0</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Sri Lanka	S	1.5	0.5	-	-	-	-	-	1.0	-	-	-	-	-
Tajikistan	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Trinidad & Tobago	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Tunisia	S	0.5	-	-	-	0.3	-	-	-	-	-	-	-	0.2
<b>Q</b>	<b>Q</b>	<b>0.5</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.3</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.2</b>
Turkey	S	6.3	-	2.0	1.8	-	-	-	-	-	2.5	-	-	-
<b>Q</b>	<b>Q</b>	<b>1.1</b>	<b>0.0</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.6</b>	<b>-</b>	<b>-</b>	<b>0.5</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
U.A.E.	S	3.7	-	-	-	-	0.7	-	-	-	-	3.0	-	-
<b>Q</b>	<b>Q</b>	<b>1.9</b>	<b>-</b>	<b>-</b>	<b>1.5</b>	<b>0.4</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Ukraine	S	1.1	-	-	-	-	-	-	-	-	-	-	-	-
<b>Q</b>	<b>Q</b>	<b>0.4</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.1</b>	<b>-</b>	<b>-</b>	<b>0.3</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Uruguay	S	0.5	-	-	-	-	0.0	-	-	0.3	-	-	0.1	-
Uzbekistan	S	-	-	-	-	-	-	-	-	-	-	-	-	-
Venezuela	S	3.0	-	-	-	-	-	-	3.0	-	-	-	-	-
Vietnam	S	0.0	-	-	0.0	-	-	-	-	-	0.0	-	-	-
Zambia	S	0.8	-	-	-	-	-	-	-	-	0.8	-	-	-
<b>Total Sovereign</b>		<b>76.6</b>	<b>8.6</b>	<b>6.2</b>	<b>12.3</b>	<b>8.2</b>	<b>9.4</b>	<b>4.0</b>	<b>5.7</b>	<b>3.7</b>	<b>4.4</b>	<b>4.3</b>	<b>2.9</b>	<b>4.4</b>
<b>Total Quasi</b>		<b>59.3</b>	<b>4.1</b>	<b>1.8</b>	<b>7.6</b>	<b>6.5</b>	<b>10.1</b>	<b>7.5</b>	<b>5.6</b>	<b>2.1</b>	<b>4.7</b>	<b>2.0</b>	<b>3.3</b>	<b>4.0</b>

Source: Bloomberg, Morgan Stanley Research

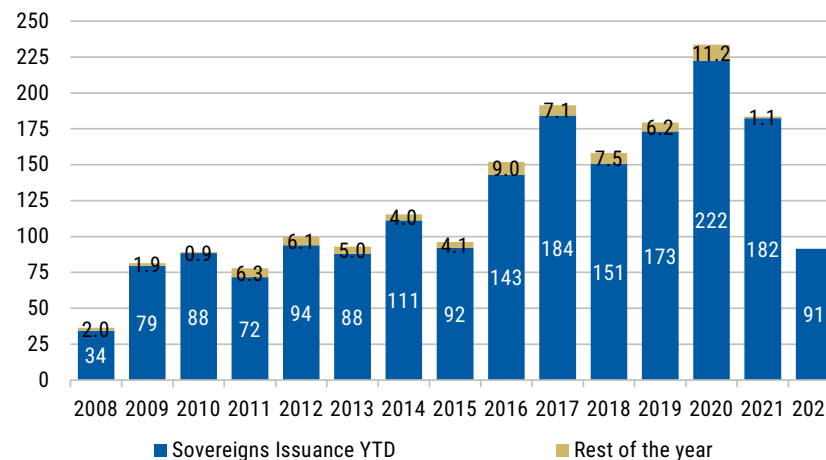
## EM credit primary market – aggregate overview

**Exhibit 32:** EM sovereign and corporate gross issuance (US\$ billions)



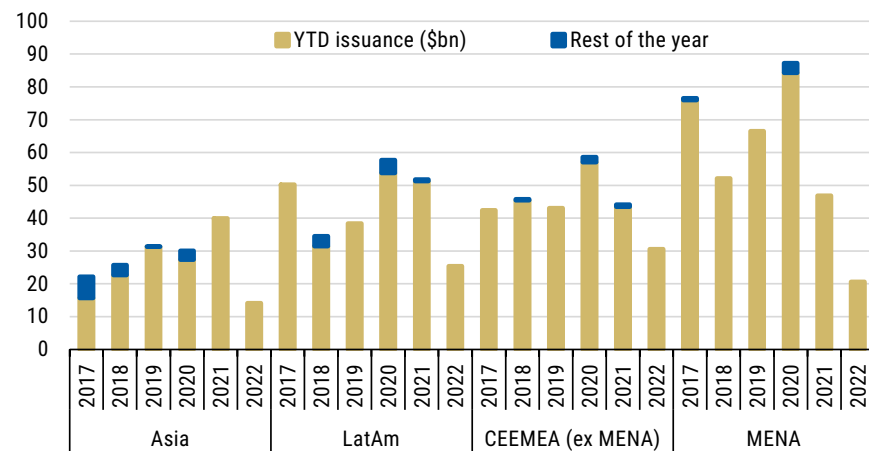
Source: Bond Radar, Bloomberg, Morgan Stanley Research

**Exhibit 33:** EM sovereign year-to-date gross issuance (US\$ billions)



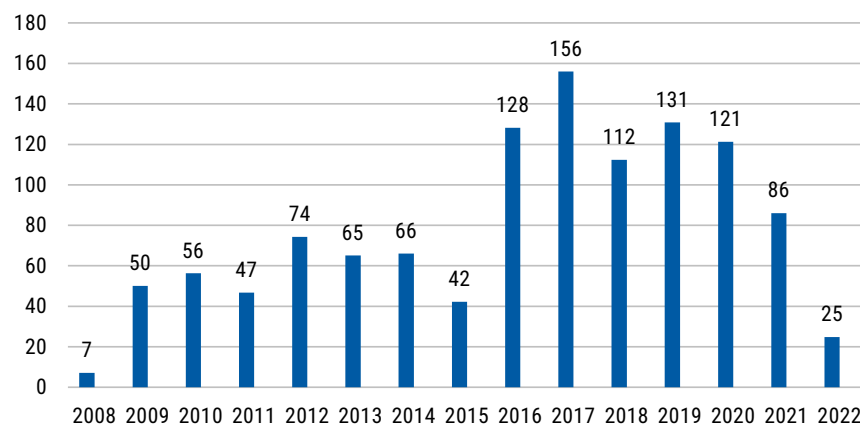
Source: Bond Radar, Bloomberg, Morgan Stanley Research estimates

**Exhibit 34:** EM sovereign gross issuance by region (US\$ billions)



Source: Bond Radar, Bloomberg, Morgan Stanley Research

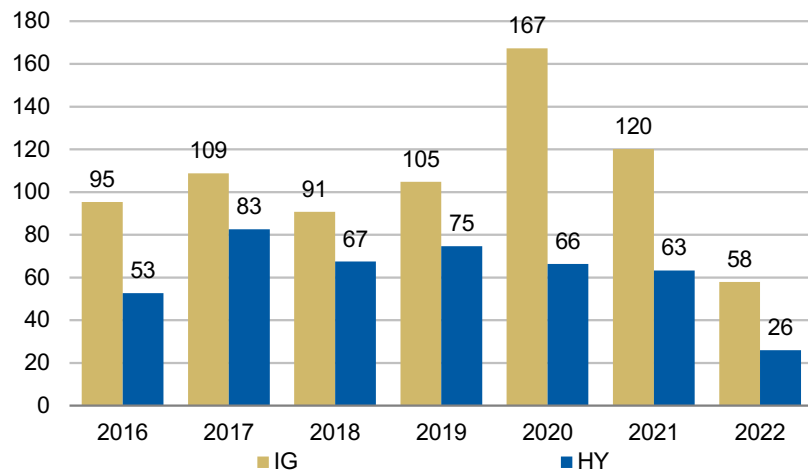
**Exhibit 35:** EM sovereign net issuance (US\$ billions)



Source: Bond Radar, Bloomberg, Morgan Stanley Research

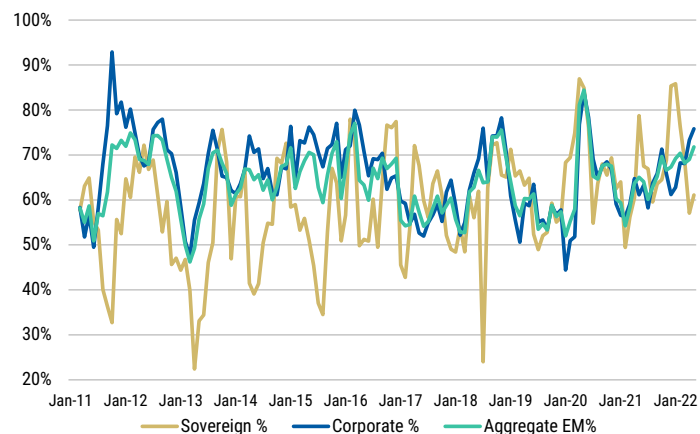
## EM credit primary market – rating and regional overview

**Exhibit 36:** EM sovereign IG vs. HY sovereign issuance (US\$ billions)



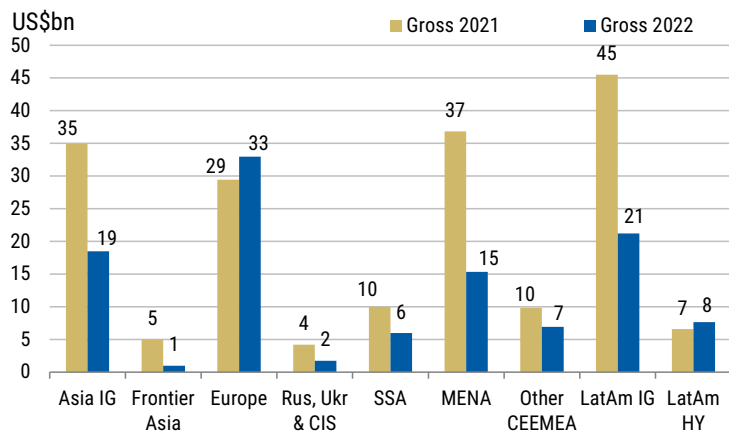
Source: Bond Radar, Bloomberg, Morgan Stanley Research

**Exhibit 37:** Monthly share of issuance that is IG, 3m moving average



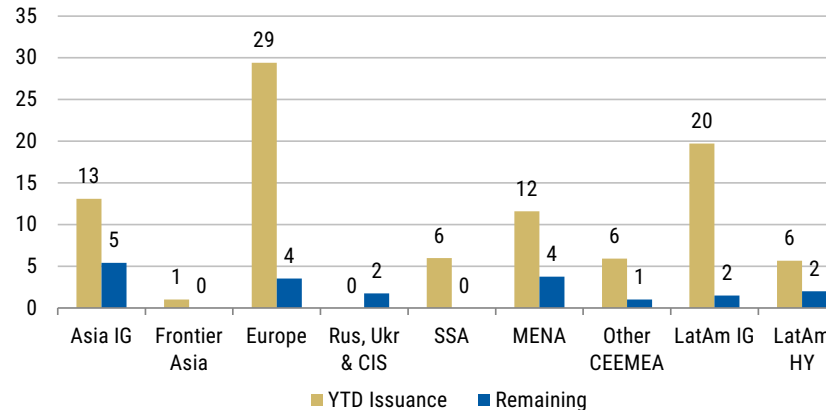
Source: Bond Radar, Bloomberg, Morgan Stanley Research

**Exhibit 38:** EM sovereign gross issuance, 2022 vs. 2021 (US\$ billions)



Source: Bond Radar, Bloomberg, Morgan Stanley Research

**Exhibit 39:** EM sovereign estimated gross issuance remaining for the rest of 2022 (US\$ billions)

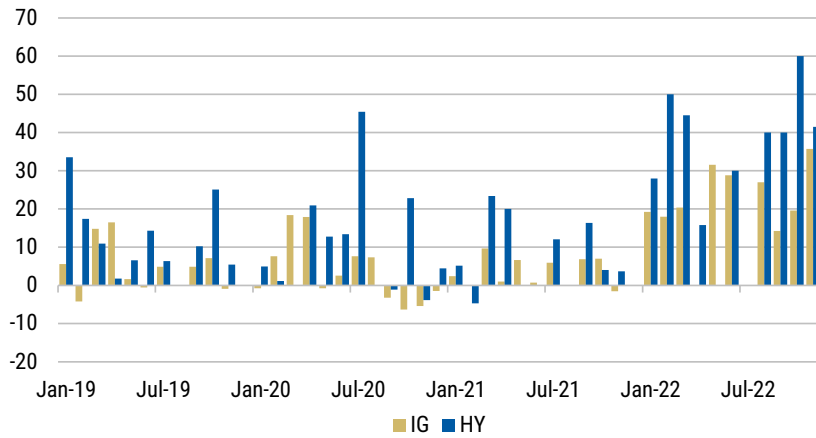


Source: Bond Radar, Bloomberg, Morgan Stanley Research



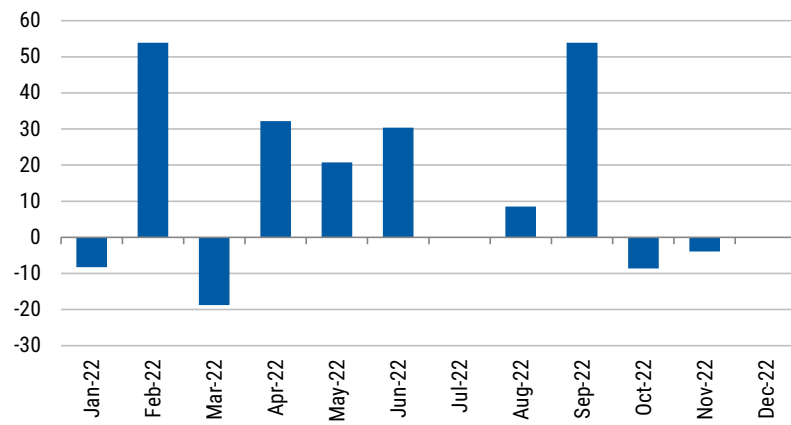
## EM credit primary market – performance monitor

**Exhibit 40:** Average monthly sovereign new issue concession by credit quality, bp



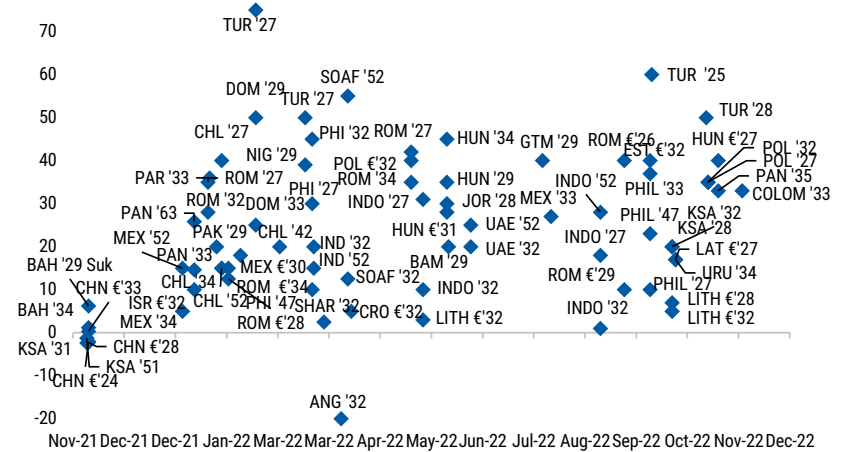
Source: Bond Radar, Bloomberg, Morgan Stanley Research. We include issuances where it is possible to compare with their existing sovereign bond curve.

**Exhibit 42:** IG new issues: 1M performance (z-spread, bp)



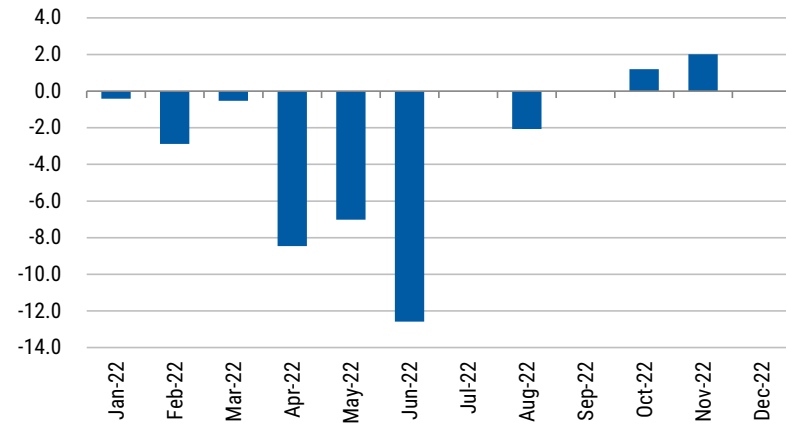
Source: Bond Radar, Bloomberg, Morgan Stanley Research. Shows the average performance of all new EMBI issues in particular month 30 days after issuance

**Exhibit 41:** Deal-specific new issue concession, bp



Source: Bond Radar, Bloomberg, Morgan Stanley Research. We include issuances where it is possible to compare with their existing sovereign bond curve.

**Exhibit 43:** HY new issues: 1M performance (price)



Source: Bond Radar, Bloomberg, Morgan Stanley Research. Shows the average performance of all new EMBI issues in particular month 30 days after issuance

## EM credit primary market – performance monitor

**Exhibit 44: 2022 IG sovereign new issue performance**

IG New Sovereign Issues: Performance by z-spread change

Country	Bond	Currency	Issue Date	Amount (ccy)	Issue Z-Spread	Latest Z-Spread	Z-Spread Change (bp)	Yield Change (bp)	Price Change
MEXICO	MEX 4.4 02/12/52	USD	1/4/2022	1900	507	292	-215	103	-23.0
MEXICO	MEX 3 1/2 02/12/34	USD	1/4/2022	2200	386	214	-173	170	-17.1
INDONESIA	INDOIS 4.4 06/06/27	USD	5/25/2022	1750	189	97	-92	34	-1.4
INDONESIA	INDOIS 4.7 06/06/32	USD	5/25/2022	1500	214	139	-75	15	-1.2
PHILIPPINES	PHILIP 5.609 04/13/33	USD	10/5/2022	750	207	140	-67	-76	6.1
PHILIPPINES	PHILIP 5.95 10/13/47	USD	10/5/2022	750	266	202	-64	-66	9.1
LATVIA	LATVIA 3 7/8 03/25/27	EUR	10/20/2022	850	126	71	-56	-105	4.1
PHILIPPINES	PHILIP 5.17 10/13/27	USD	10/5/2022	500	141	86	-55	-58	2.5
POLAND	POLAND 5 1/2 11/16/27	USD	11/8/2022	1500	141	90	-50	-84	3.5
ESTONIA	ESTONI 4 10/12/32	EUR	10/5/2022	1000	115	67	-47	-77	6.4
SAUDI ARABIA	KSA 5.268 10/25/28	USD	10/19/2022	2500	136	89	-47	-74	3.8
SAUDI ARABIA	KSA 5 1/2 10/25/32	USD	10/19/2022	2500	175	128	-47	-76	5.9
URUGUAY	URUGUAY 5 3/4 10/28/34	USD	10/20/2022	1000	176	131	-45	-97	8.2
ROMANIA	ROMANI 5 09/27/26	EUR	9/20/2022	600	243	198	-45	-40	1.4
LITHUANIA	LITHUN 4 1/8 04/25/28	EUR	10/18/2022	900	131	87	-45	-89	4.3
ROMANIA	ROMANI 5 1/8 09/27/29	EUR	9/20/2022	750	403	359	-44	-45	2.4
CHILE	CHILE 2 3/4 01/31/27	USD	1/27/2022	1500	125	84	-41	191	-7.2
ROMANIA	ROMANI 5 1/4 11/25/27	USD	5/18/2022	1000	258	217	-40	64	-2.8
UNITED ARAB EMIRATE	UAE 4.951 07/07/52	USD	6/23/2022	1250	220	184	-36	5	-0.7
POLAND	POLAND 5 3/4 11/16/32	USD	11/8/2022	1500	187	154	-33	-74	5.6
CHILE	CHILE 4.34 03/07/42	USD	3/2/2022	2000	253	221	-32	123	-14.5
UNITED ARAB EMIRATE	UAE 4.05 07/07/32	USD	6/23/2022	1750	114	84	-30	24	-1.9
PANAMA	PANAMA 5.4 02/14/35	USD	11/14/2022	1500	280	252	-28	-43	3.6
BULGARIA	BGARIA 4 5/8 09/23/34	EUR	9/15/2022	750	206	179	-27	-16	1.4
CHILE	CHILE 3 1/2 01/31/34	USD	1/27/2022	1500	185	161	-24	154	-13.0
PHILIPPINES	PHILIP 4.2 03/29/47	USD	3/21/2022	650	204	189	-15	95	-13.0
INDONESIA	INDON 5.45 09/20/52	USD	9/6/2022	500	245	231	-14	3	-0.5
BULGARIA	BGARIA 4 1/8 09/23/29	EUR	9/15/2022	1500	163	150	-13	-1	0.0
PHILIPPINES	PHILIP 3.556 09/29/32	USD	3/21/2022	750	141	129	-12	118	-9.2
INDONESIA	INDON 4.65 09/20/32	USD	9/6/2022	1400	147	135	-12	16	-1.2
HUNGARY	REPHUN 5 1/4 06/16/29	USD	6/8/2022	1750	243	232	-11	66	-3.5
MEXICO	MEX 4 7/8 05/19/33	USD	8/8/2022	1800	230	220	-10	78	-6.1
HUNGARY	REPHUN 5 1/2 06/16/34	USD	6/8/2022	1250	264	255	-9	50	-4.1
INDONESIA	INDON 3.55 03/31/32	USD	3/22/2022	600	133	127	-6	118	-8.8
CHILE	CHILE 4 01/31/52	USD	1/27/2022	1000	232	228	-5	143	-20.8
INDONESIA	INDON 4.3 03/31/52	USD	3/22/2022	1400	210	212	2	98	-14.5
ROMANIA	ROMANI 6 05/25/34	USD	5/18/2022	750	328	330	2	76	-6.0
INDONESIA	INDON 4.15 09/20/27	USD	9/6/2022	750	88	92	4	50	-2.1
ROMANIA	ROMANI 3 02/27/27	USD	1/19/2022	1350	149	184	35	265	-9.9
PANAMA	PANAMA 3.298 01/19/33	USD	1/11/2022	1000	173	216	43	230	-17.6
PANAMA	PANAMA 4 1/2 01/19/63	USD	1/11/2022	1500	293	338	45	192	-27.3
U.A.E.	SHARSK 3.886 04/04/30	USD	3/28/2022	750	157	221	63	185	-10.9
POLAND	POLAND 2 3/4 05/25/32	EUR	5/18/2022	2000	49	114	65	158	-12.9
HUNGARY	REPHUN 5 02/22/27	EUR	11/14/2022	1000	133	227	94	80	-3.1
ROMANIA	ROMANI 3 5/8 03/27/32	USD	1/19/2022	1060	196	298	102	282	-19.5
MEXICO	MEX 2 3/8 02/11/30	EUR	2/7/2022	800	-14	140	153	355	-24.5
HUNGARY	REPHUN 4 1/4 06/16/31	EUR	6/8/2022	750	133	290	157	223	-15.8
ISRAEL	ISRAEL 0 5/8 01/18/32	EUR	1/11/2022	1500	-109	65	174	399	-34.5
LITHUANIA	LITHUN 2 1/8 06/01/32	EUR	10/18/2022	300	-91	87	177	124	-9.8
ROMANIA	ROMANI 3 3/4 02/07/34	EUR	1/31/2022	1250	205	400	195	413	-34.9
ROMANIA	ROMANI 2 1/8 03/07/28	EUR	1/31/2022	1250	-19	319	338	575	-28.8

Source: Bond Radar, Bloomberg, Morgan Stanley Research

**Exhibit 45: 2022 HY sovereign new issuance performance**

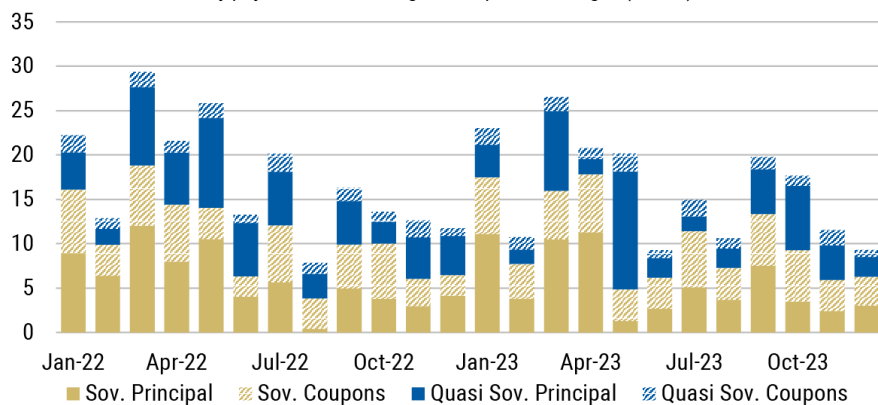
HY/Crossover New Sovereign Issues: Performance by price change

Country	Bond	Currency	Issue Date	Amount (ccy)	Issue Price	Latest Price	Price Change	Yield Change (bp)
TURKEY	TURKEY 9 7/8 01/15/28	USD	11/7/2022	1500	100.0	104.6	4.6	-113
TURKEY	TURKSK 9 758 11/13/25	USD	10/6/2022	2500	100.0	104.0	4.0	-157
JORDAN	JORDAN 7 3/4 01/15/28	USD	6/8/2022	650	100.0	102.5	2.5	-60
TURKEY	TURKEY 8.6 09/24/27	USD	3/17/2022	2000	100.0	100.6	0.6	-17
COLOMBIA	COLOM 8 04/20/33	USD	11/28/2022	1360	100.0	99.4	-0.6	8
TURKEY	TURKSK 7 1/4 02/24/27	USD	2/16/2022	3000	100.0	97.3	-2.7	77
GUATEMALA	GUATEM 5 1/4 08/10/29	USD	8/3/2022	500	100.0	96.7	-3.3	60
SOUTH AFRICA	SOAF 5 7/8 04/20/32	USD	4/11/2022	1400	100.0	92.9	-7.1	104
DOMINICAN REPUBLIC	DOMREP 5 1/2 02/22/29	USD	2/16/2022	1782	100.0	91.8	-8.2	165
ANGOLA	ANGOL 8 3/4 04/14/32	USD	4/7/2022	1750	100.0	90.0	-10.0	170
DOMINICAN REPUBLIC	DOMREP 6 02/22/33	USD	2/16/2022	1782	100.0	89.6	-10.4	147
SOUTH AFRICA	SOAF 7 3/4 04/20/52	USD	4/11/2022	1600	100.0	88.2	-11.8	109
BOLIVIA	BOLIVI 7 1/2 03/02/30	USD	2/23/2022	850	100.0	86.3	-13.7	306
PARAGUAY	PARGUY 3.849 06/28/33	USD	1/19/2022	501	100.0	86.2	-13.8	190
CROATIA	CROATI 2 7/8 04/22/32	EUR	4/13/2022	1250	109.0	94.0	-14.9	175
NIGERIA	NGERIA 8 3/8 03/24/29	USD	3/17/2022	1250	100.0	83.2	-16.8	389
BAHAMAS	BAHAMA 9 06/16/29	USD	6/9/2022	250	100.0	82.6	-17.4	402
LITHUANIA	LITHUN 2 1/8 06/01/32	EUR	5/25/2022	650	106.9	88.9	-18.0	214
PAKISTAN	PKSTAN 7.95 01/31/29	USD	1/24/2022	1000	100.0	52.8	-47.2	1,447

Source: Bond Radar, Bloomberg, Morgan Stanley Research

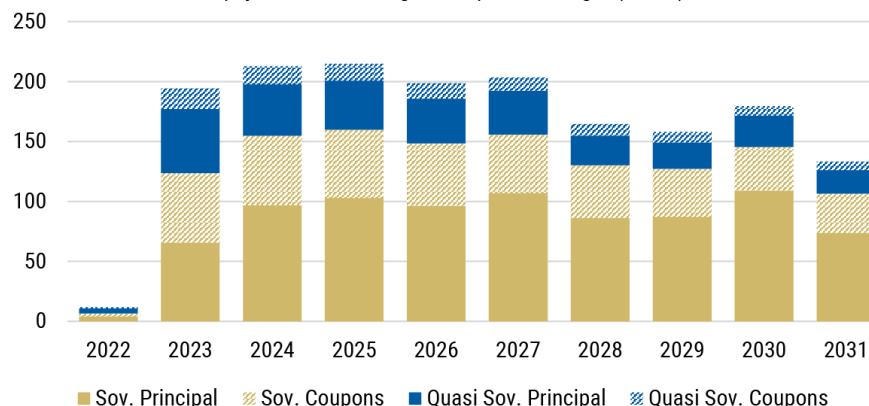
## EM credit amortisations

**Exhibit 46:** Total monthly payments for sovereigns and quasi-sovereigns (US\$bn)\*



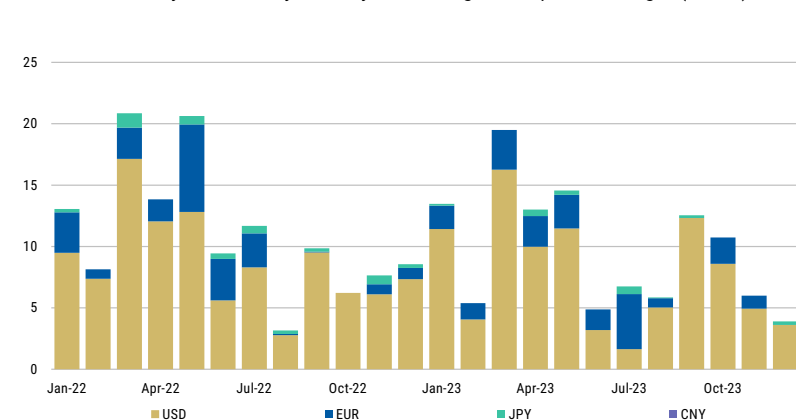
Source: Bloomberg, Morgan Stanley Research; \*For EMBIG-eligible tickers denominated in USD, GBP, JPY, and EUR.

**Exhibit 47:** Total annual payments for sovereigns and quasi-sovereigns (US\$bn)\*



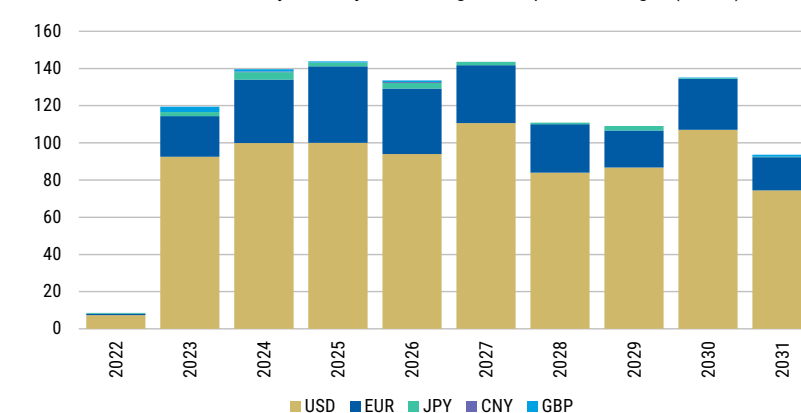
Source: Bloomberg, Morgan Stanley Research; \*For EMBIG-eligible tickers denominated in USD, GBP, JPY, and EUR.

**Exhibit 48:** Monthly maturities by currency for sovereigns and quasi-sovereigns (US\$bn)\*



Source: Bloomberg, Morgan Stanley Research; \*For EMBIG-eligible tickers denominated in USD, GBP, JPY and EUR.

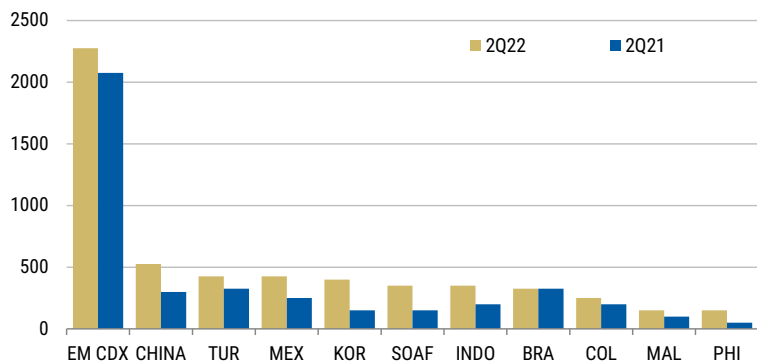
**Exhibit 49:** Annual maturities by currency for sovereigns and quasi-sovereigns (US\$bn)\*



Source: Bloomberg, Morgan Stanley Research; \*For EMBIG-eligible tickers denominated in USD, GBP, JPY and EUR.

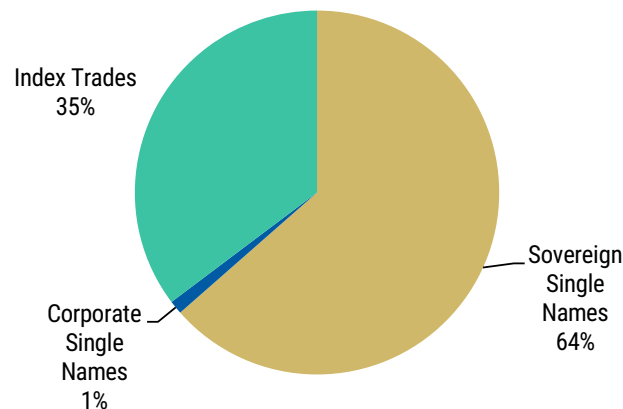
## EM CDS market – trading volumes and positioning

**Exhibit 50:** Top 10 traded EM sovereign CDS reference entities (average daily traded notional, US\$m)



Source: DTCC, Morgan Stanley Research

**Exhibit 51:** EM CDS trading breakdown for 2Q22



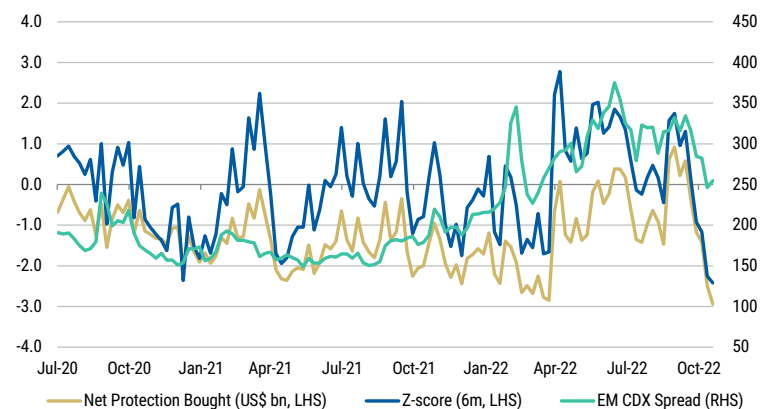
Source: DTCC, Morgan Stanley Research

**Exhibit 52:** EM CDX index composition and trading volumes

Country	EM CDX 38 Weight	EM CDX 37 Weight	V38 - V37 Change	EM Cash Index Weight	2022	Change Since 2021
TUR	12%	12%	0%	4%	425	100
BRA	12%	12%	0%	3%	325	0
EGY	2%	2%	0%	3%	15	13
MEX	12%	12%	0%	5%	425	175
SOAF	11%	12%	-1%	3%	350	200
CHINA	12%	12%	0%	5%	525	225
INDO	10%	9%	1%	5%	350	150
MAL	3%	3%	0%	3%	150	50
COL	6%	6%	0%	3%	250	50
PER	3%	3%	0%	3%	100	-25
PHI	2%	2%	0%	3%	150	100
CHILE	3%	3%	0%	3%	150	75
PAN	2%	2%	0%	3%	18	13
QAT	2%	2%	0%	4%	50	28
SAUD	2%	2%	0%	4%	100	50
ARG	2%	2%	0%	1%	20	8
OMAN	2%	0%	2%	1%	5	3
ADGB	2%	2%	0%	4%	20	10

Source: DTCC, Bloomberg, Morgan Stanley Research

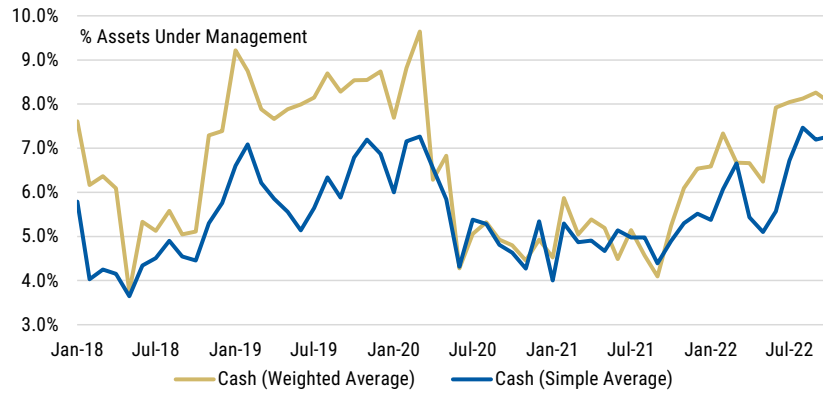
**Exhibit 53:** EM CDX (all series) net protection bought by non-dealers (latest data as of Nov 18)



Source: DTCC, Morgan Stanley Research

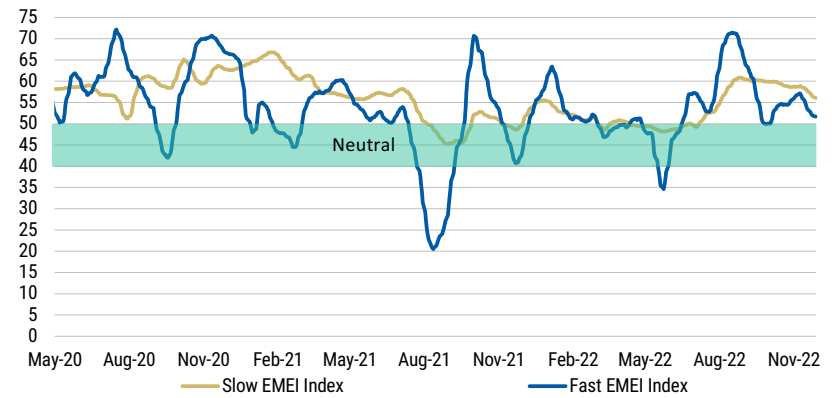
# EM credit fund cash balances and performances

**Exhibit 54:** Fund cash balances – until October 31



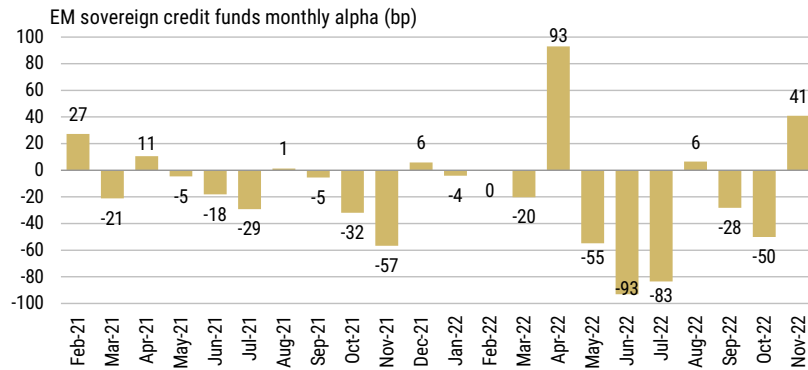
Source: EPFR monthly data, Bloomberg, Morgan Stanley Research

**Exhibit 55:** 'Fast' and 'slow' EMEIs\*



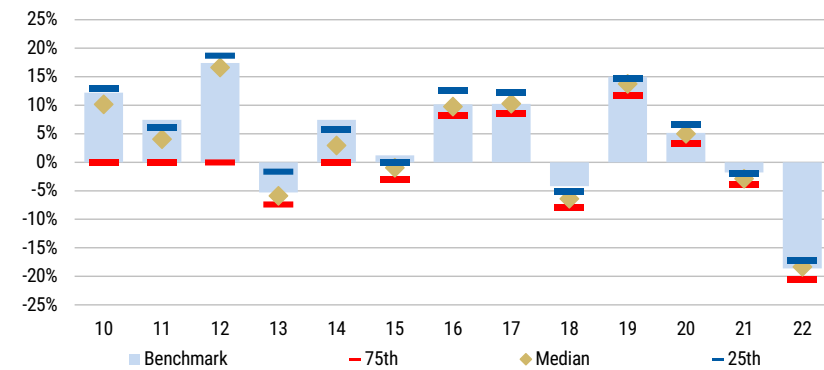
Source: Bloomberg, Morgan Stanley Research; \*Emerging market exposure indices (EMEI) are a measure of the aggregate beta of EM debt-dedicated hard currency funds based on fund total returns versus benchmarks. For further details please refer to [Bringing Back The EMEI](#).

**Exhibit 56:** EM sovereign credit funds performance vs. benchmark



Source: Bloomberg, Morgan Stanley Research

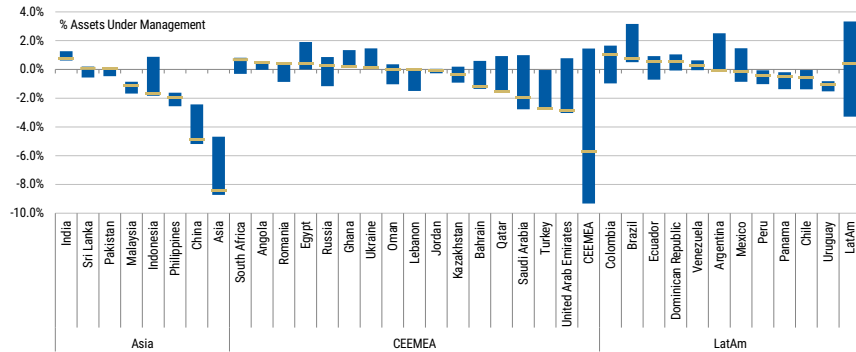
**Exhibit 57:** EM sovereign credit funds absolute annual returns (%)



Source: Bloomberg, Morgan Stanley Research

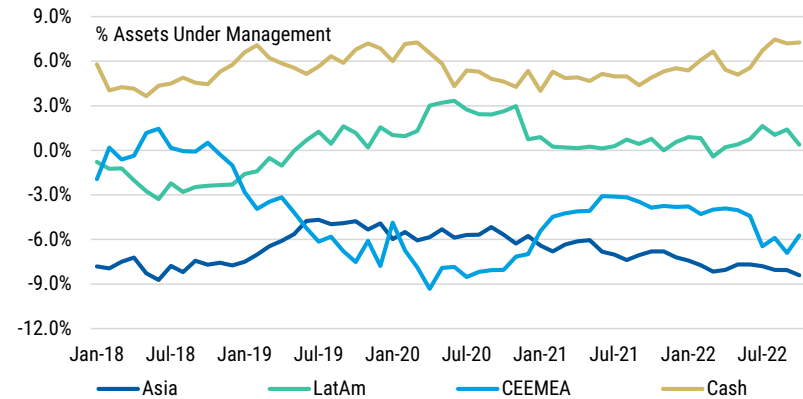
## EM credit fund exposures – regional level

**Exhibit 58:** Regional and country exposures vs. benchmark, latest position as of October 31, 2022 and range since January 2018



Source: EPFR monthly data, Morgan Stanley Research

**Exhibit 59:** Exposure vs. benchmark by region – until October 31, 2022



Cash is outright, while by rating is relative to benchmark.

Source: EPFR monthly data, Morgan Stanley Research

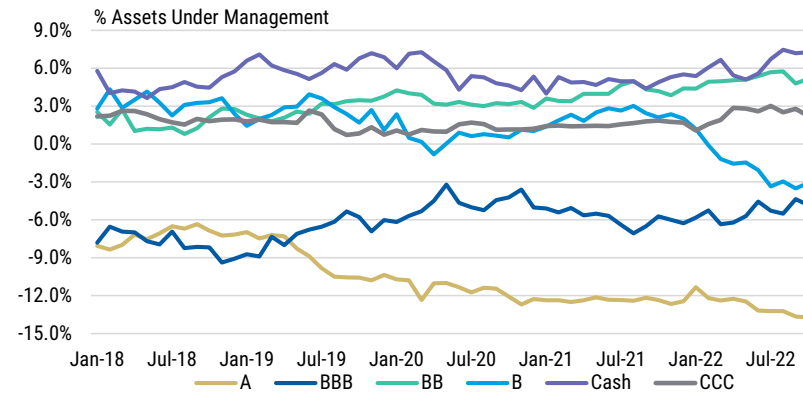
**Exhibit 60:** Exposure vs. benchmark by IG/HY rating – until October 31, 2022

### HY allocation vs. benchmark



Source: EPFR monthly data, Morgan Stanley Research

**Exhibit 61:** Exposure vs. benchmark by rating – until October 31\*

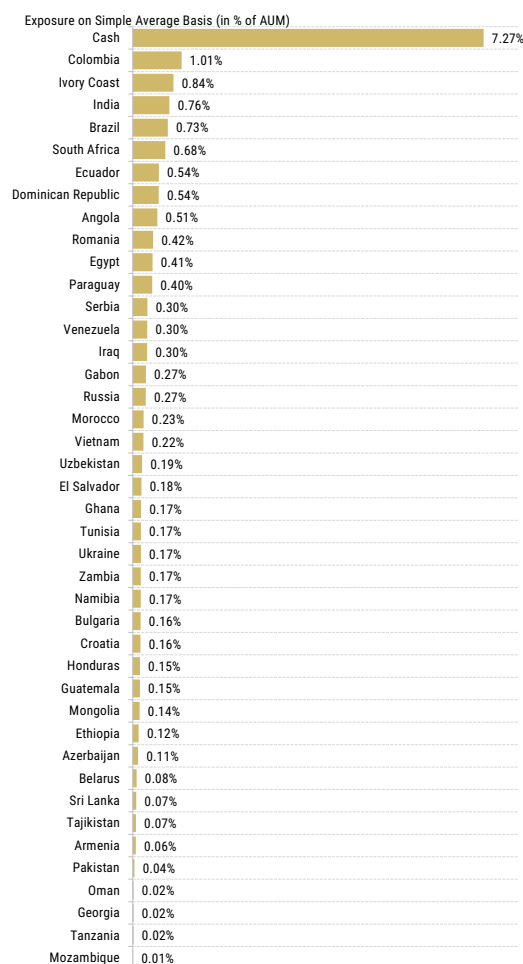


Cash is outright, while by rating is relative to benchmark.

Source: EPFR monthly data, Morgan Stanley Research; \*A bucket includes all credits rated A and above

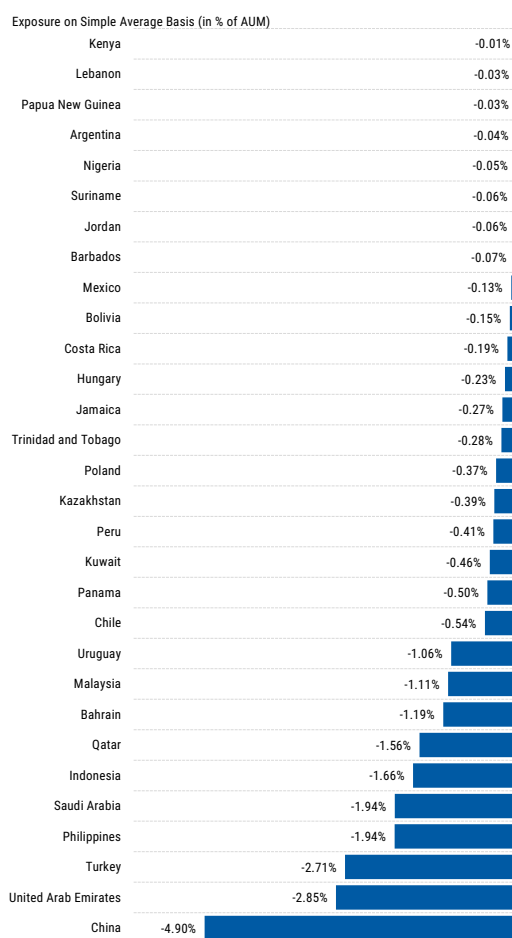
## EM credit fund exposures vs. benchmark: country level – current

**Exhibit 62:** Simple average exposure vs. benchmark (overweight)



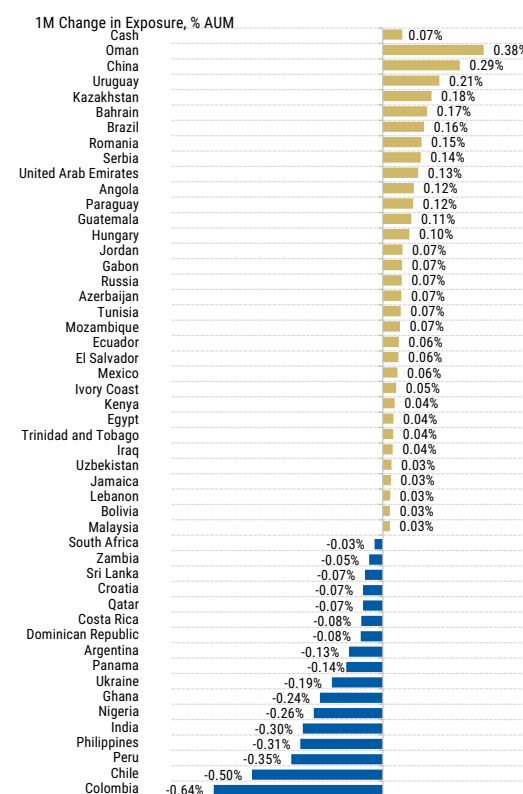
Source: EPFR monthly data, Morgan Stanley Research

**Exhibit 63:** Simple average exposure vs. benchmark (underweight)



Source: EPFR monthly data, Morgan Stanley Research

**Exhibit 64:** Simple average 1M change in exposure vs. benchmark as % of AUM\*

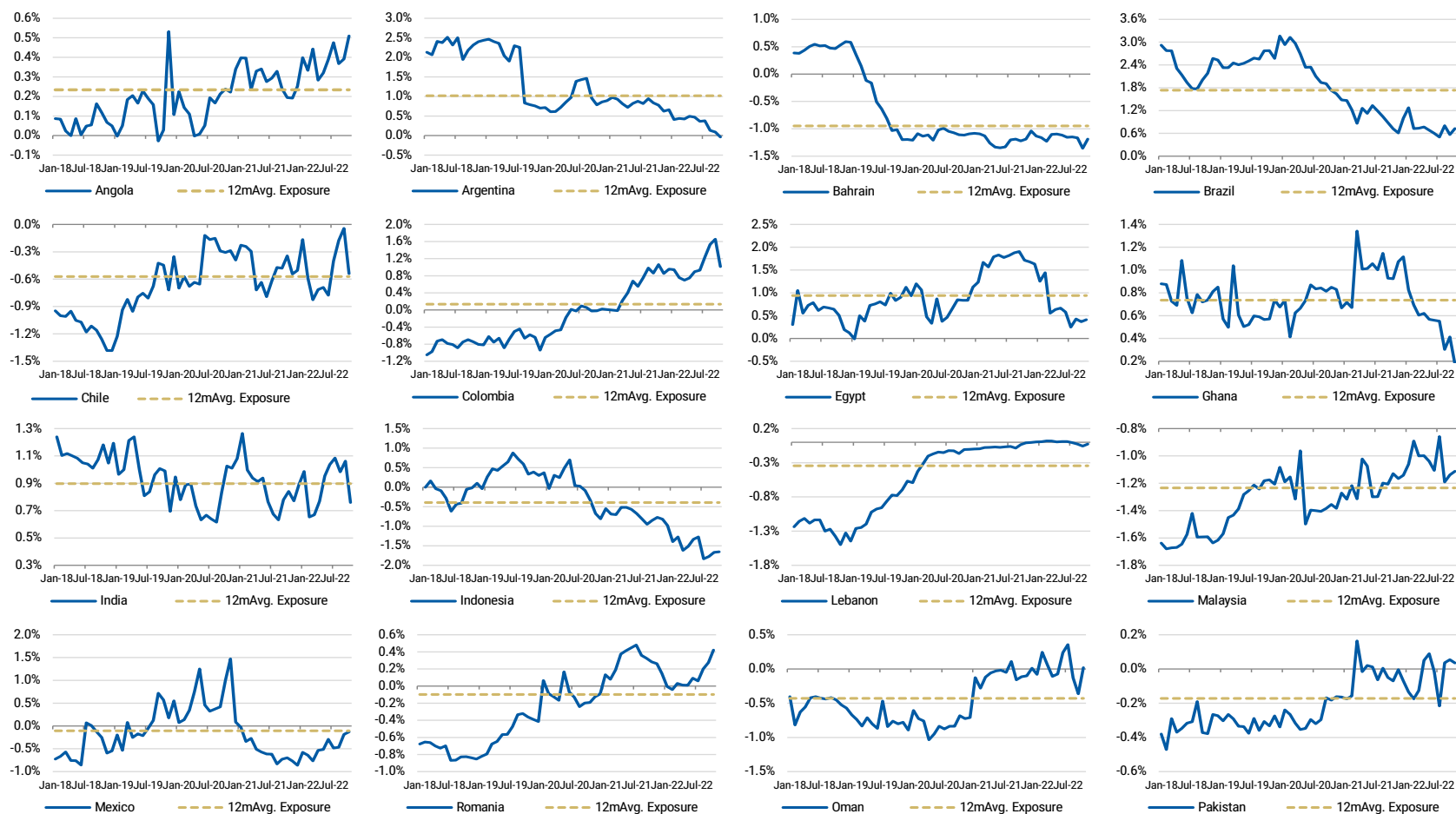


Source: EPFR monthly data, Morgan Stanley Research

Data are up to October 31, 2022. \*The sample currently includes 22 EM hard currency funds with US\$27.5bn in AUM. Note that all exposures shown are at a country level, meaning this can include both corporates and local currency bonds if held off benchmark.

# EM credit fund exposures vs. benchmark – country history page 1

**Exhibit 65:** EM credit fund exposures vs. benchmark: country level – history

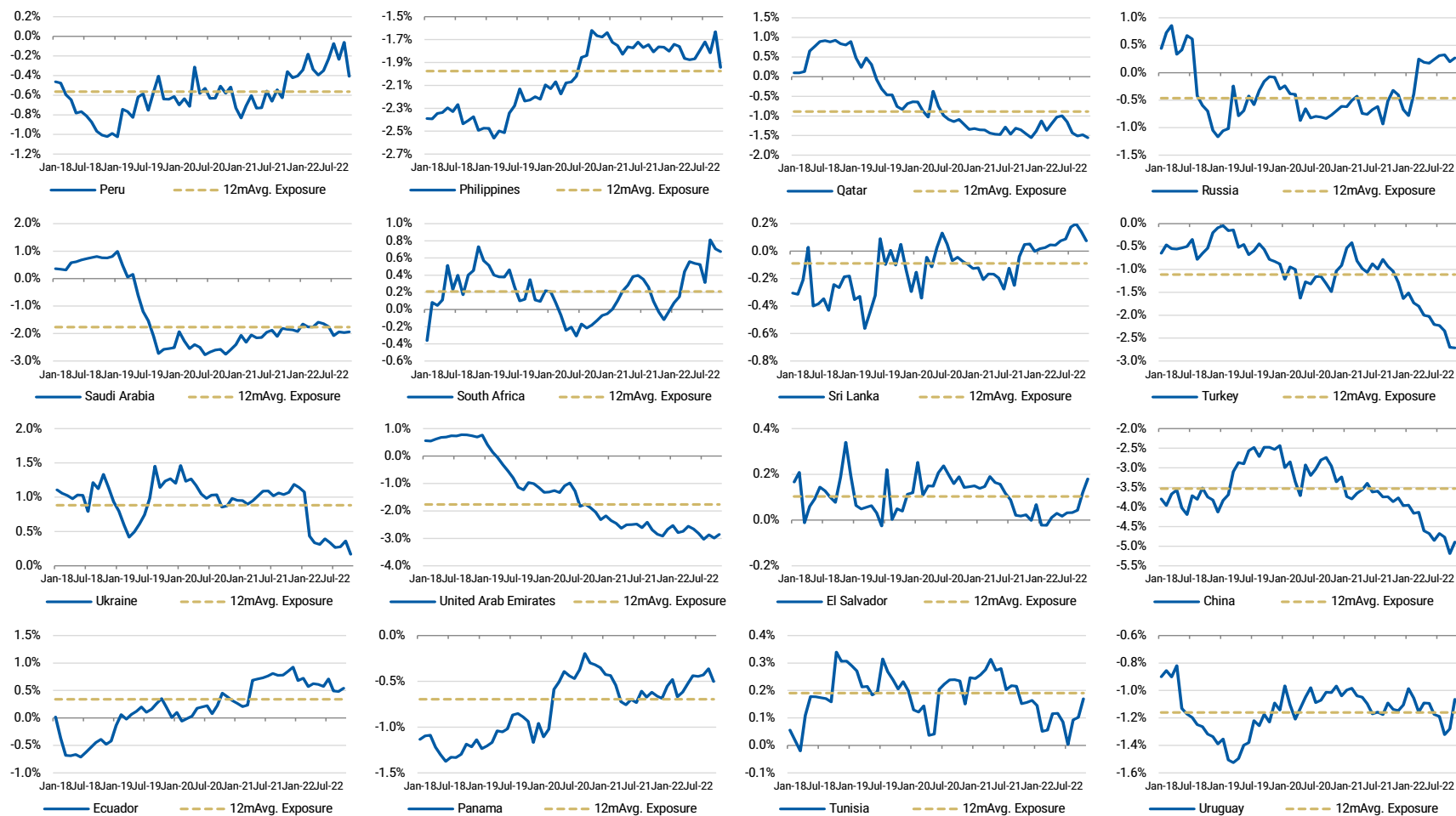


Source: EPFR monthly data, Morgan Stanley Research



## EM credit fund exposures vs. benchmark – country history page 2

**Exhibit 66:** EM credit fund exposures vs. benchmark: country level – history (cont.)



Source: EPFR monthly data, Morgan Stanley Research

## EM fixed income and foreign exchange strategy

New York			
Simon Waever	Global Head of EM Sovereign Credit Strategy	<a href="mailto:Simon.Waever@morganstanley.com">Simon.Waever@morganstanley.com</a>	+1 212 296 8101
Gilberto Hernandez-Gomez	LatAm Macro Strategy	<a href="mailto:Gilberto.Hernandez-Gomez@morganstanley.com">Gilberto.Hernandez-Gomez@morganstanley.com</a>	+1 212 296 8940
Ioana Zamfir	LatAm Macro Strategy	<a href="mailto:Ioana.Zamfir@morganstanley.com">Ioana.Zamfir@morganstanley.com</a>	+1 212 761 4012
Emma Cerda	EM Sovereign Credit Strategy	<a href="mailto:Emma.Cerda@morganstanley.com">Emma.Cerda@morganstanley.com</a>	+1 212 761 2344
London			
James Lord	Global Head of EM Fixed Income Strategy	<a href="mailto:James.Lord@morganstanley.com">James.Lord@morganstanley.com</a>	+44 (0)20 7677 3254
Neville Mandimika	EM Sovereign Credit Strategy	<a href="mailto:Neville.Mandimika@morganstanley.com">Neville.Mandimika@morganstanley.com</a>	+44 (0)20 7425 2509
Filip Denchev	EM Local Rates Strategy	<a href="mailto:Filip.Denchev@morganstanley.com">Filip.Denchev@morganstanley.com</a>	+44 (0)20 7677 3166
Pascal Bode	EM Sovereign Credit Strategy	<a href="mailto:Pascal.Bode@morganstanley.com">Pascal.Bode@morganstanley.com</a>	+44 (0)20 7425-3282
Hong Kong			
Min Dai	Head of Asia Macro Strategy	<a href="mailto:Min.Dai@morganstanley.com">Min.Dai@morganstanley.com</a>	+852 2239 7983
Kelvin Pang	AXJ Corporate Credit Strategy	<a href="mailto:Kelvin.Pang@morganstanley.com">Kelvin.Pang@morganstanley.com</a>	+852 2848 8204
Belle Chang	EM Sovereign Credit Strategy	<a href="mailto:Belle.Chang@morganstanley.com">Belle.Chang@morganstanley.com</a>	+852 3963 0668
Madan Reddy	AXJ FX and Rates Strategy	<a href="mailto:Madan.Reddy@morganstanley.com">Madan.Reddy@morganstanley.com</a>	+852 2239 1792

*Note: The EPFR data and charts displayed here must not be extracted and republished (whether internally or externally). Such use will violate the terms of Morgan Stanley's contract with EPFR which only covers named users.*

*Important note regarding economic sanctions. This research references country/ies which are generally the subject of comprehensive or selective sanctions programs administered or enforced by the U.S. Department of the Treasury's Office of Foreign Assets Control ("OFAC"), the European Union and/or by other countries and multi-national bodies. Any references in this report to entities, debt or equity instruments, projects or persons that may be covered by such sanctions are strictly informational, and should not be read as recommending or advising as to any investment activities in relation to such entities, instruments or projects. Users of this survey are solely responsible for ensuring that their investment activities in relation to any sanctioned country/ies are carried out in compliance with applicable sanctions.*

## Disclosure Section

The information and opinions in Morgan Stanley Research were prepared or are disseminated by Morgan Stanley & Co. LLC and/or Morgan Stanley C.T.V.M. S.A. and/or Morgan Stanley México, Casa de Bolsa, S.A. de C.V. and/or Morgan Stanley Canada Limited and/or Morgan Stanley & Co. International plc and/or Morgan Stanley Europe S.E. and/or RMB Morgan Stanley Proprietary Limited and/or Morgan Stanley MUFG Securities Co., Ltd. and/or Morgan Stanley Capital Group Japan Co., Ltd. and/or Morgan Stanley Asia Limited and/or Morgan Stanley Asia (Singapore) Pte. (Registration number 199206298Z) and/or Morgan Stanley Asia (Singapore) Securities Pte Ltd (Registration number 200008434H), regulated by the Monetary Authority of Singapore (which accepts legal responsibility for its contents and should be contacted with respect to any matters arising from, or in connection with, Morgan Stanley Research) and/or Morgan Stanley Taiwan Limited and/or Morgan Stanley & Co International plc, Seoul Branch, and/or Morgan Stanley Australia Limited (A.B.N. 67 003 734 576, holder of Australian financial services license No. 233742, which accepts responsibility for its contents), and/or Morgan Stanley Wealth Management Australia Pty Ltd (A.B.N. 19 009 145 555, holder of Australian financial services license No. 240813, which accepts responsibility for its contents), and/or Morgan Stanley India Company Private Limited, regulated by the Securities and Exchange Board of India ("SEBI") and holder of licenses as a Research Analyst (SEBI Registration No. INH000001105), Stock Broker (BSE Registration No. INB011054237 and NSE Registration No. INB/INF231054231), Merchant Banker (SEBI Registration No. INM000011203), and depository participant with National Securities Depository Limited (SEBI Registration No. IN-DP-NSDL-372-2014) which accepts the responsibility for its contents and should be contacted with respect to any matters arising from, or in connection with, Morgan Stanley Research, and their affiliates (collectively, "Morgan Stanley").

For important disclosures, stock price charts and equity rating histories regarding companies that are the subject of this report, please see the Morgan Stanley Research Disclosure Website at [www.morganstanley.com/researchdisclosures](http://www.morganstanley.com/researchdisclosures), or contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY, 10036 USA.

For valuation methodology and risks associated with any recommendation, rating or price target referenced in this research report, please contact the Client Support Team as follows: US/Canada +1 800 303-2495; Hong Kong +852 2848-5999; Latin America +1 718 754-5444 (U.S.); London +44 (0)20-7425-8169; Singapore +65 6834-6860; Sydney +61 (0)2-9770-1505; Tokyo +81 (0)3-6836-9000. Alternatively you may contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY 10036 USA.

### Analyst Certification

The following analysts hereby certify that their views about the companies and their securities discussed in this report are accurately expressed and that they have not received and will not receive direct or indirect compensation in exchange for expressing specific recommendations or views in this report: Pascal N Bode; Emma C Cerda; Belle Chang; Min Dai; Gilberto A Hernandez-Gomez; Simon Waever.

### Global Research Conflict Management Policy

Morgan Stanley Research has been published in accordance with our conflict management policy, which is available at [www.morganstanley.com/institutional/research/conflictolicies](http://www.morganstanley.com/institutional/research/conflictolicies). A Portuguese version of the policy can be found at [www.morganstanley.com.br](http://www.morganstanley.com.br)

### Important Regulatory Disclosures on Subject Companies

The equity research analysts or strategists principally responsible for the preparation of Morgan Stanley Research have received compensation based upon various factors, including quality of research, investor client feedback, stock picking, competitive factors, firm revenues and overall investment banking revenues. Equity Research analysts' or strategists' compensation is not linked to investment banking or capital markets transactions performed by Morgan Stanley or the profitability or revenues of particular trading desks.

Morgan Stanley and its affiliates do business that relates to companies/instruments covered in Morgan Stanley Research, including market making, providing liquidity, fund management, commercial banking, extension of credit, investment services and investment banking. Morgan Stanley sells to and buys from customers the securities/instruments of companies covered in Morgan Stanley Research on a principal basis. Morgan Stanley may have a position in the debt of the Company or instruments discussed in this report. Morgan Stanley trades or may trade as principal in the debt securities (or in related derivatives) that are the subject of the debt research report.

Certain disclosures listed above are also for compliance with applicable regulations in non-US jurisdictions.

### STOCK RATINGS

Morgan Stanley uses a relative rating system using terms such as Overweight, Equal-weight, Not-Rated or Underweight (see definitions below). Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold and sell. Investors should carefully read the definitions of all ratings used in Morgan Stanley Research. In addition, since Morgan Stanley Research contains more complete information concerning the analyst's views, investors should carefully read Morgan Stanley Research, in its entirety, and not infer the contents from the rating alone. In any case, ratings (or research) should not be used or relied upon as investment advice. An investor's decision to buy or sell a stock should depend on individual circumstances (such as the investor's existing holdings) and other considerations.

### Global Stock Ratings Distribution

(as of October 31, 2022)

The Stock Ratings described below apply to Morgan Stanley's Fundamental Equity Research and do not apply to Debt Research produced by the Firm. For disclosure purposes only (in accordance with FINRA requirements), we include the category headings of Buy, Hold, and Sell alongside our ratings of Overweight, Equal-weight, Not-Rated and Underweight. Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold, and sell but represent recommended relative weightings (see definitions below). To satisfy regulatory requirements, we correspond Overweight, our most positive stock rating, with a buy recommendation; we correspond Equal-weight and Not-Rated to hold and Underweight to sell recommendations, respectively.

STOCK RATING CATEGORY	COVERAGE UNIVERSE		INVESTMENT BANKING CLIENTS (IBC)			OTHER MATERIAL INVESTMENT SERVICES CLIENTS (MISC)	
	COUNT	% OF TOTAL	COUNT	% OF TOTAL IBC	% OF RATING CATEGORY	COUNT	% OF TOTAL OTHER MSC
<b>Overweight/Buy</b>	<b>1353</b>	<b>38%</b>	<b>288</b>	<b>41%</b>	<b>21%</b>	<b>597</b>	<b>39%</b>
<b>Equal-weight/Hold</b>	<b>1599</b>	<b>45%</b>	<b>326</b>	<b>47%</b>	<b>20%</b>	<b>709</b>	<b>46%</b>
<b>Not-Rated/Hold</b>	<b>1</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>0%</b>	<b>0</b>	<b>0%</b>
<b>Underweight/Sell</b>	<b>624</b>	<b>17%</b>	<b>80</b>	<b>12%</b>	<b>13%</b>	<b>220</b>	<b>14%</b>
<b>TOTAL</b>	<b>3,577</b>		<b>694</b>			<b>1526</b>	

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months. Due to rounding off of decimals, the percentages provided in the "% of total" column may not add up to exactly 100 percent.

### Analyst Stock Ratings

Overweight (O or Over) - The stock's total return is expected to exceed the total return of the relevant country MSCI Index or the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis over the next 12-18 months.

Equal-weight (E or Equal) - The stock's total return is expected to be in line with the total return of the relevant country MSCI Index or the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis over the next 12-18 months.

Not-Rated (NR) - Currently the analyst does not have adequate conviction about the stock's total return relative to the relevant country MSCI Index or the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Underweight (U or Under) - The stock's total return is expected to be below the total return of the relevant country MSCI Index or the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Unless otherwise specified, the time frame for price targets included in Morgan Stanley Research is 12 to 18 months.

### Analyst Industry Views

Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.

In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below.

Cautious (C): The analyst views the performance of his or her industry coverage universe over the next 12-18 months with caution vs. the relevant broad market benchmark, as indicated below.

Benchmarks for each region are as follows: North America - S&P 500; Latin America - relevant MSCI country index or MSCI Latin America Index; Europe - MSCI Europe; Japan - TOPIX; Asia - relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

### Important Disclosures for Morgan Stanley Smith Barney LLC & E\*TRADE Securities LLC Customers

Important disclosures regarding the relationship between the companies that are the subject of Morgan Stanley Research and Morgan Stanley Smith Barney LLC or Morgan Stanley or any of their affiliates, are available on the Morgan Stanley Wealth Management disclosure website at [www.morganstanley.com/online/researchdisclosures](http://www.morganstanley.com/online/researchdisclosures). For Morgan Stanley specific disclosures, you may refer to [www.morganstanley.com/researchdisclosures](http://www.morganstanley.com/researchdisclosures).

Each Morgan Stanley research report is reviewed and approved on behalf of Morgan Stanley Smith Barney LLC and E\*TRADE Securities LLC. This review and approval is conducted by the same person who reviews the research report on behalf of Morgan Stanley. This could create a conflict of interest.

### Other Important Disclosures

Morgan Stanley Research policy is to update research reports as and when the Research Analyst and Research Management deem appropriate, based on developments with the issuer, the sector, or the market that may have a material impact on the research views or opinions stated therein. In addition, certain Research publications are intended to be updated on a regular periodic basis (weekly/monthly/quarterly/annual) and will ordinarily be updated with that frequency, unless the Research Analyst and Research Management determine that a different publication schedule is appropriate based on current conditions. Morgan Stanley is not acting as a municipal advisor and the opinions or views contained herein are not intended to be, and do not constitute, advice within the meaning of Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act.

Morgan Stanley produces an equity research product called a "Tactical Idea." Views contained in a "Tactical Idea" on a particular stock may be contrary to the recommendations or views expressed in research on the same stock. This may be the result of differing time horizons, methodologies, market events, or other factors. For all research available on a particular stock, please contact your sales representative or go to Matrix at <http://www.morganstanley.com/matrix>.

Morgan Stanley Research is provided to our clients through our proprietary research portal on Matrix and also distributed electronically by Morgan Stanley to clients. Certain, but not all, Morgan Stanley Research products are also made available to clients through third-party vendors or redistributed to clients through alternate electronic means as a convenience. For access to all available Morgan Stanley Research, please contact your sales representative or go to Matrix at <http://www.morganstanley.com/matrix>.

Any access and/or use of Morgan Stanley Research is subject to Morgan Stanley's Terms of Use (<http://www.morganstanley.com/terms.html>). By accessing and/or using Morgan Stanley Research, you are indicating that you have read and agree to be bound by our Terms of Use (<http://www.morganstanley.com/terms.html>). In addition you consent to Morgan Stanley processing your personal data and using cookies in accordance with our Privacy Policy and our Global Cookies Policy ([http://www.morganstanley.com/privacy\\_pledge.html](http://www.morganstanley.com/privacy_pledge.html)), including for the purposes of setting your preferences and to collect readership data so that we can deliver better and more personalized service and products to you. To find out more information about how Morgan Stanley processes personal data, how we use cookies and how to reject cookies see our Privacy Policy and our Global Cookies Policy ([http://www.morganstanley.com/privacy\\_pledge.html](http://www.morganstanley.com/privacy_pledge.html)).

If you do not agree to our Terms of Use and/or if you do not wish to provide your consent to Morgan Stanley processing your personal data or using cookies please do not access our research.

Morgan Stanley Research does not provide individually tailored investment advice. Morgan Stanley Research has been prepared without regard to the

circumstances and objectives of those who receive it. Morgan Stanley recommends that investors independently evaluate particular investments and strategies, and encourages investors to seek the advice of a financial adviser. The appropriateness of an investment or strategy will depend on an investor's circumstances and objectives. The securities, instruments, or strategies discussed in Morgan Stanley Research may not be suitable for all investors, and certain investors may not be eligible to purchase or participate in some or all of them. Morgan Stanley Research is not an offer to buy or sell or the solicitation of an offer to buy or sell any security/instrument or to participate in any particular trading strategy. The value of and income from your investments may vary because of changes in interest rates, foreign exchange rates, default rates, prepayment rates, securities/instruments prices, market indexes, operational or financial conditions of companies or other factors. There may be time limitations on the exercise of options or other rights in securities/instruments transactions. Past performance is not necessarily a guide to future performance. Estimates of future performance are based on assumptions that may not be realized. If provided, and unless otherwise stated, the closing price on the cover page is that of the primary exchange for the subject company's securities/instruments.

The fixed income research analysts, strategists or economists principally responsible for the preparation of Morgan Stanley Research have received compensation based upon various factors, including quality, accuracy and value of research, firm profitability or revenues (which include fixed income trading and capital markets profitability or revenues), client feedback and competitive factors. Fixed Income Research analysts', strategists' or economists' compensation is not linked to investment banking or capital markets transactions performed by Morgan Stanley or the profitability or revenues of particular trading desks.

The "Important Regulatory Disclosures on Subject Companies" section in Morgan Stanley Research lists all companies mentioned where Morgan Stanley owns 1% or more of a class of common equity securities of the companies. For all other companies mentioned in Morgan Stanley Research, Morgan Stanley may have an investment of less than 1% in securities/instruments or derivatives of securities/instruments of companies and may trade them in ways different from those discussed in Morgan Stanley Research. Employees of Morgan Stanley not involved in the preparation of Morgan Stanley Research may have investments in securities/instruments or derivatives of securities/instruments of companies mentioned and may trade them in ways different from those discussed in Morgan Stanley Research. Derivatives may be issued by Morgan Stanley or associated persons.

With the exception of information regarding Morgan Stanley, Morgan Stanley Research is based on public information. Morgan Stanley makes every effort to use reliable, comprehensive information, but we make no representation that it is accurate or complete. We have no obligation to tell you when opinions or information in Morgan Stanley Research change apart from when we intend to discontinue equity research coverage of a subject company. Facts and views presented in Morgan Stanley Research have not been reviewed by, and may not reflect information known to, professionals in other Morgan Stanley business areas, including investment banking personnel.

Morgan Stanley Research personnel may participate in company events such as site visits and are generally prohibited from accepting payment by the company of associated expenses unless pre-approved by authorized members of Research management.

Morgan Stanley may make investment decisions that are inconsistent with the recommendations or views in this report.

To our readers based in Taiwan or trading in Taiwan securities/instruments: Information on securities/instruments that trade in Taiwan is distributed by Morgan Stanley Taiwan Limited ("MSTL"). Such information is for your reference only. The reader should independently evaluate the investment risks and is solely responsible for their investment decisions. Morgan Stanley Research may not be distributed to the public media or quoted or used by the public media without the express written consent of Morgan Stanley. Any non-customer reader within the scope of Article 7-1 of the Taiwan Stock Exchange Recommendation Regulations accessing and/or receiving Morgan Stanley Research is not permitted to provide Morgan Stanley Research to any third party (including but not limited to related parties, affiliated companies and any other third parties) or engage in any activities regarding Morgan Stanley Research which may create or give the appearance of creating a conflict of interest. Information on securities/instruments that do not trade in Taiwan is for informational purposes only and is not to be construed as a recommendation or a solicitation to trade in such securities/instruments. MSTL may not execute transactions for clients in these securities/instruments.

Certain information in Morgan Stanley Research was sourced by employees of the Shanghai Representative Office of Morgan Stanley Asia Limited for the use of Morgan Stanley Asia Limited.

Morgan Stanley is not incorporated under PRC law and the research in relation to this report is conducted outside the PRC. Morgan Stanley Research does not constitute an offer to sell or the solicitation of an offer to buy any securities in the PRC. PRC investors shall have the relevant qualifications to invest in such securities and shall be responsible for obtaining all relevant approvals, licenses, verifications and/or registrations from the relevant governmental authorities themselves. Neither this report nor any part of it is intended as, or shall constitute, provision of any consultancy or advisory service of securities investment as defined under PRC law. Such information is provided for your reference only.

Morgan Stanley Research is disseminated in Brazil by Morgan Stanley C.T.V.M. S.A. located at Av. Brigadeiro Faria Lima, 3600, 6th floor, São Paulo - SP, Brazil; and is regulated by the Comissão de Valores Mobiliários; in Mexico by Morgan Stanley México, Casa de Bolsa, S.A. de C.V which is regulated by Comisión Nacional Bancaria y de Valores. Paseo de los Tamarindos 90, Torre 1, Col. Bosques de las Lomas Floor 29, 05120 Mexico City; in Japan by Morgan Stanley MUFG Securities Co., Ltd. and, for Commodities related research reports only, Morgan Stanley Capital Group Japan Co., Ltd; in Hong Kong by Morgan Stanley Asia Limited (which accepts responsibility for its contents) and by Morgan Stanley Bank Asia Limited; in Singapore by Morgan Stanley Asia (Singapore) Pte. (Registration number 199206298Z) and/or Morgan Stanley Asia (Singapore) Securities Pte Ltd (Registration number 200008434H), regulated by the Monetary Authority of Singapore (which accepts legal responsibility for its contents and should be contacted with respect to any matters arising from, or in connection with, Morgan Stanley Research) and by Morgan Stanley Bank Asia Limited, Singapore Branch (Registration number T14FC0118J); in Australia to "wholesale clients" within the meaning of the Australian Corporations Act by Morgan Stanley Australia Limited A.B.N. 67 003 734 576, holder of Australian financial services license No. 233742, which accepts responsibility for its contents; in Australia to "wholesale clients" and "retail clients" within the meaning of the Australian Corporations Act by Morgan Stanley Wealth Management Australia Pty Ltd (A.B.N. 19 009 145 555, holder of Australian financial services license No. 240813, which accepts responsibility for its contents; in Korea by Morgan Stanley & Co International plc, Seoul Branch; in India by Morgan Stanley India Company Private Limited; in Canada by Morgan Stanley Canada Limited; in Germany and the European Economic Area where required by Morgan Stanley Europe S.E., authorised and regulated by Bundesanstalt fuer Finanzdienstleistungsaufsicht (BaFin) under the reference number 149169; in the US by Morgan Stanley & Co. LLC, which accepts responsibility for its contents. Morgan Stanley & Co. International plc, authorized by the Prudential Regulatory Authority and regulated by the Financial Conduct Authority and the Prudential Regulatory Authority, disseminates in the UK research that it has prepared, and approves solely for the purposes of section 21 of the Financial Services and Markets Act 2000, research which has been prepared by any of its affiliates. RMB Morgan Stanley Proprietary Limited is a member of the JSE Limited and A2X (Pty) Ltd. RMB Morgan Stanley Proprietary Limited is a joint venture owned equally by Morgan Stanley International Holdings Inc. and RMB Investment Advisory (Proprietary) Limited, which is wholly owned by FirstRand Limited. The information in Morgan Stanley Research is being disseminated by Morgan Stanley Saudi Arabia, regulated by the Capital Market Authority in the Kingdom of Saudi Arabia, and is directed at Sophisticated investors only.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (DIFC Branch), regulated by the Dubai Financial Services Authority (the DFSA), and is directed at Professional Clients only, as defined by the DFSA. The financial products or financial services to which this research relates will only be made available to a customer who we are satisfied meets the regulatory criteria to be a Professional Client. A distribution of the different MS Research ratings or recommendations, in percentage terms for Investments in each sector covered, is available upon request from your sales representative.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (QFC Branch), regulated by the Qatar Financial Centre Regulatory Authority (the QFCRA), and is directed at business customers and market counterparties only and is not intended for Retail Customers as defined by the QFCRA.

As required by the Capital Markets Board of Turkey, investment information, comments and recommendations stated here, are not within the scope of

investment advisory activity. Investment advisory service is provided exclusively to persons based on their risk and income preferences by the authorized firms. Comments and recommendations stated here are general in nature. These opinions may not fit to your financial status, risk and return preferences. For this reason, to make an investment decision by relying solely to this information stated here may not bring about outcomes that fit your expectations.

The trademarks and service marks contained in Morgan Stanley Research are the property of their respective owners. Third-party data providers make no warranties or representations relating to the accuracy, completeness, or timeliness of the data they provide and shall not have liability for any damages relating to such data. The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of MSCI and S&P.

Morgan Stanley Research, or any portion thereof may not be reprinted, sold or redistributed without the written consent of Morgan Stanley.

Indicators and trackers referenced in Morgan Stanley Research may not be used as, or treated as, a benchmark under Regulation EU 2016/1011, or any other similar framework.

The issuers and/or fixed income products recommended or discussed in certain fixed income research reports may not be continuously followed. Accordingly, investors should regard those fixed income research reports as providing stand-alone analysis and should not expect continuing analysis or additional reports relating to such issuers and/or individual fixed income products.

Morgan Stanley may hold, from time to time, material financial and commercial interests regarding the company subject to the Research report.

The following authors are Fixed Income Research Analysts/Strategists and are not opining on or expressing recommendations on equity securities: Min Dai; Simon Waever; Belle Chang; Emma C Cerda; Pascal N Bode; Gilberto A Hernandez-Gomez.

© 2022 Morgan Stanley