



Sustainable finance continues to be a key focus area for global investors and policy makers. As discussed in the recent Global Financial Stability Reports, the segment came to prominence in advanced economies earlier but has been expanding steadily in EMs, more recently. This special feature is the first in a series of notes delving deeper into the sustainable finance market in emerging markets. This note delves deeper into the green bond market in EMs highlighting the trends over the last few years along with the differences across various dimensions including economic sectors, ownership types, maturity, and coupon rates.

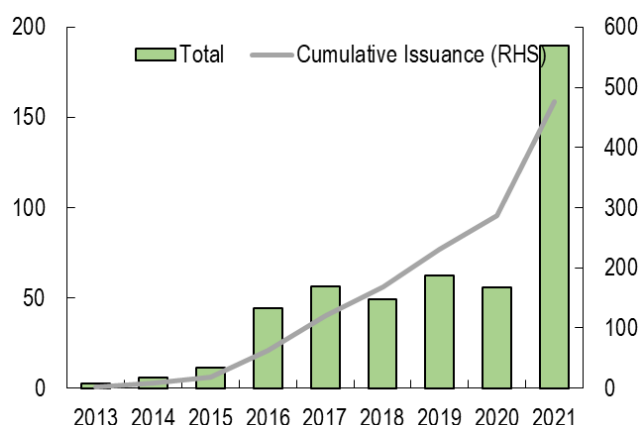
## 2021 WAS A BREAKOUT YEAR FOR EMERGING MARKET ESG FLOWS

**2021 turned out to be a breakout year for sustainable financial markets in EMs.** EMs saw a strong rebound in ESG flows, on the back of exceptional bond issuance volumes and sustained strong flows into equities.

- **Bonds:** Gross flows into EM ESG related bonds were ~\$190 bn in 2021 against average \$60 bn in the last 2 years (Chart 1). This accounts for ~40 percent of the total cumulative issuance of ~\$475bn since 2015. The sharp acceleration in 2021 comes after sustainable finance strategies became more mainstream in EMs, driven in part by pandemic induced demand, as also reflected in the use of green borrowing strategies in LATAM. The share of EM in global ESG issuance had fallen from 30.7% in 2016 to 7.3% in 2020 reflecting an early lead by the advanced economies when it comes to ESG strategies. However, with EM bond issuance growing at around 250% in 2021, EM's share in global bond issuance has risen to 12.3% for 2021 with this being the first year where EMs have gained market share at the expense of AEs since 2016.
- **Equities:** ESG equity flows, at \$25bn, were slightly ahead of the record flows of 2020. This led to total assets under management rising to almost \$150bn (Chart 2). The cumulative ~\$50bn flows in the last 2 years compares with \$20bn in the last 6 years. The rising penetration is also reflected in a sharp rise in the proportion of EM ESG AUM and the number of funds, which rose by 1.2 ppts and 1.9 ppts to 6.4% and 7.8%, respectively.

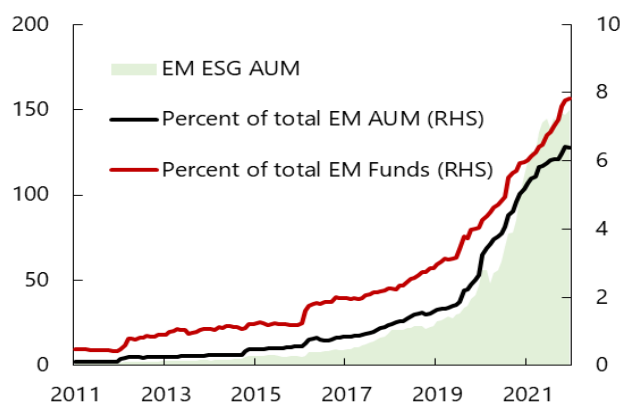
*There is a sharp rise in the EM ESG bond issuance especially in 2021*

**Chart 1. EM ESG Bond Issuance**  
(USD bn.)



*Similarly, AUMs attributed to EM equity funds have also continued to rise*

**Chart 2. EM ESG Equity Funds**  
(USD bn, percent; Based on EPFR data)



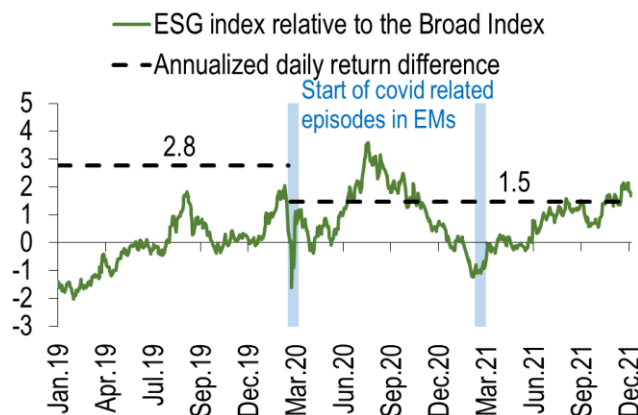
## ESG OUTPERFORMANCE SUPPORTING THE INVESTOR RISK SENTIMENT

**The broader investor optimism about the segment is also reflected in a steady outperformance of ESG assets over the broader indices across asset classes.** This might reflect the fact that ESG issuances were earlier dominated by higher-credit quality issuers, or the sectoral composition of these ESG indices which are dominated by the tech sector.

- **Bonds:** Since 2019, the period over which more than half of EM ESG bonds have been issued, the average annualized return of the ESG segment is 2.1ppts higher than the corresponding broad indices. Since the COVID-19 pandemic this return differential has receded to a still notable 1.5ppts (Chart 3)
- **Equities:** For major EMs<sup>1</sup>, the average annualized return for ESG sub-indices since Jan 2020 is 18.2%, almost 10pp higher than the broad indices. While this average return differential is exaggerated by broader equity indices yielding negative returns in Chile and Brazil, the average return differential since Jan 2020 still stands at meaningful 4.8 ppts for other major EMs, i.e. China, India and Mexico (Chart 4).

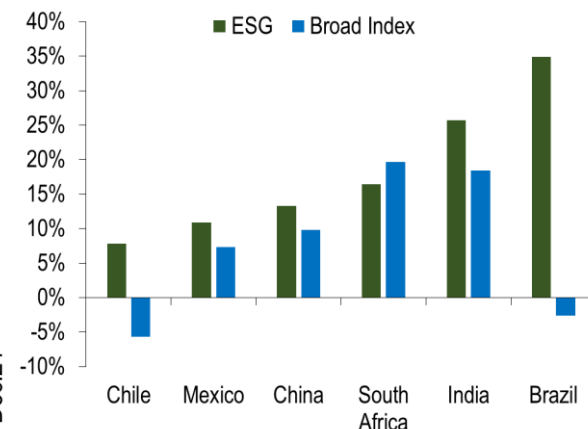
*ESG bonds have outperformed the broader index significantly over the last few years*

**Chart 3. Bond returns: EM ESG vs the broad Index**  
(Indices = 100 on 1 Jan 2020; percent; As aggregated by JP Morgan in its ESG EMBI Global Diversified index)



*ESG equity returns in major issuing EM markets have been higher by ~5-10ppts relative to broader indices*

**Chart 4. Equity Performance: ESG vs the broad Index**  
(Annualized Returns since Jan 2020)



## EM ESG ISSUANCE: EXPANSION ACROSS INSTRUMENTS AND REGIONS

**The sharp rise in the relevance of ESG instruments is also reflected through the changing financing composition for EMs.** ESG instruments (for EMs ex China) account for almost 4% of the total issuance in 2021, which compares with around 1% for the last five years (Chart 5). This shift is even more stark in the offshore markets with ESG instruments accounting for a meaningful 17% of the total issuance in 2021. This compares with just around 4% over the last 5 years<sup>2</sup>.

### Expansion across Instruments (Chart 6)

**Green bonds remain the core part of EM ESG ecosystem...** In 2021, EMs raised \$103bn in green bonds, which is almost 2.5x the average issuance over the last five years. A significant proportion of this rise in issuance came

<sup>1</sup> The sample of China, Chile, India, Mexico, Brazil and South Africa (for which ESG sub-indices are available and which collectively have 16% of all EM ESG equity flows since Jan 2020).

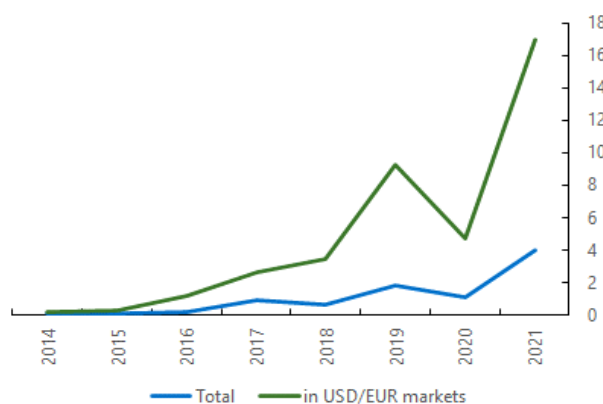
<sup>2</sup> Sample consists for 13 major EMs with the details provided in the annex

from China (up 2.8x in 2021 vs average levels over the last five years), which meets about 90% of its ESG debt finance through green bonds (over 2016-2021). Green bonds constitute 65% of all EM ESG fixed income issuances since 2016, with an annual growth rate of c20% in volumes.

**...however, non-green instruments are rising in prominence too – reflecting the development of a broader sustainable finance ecosystem.** Non-green bond segments accounted for 48% of the total issuance in 2021, which compares with just ~20% in 2016-18. This segment has grown particularly in EMs ex China (i.e Chile, India, Mexico and Brazil) where non-green instruments comprise ~80% of ESG issuance (vs ~0% in 2020). The higher penetration is particularly evident in three sub-sectors: sustainability bonds (14%), sustainability linked bonds (11%) and sustainability linked loans (11%) that collectively raised almost 40% of EM ESG debt funding in EMs ex China vs just 4% over 2016-18.

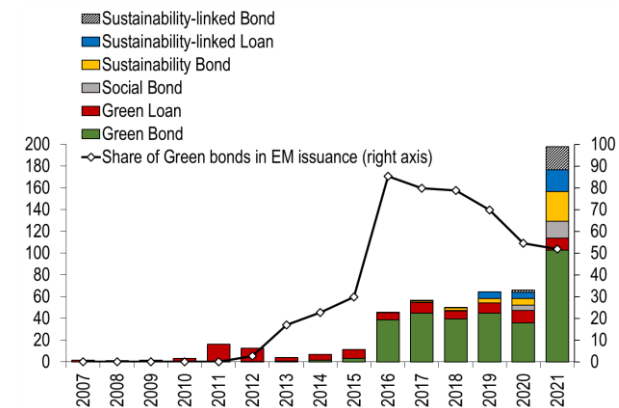
*EM financing composition has been shifting in the favor of ESG instruments, especially in the offshore markets*

**Chart 5. ESG Issuance as a proportion of the total issuance (Percent; for EMs ex China)**



*Green bond remains the core ESG bond segment for EMs, though other categories have picked up recently*

**Chart 6. Yearly ESG debt issuance in EMs, by type (USD Billion, percent)**



### Expansion across regions, with a notable differentiation within EMs (Charts 7 and 8)

**China remains a dominant player in the ESG universe...** With almost \$110bn ESG issuance in 2021. China now stands in the league of leading AE issuers like US, France and Germany, becoming the third largest issuer of ESG debt in the world in 2021. Furthermore, as ESG debt issuance of China is primarily in green bonds, it is now also globally, the second largest issuer in the segment (cumulative green bond issuance of almost ~2% of GDP)

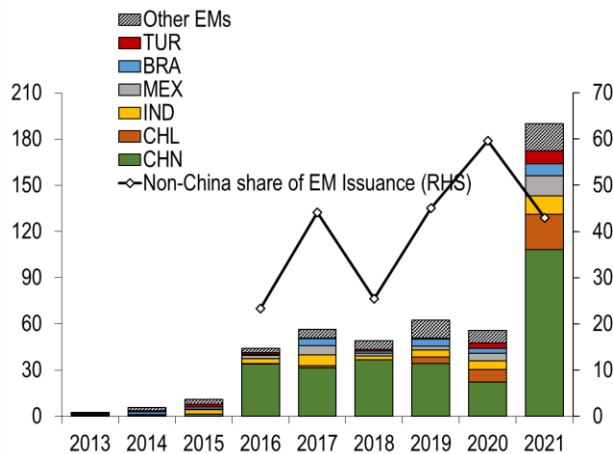
**...with a sharp pickup in EMs ex China as well<sup>3</sup>.** ESG issuance for EMs ex China rose to \$80bn in 2021 (vs average of \$20bn over the last five years), increasing their proportion of total issuance to 42% in 2021 vs ~30% over 2016-18. Green bond issuance also grew sharply to ~\$20 bn in 2021 (vs average of \$11 bn in the last five years). While the rise in the ESG issuance is promising, the breadth of participation is still not very high as the number of issuers remains low and concentrated amongst a handful of entities in most markets.

**India, Chile and Mexico lead the ESG issuance amongst EMs ex China.** Chile (and to a smaller extent Peru) has a significant amount of ESG instruments (as a proportion of its overall issuance) in both domestic and offshore issuances. This contrasts with India and Poland where ESG instruments dominate the offshore financing mix but relatively little in the total issuance. It might reflect the role played by a different set of investors in this segment.

<sup>3</sup> Annexe Tables 1 and 2 provide heatmaps for long-term trends in ESG issuance in EMs and the sub-asset class mix

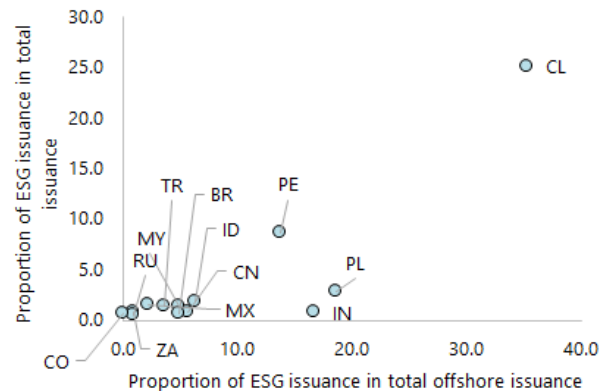
*China used to be a dominant issuer in the EM space, but issuance by other EMs have risen as well recently*

**Chart 7. Yearly ESG debt issuance in EMs, by region**  
(USD Billion, percent)



*EM financing mix has shifted materially towards ESG instruments for a few EMs like Chile, Poland and India*

**Chart 8. ESG Issuance as a proportion of the total issuance – Country level (Percent)**



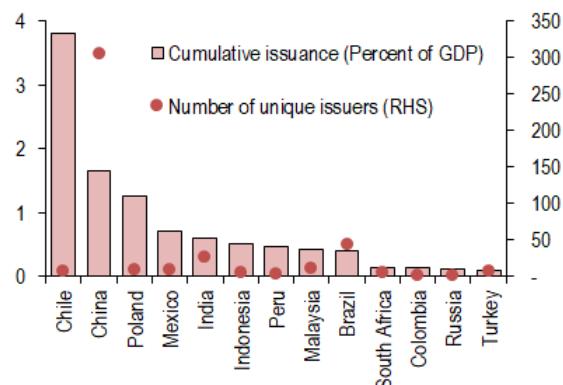
## EM GREEN BONDS: COUNTRY COMPOSITION AND KEY ISSUANCE PARAMETERS

The market depth in the EM green bond space is rising across multiple dimensions. Furthermore, there is a material differentiation not only between China and other EMs, but also within the EM ex China universe. In this section, we will detail the trends and country differentiation in EM green bonds across some of these dimensions.

**Country Variation: Rise in aggregate EM green bonds masks high underlying variation.** As of end 2021, Chile, India, Mexico and Brazil have the largest share in cumulative green bond issuance amongst EMs ex-China. As a percent of GDP, the largest green bond issuances (cumulatively over 2015-2021) are by Chile, China, Poland, Mexico and India. However, there has been a shift in market share over the years. Chile, Poland and Russia have gained in proportion for total green bond issuance over the last three years (as compared to other EMs ex China). However, the market share gains are led by Chile, Indonesia and Peru in terms of the offshore EM ESG issuance. (Charts 9 and 10)

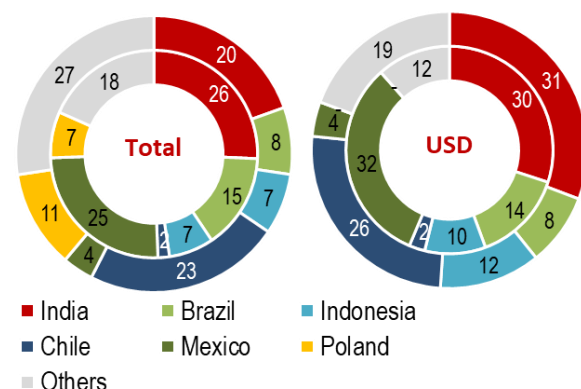
*Chile leads the pack with cumulative green bond issuance of almost 4 percent of GDP*

**Chart 9. Total Green Bond Issuance, as a percent of GDP (Percent)**



*Chile, Poland and other countries gained risen in proportion in the last few years*

**Chart 10. Composition of EM ex CHN green bond issuance (Inner circle: 2014-18; Outer circle: 2018-21)**



**Currency:** China has seen a surge in USD denominations while other EMs expand in other currencies (Charts 11 and 12). Given China's dominant size, CNY denominations account for ~60% of the total EM green bond issuance. However, this trend is changing as China has been issuing a larger portion of its issuance in USD. This combined with large USD green bond issuers (like India, Brazil, Chile and Mexico) maintaining their USD presence imply that the prominence of USD has risen sharply for the overall EM sample. Outside of China, USD remains dominant accounting for almost two-thirds of the green bonds in EMs. Countries like India, Indonesia and Mexico issue primarily in offshore markets. However, role of other currencies is picking up led by EUR (Poland, Turkey and Chile) and other local currencies (Malaysia, Colombia and South Africa).

**Significant difference in the local currency and hard currency ESG denominated instruments potentially also points to investor base dynamics for this segment.** As seen in Chart 5, almost 20% of EM offshore issuance is in ESG linked instruments (vs just 4% for the total issuance). This is also reflected in the fact that a significant portion of green bonds by EMs ex China are denominated in USD / EUR.

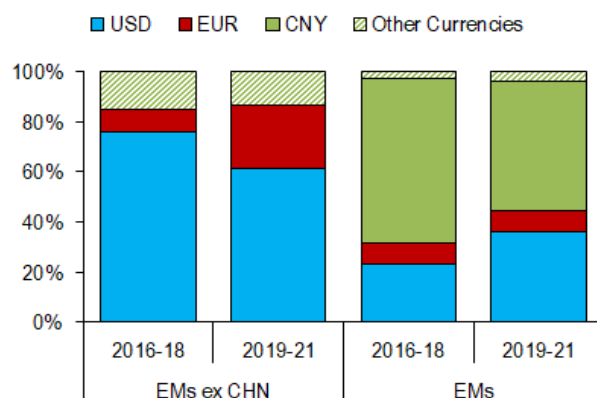
**Economic Sectors:** Rising prominence of non-financial sectors underline the market expansion (Charts 13 and 14): Financial sector has been the dominant issuer of green bonds especially in China (accounting for ~65% of its total issuance). However, over the last three years – proportion of issuance from the non-financial sectors (most notably utilities, energy and industrials) has risen sharply from 30% to 50% for overall EMs, and from 80% to 85% for EMs ex China (comparing 2016-18 vs 2019-21)<sup>4</sup>. In terms of the non-financial sectors, while utilities lead in China and India; industrial and energy sectors have been the largest issuers in Chile, Russia and Mexico

**Ownership Structure:** Varying levels of government participation (Charts 15 and 16) In terms of ownership, there is a sharp difference between China and the rest of EMs. For overall EMs, issuance by government related entities rose from 40% in 2016-18 to almost 60% in 2019-21 primarily due to China, which has witnessed a significant increase in green bond issuance by government related entities since 2019. This potentially reflects the fact that ESG transition is more expressly mandated in China vs most other EMs. Corporate participation is however rising amongst EMs ex-China, to the point that, it constituted 2/3<sup>rd</sup> of 2021 issuances, and half of 2019-21 cumulative issuances (vs 30% of issuances during 2015-18).

## EM Green Bonds: Trends across various dimensions

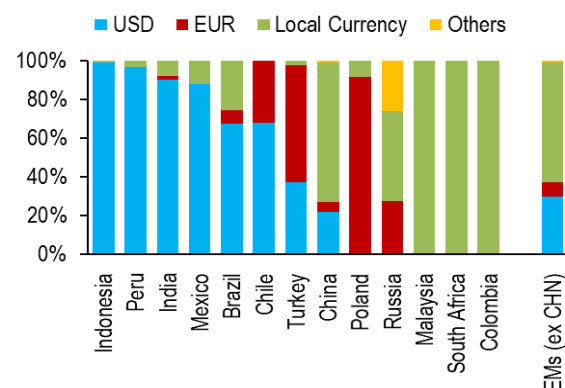
*There is a sharp rise in USD denominated issuances...*

**Chart 11. Split by Currency Denomination**



*... though many countries continue to issue predominantly in the local currency*

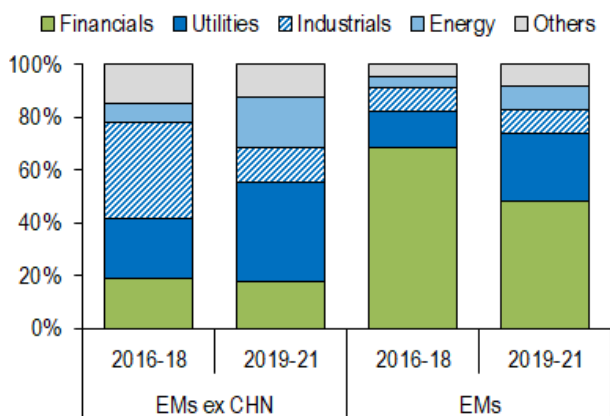
**Chart 12. Split by Currency Denomination, by country**



<sup>4</sup> Financial sector issuance declined not only in relative terms but also absolute. During 2019-21, the financial sector for EMs raised \$69 bn which was ~\$3 bn less than that during 2016-18

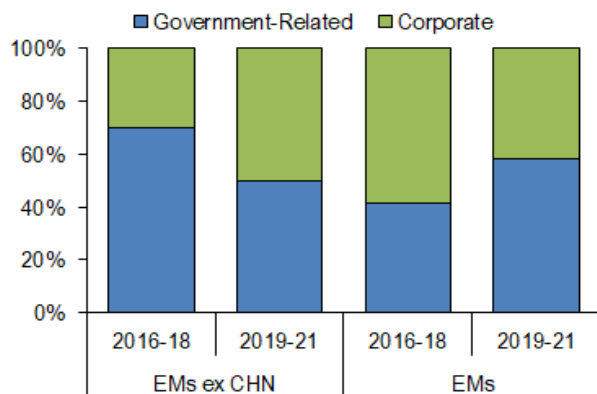
Issuances are also moving away from the financial sector with a rise specifically in the utility sector

**Chart 13. Split by Economic Sectors**



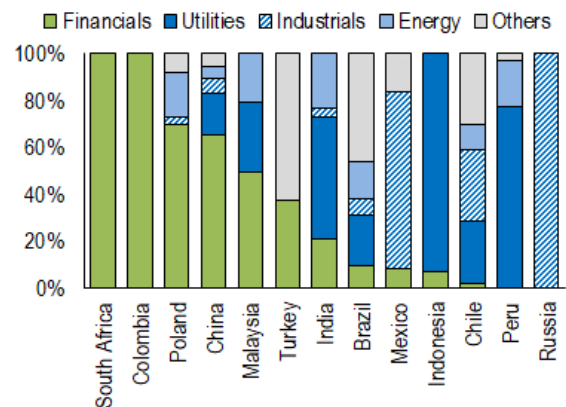
Participation from private sector corporates has risen in EMs ex China, while it has declined in China

**Chart 15. Split by Ownership Type**



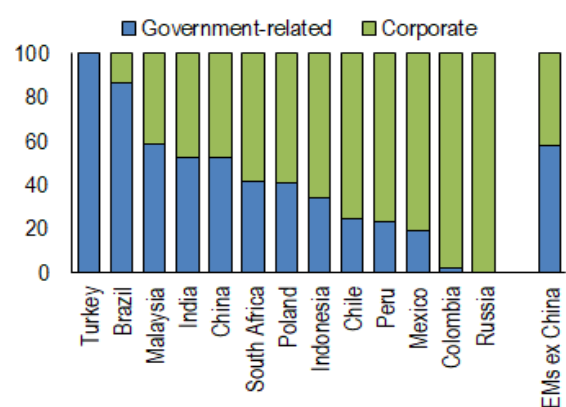
There is a significant difference across countries with some EMs showing a high sectoral concentration

**Chart 14. Split by Economic Sectors, by country**



Many EMs have more than 50% of issuance from government-related sectors

**Chart 16. Split by Ownership Type, by country**



## EM GREEN BONDS: COUPONS AND TENORS SHOW THE EMBEDDED RISK PREMIA

**Embedded risk premia are also reflected in the coupon and tenor profile of EM green bond categories.**

- **FX:** Coupons for USD and CNY denominated bonds are significantly higher than EUR denominated bonds, USD denominated bonds also have the highest tenors while CNY denominated bonds have the lowest tenors (Chart 17).
- **Credit:** Corporate bonds pay significantly higher coupon rates but at less tenors than bonds issued by the government related sectors. This potentially reflects the embedded credit risk premia (Chart 18)
- **Sectoral:** Financials has the lowest coupon and tenor with industrials sector at the other end of the extreme

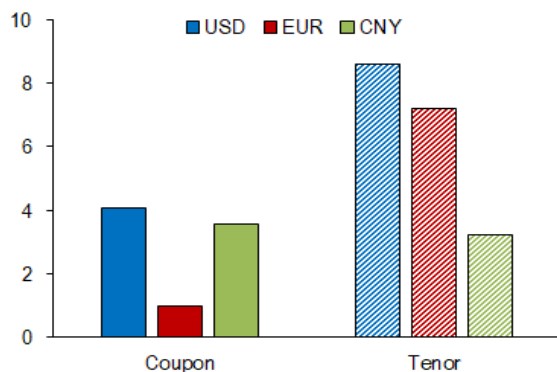
**Country Variation** (Charts 19 and 20): Latin American EMs (led by Chile, Mexico and Peru) have issued long-term tenors while India, China, Turkey and Romania have issued relatively short-term instruments. There is a wide variation in coupons ranging from Poland (<2%) to South Africa and Colombia (~7%). However, this may reflect the differences due to the currency denomination of issuance. In a like-for-like comparison, Brazil, Peru, Turkey and India have paid the highest coupons in USD denominations, while Turkey, India and Indonesia have paid the highest coupons in local currency denominations.



## EM Green Bonds: Coupon and Tenor across different dimensions

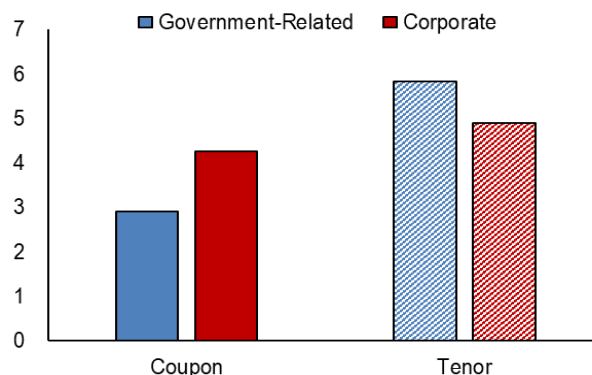
USD denominated issuances have the largest coupon and with the longest tenors; Local issuances in CNY are very short term in nature

**Chart 17. Average coupon and tenor, across different ownership types across different currency denominations...** (Tenor in years, Coupons in percent)



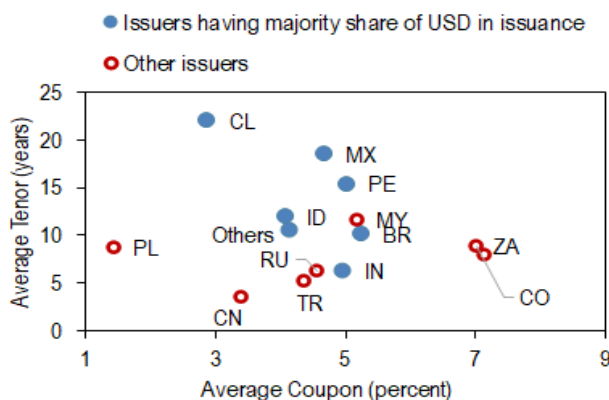
Corporate bonds are higher coupon but less tenors – reflecting the embedded risk premia

**Chart 18. ... and across different ownership types** (Tenor in years, Coupons in percent)



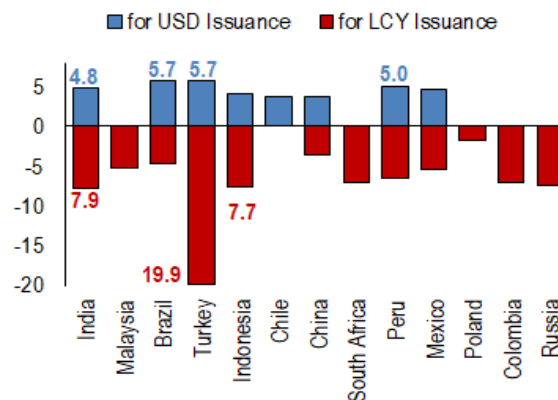
There is a wide range across countries in coupons and tenors, influenced by the currency of issuance as well

**Chart 19. Average coupon and tenor, across different EMs** (Percent, Years)



Brazil, Peru, Turkey and India pay the highest coupons in USD denominations

**Chart 20. Coupon Rates for USD and Local Currency Issuance, across different EMs** (Percent)



## ANNEX: LONG TERM HISTORY OF EM ESG ISSUANCE

*Sustainable Finance Issuance has picked up across EMs in the last few quarters*

**Table 1. Quarterly Sustainable Finance Issuance by key EMs (USD Bn)**

	2015				2016				2017				2018				2019				2020				2021			
Brazil	1	0	0	0	1	0	1	1	1	1	0	0	0	0	1	1	3	1	0	1	1	1	4	2	1	1		
Chile					0	0	1		1							3	0	1	4	0	1	3	7	4	10	1		
China	0	0	0	1	8	1	12	12	2	8	9	12	4	8	7	18	3	9	14	8	4	5	9	4	16	27	34	32
Colombia										0	1	0					0						1			0	0	
India	1	0	0	2	1	1	1	0	2	1	2	2	1	0	1	0	1	1	2	1	2	1	1	2	5	1	5	1
Indonesia				1		0	1	0	1				2	1	0		1		1	1		1	0	1	1	1	1	0
Malaysia											1	0		0			0		1	0		1	0	0	0	2	0	0
Mexico			1			2			0	6			0	1	1	0	0	1	1	0	0	0	2	3	1	4	3	5
Peru																0		0					0	0			0	4
Poland		0	0			1						1					2	0	1	1	0	0	0	1	1	2	1	0
South Africa	2					1				2		0	1	0			0	1				0				0	1	0
Russia									1				0				0	2	0	1	1			1	1	2	0	0
Turkey	0	1	0	1	0	1		1	0	0		1		0			0	0	0	0	1	1	0	2	1	4	1	3

*Green bond category remains the key across EMs but other categories of sustainable debt (like green loan / sustainability bond) are also prominent for a few EMs*

**Table 2. Type of Sustainable Finance Issuance by key EMs (Cumulative since 2015 beginning)**

	Green Loan	Green Bond	Social Bond	Sustainability Bond	Sustainability-linked Loan	Sustainability-linked Bond
Brazil	4	9		2	3	6
Chile	4	12	15	5	0	1
China	12	231	1	10	8	7
Colombia	1	0		0	1	
India	15	17	1	1	2	1
Indonesia	5	5		1	1	0
Malaysia	0	1	0	3	1	
Mexico	4	9	1	5	7	5
Peru	0	1	1	3		0
Poland	1	7		0	1	1
South Africa	7	0	0		1	0
Russia	2	1	1		6	
Turkey	6	1		3	7	