Green bond market summary

Q3 2019

Climate Bonds INITIATIVE

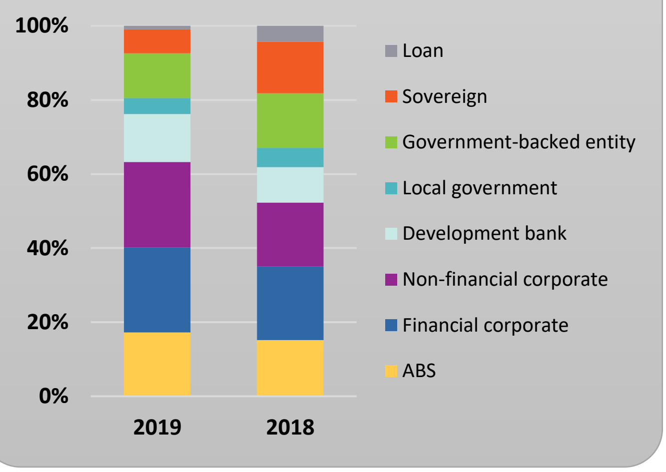
October 2019

The quarter at a glance

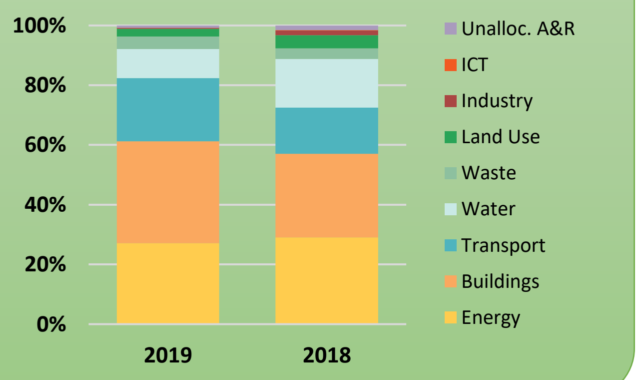
Key figures

- USD62.8bn of issuance* - up 87% year-on-year
- 625 deals* with 477 from the USA, 23 from Japan and 18 each from Sweden and China
- 139 issuers* from 32** countries
- Repeat deals from 3 of 12 sovereign issuers: Chile (GB debut in H1), France and Belgium
- 61 market entrants from 21** countries bring the total number of GB issuers to 816
- 57** GB markets reached: Panama is newest

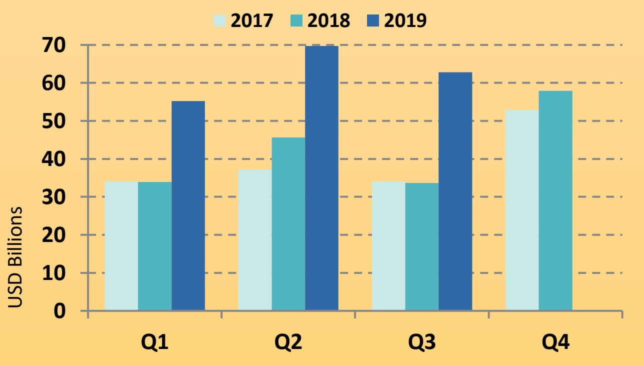
Issuer types: Q3 2019 v Q3 2018



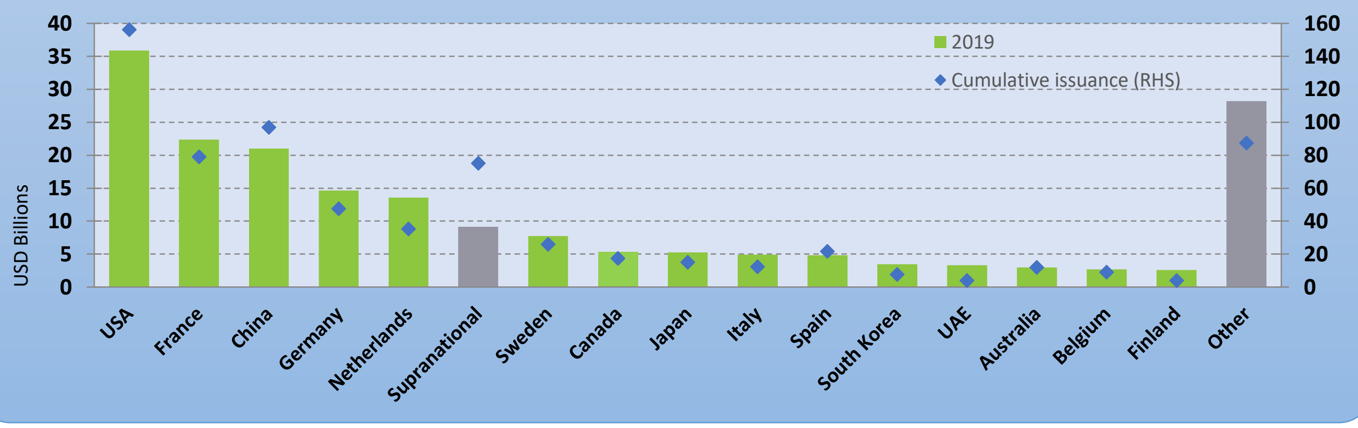
Q3 use of proceeds: 2019 vs 2018



Quarterly issuance volume



2019 green bond issuance (Jan-Sep): top 15 countries



** All charts and analysis are based on preliminary figures for Q3 2019 issuance volume and number of deals, pending the inclusion of 29 deals still under assessment for inclusion in the CBI green bond database. ** Hong Kong is counted as a separate country as it is classified as a developed country according to MSCI's Market Classification, whereas China is classified as an emerging market.*

Q3 2019 green bond issuance highlights

Green bonds **included** in CBI's database for Q3 2019 are up 87% year-on-year, reaching USD62.8bn. For inclusion, at least 95% of proceeds must be dedicated to green assets or projects aligned with Climate Bonds Taxonomy.

A diversifying market

The share of **excluded** bonds increased by 77% compared to Q3 2018. Accounting for excluded bonds in Q3 2019 issuance takes figures to +85% year-on-year. Chinese bonds that do not meet international definitions of green are the largest excluded category, and bonds with high allocations to working capital make up 58% (USD12.3bn) of excluded bonds (*Note: China's Green Bond guidelines allow issuers to use up to 50% for working capital*).

Other recent developments in the broader labelled market include sustainability-linked bonds, such as Enel's *General Purpose SDG Linked Bond*. So-called **transition bonds** have also become a topic of discussion recently with issuers such as Brazilian meat producer Marfrig tapping into the market. Both deals do not comply with the CBI green bond database methodology, so are not included in GB figures.

We expect to see more issuance with a varied set of labels and proceed allocation models in the future, and will track the numbers as outlined in the **labelled bond universe** section on the last page. In this issue, we have also included a **Spotlight on green loans** to shed light on the diversifying funding models available for green debt.

Certified Climate Bonds accounted for 17% of Q3 volumes (+9% year-on-year), with deals from issuers in Australia, Chile, France, Germany, India, Italy, Japan, Netherlands, New Zealand, South Africa, Thailand and the USA. The largest Q3 CCB deal came from French state railway operator **SNCF** (USD1.7bn), which contributed a fifth of the Q3 total Certified volumes with USD2.2bn.

Corporates lead the way

Financial corporates led the way in Q3 2019 issuance with 24% of total volume – up from 20% last year. Notably large deals were contributed by China's **Industrial Bank** (CNY20bn/USD2.9bn) and **ICBC** (USD2.5n). Together they accounted for over a third (36%) of the segment's volume.

Other active parties in the segment included the 6 new and 3 repeat issuer **Japanese REITs** that tapped into the market in Q3 2019, which we highlighted in Market Blog #30. REIT issuances helped to maintain **Buildings** as the most popular use of proceeds category at 34% (Q3 2018: 28%).

Commercial banks were active issuers with Q3 2019 seeing debuts from, for example, Canadian **Bank of Nova Scotia** (USD500m), Dutch **De Volksbank** (EUR500m/USD554m) and Chilean **Banco de Chile** (USD48m).

Non-financial corporates came in a close second in Q3 2019 with a share of 22% (Q3 2018: 17%). The top three issuers, **E.ON** and **EnBW** (Germany) and **Greenko** (India), contributed 26% of the segment's volume. **Energy** remains a popular sector (Q3 2019: 27%, second after Buildings). New entrants appeared across the globe, e.g. **Hanwha** (Republic of Korea) and **Neoenergia** (Brazil).

Less common sectors include postal services and forest conservation. Dutch **Post NL** was the first of its kind to issue a green bond (EUR300m/USD331m) to finance Transport, Energy and Buildings. US-based **Conservation Fund** issued USD150m to finance biodiversity conservation and sustainable practices in forestry assets across the USA.

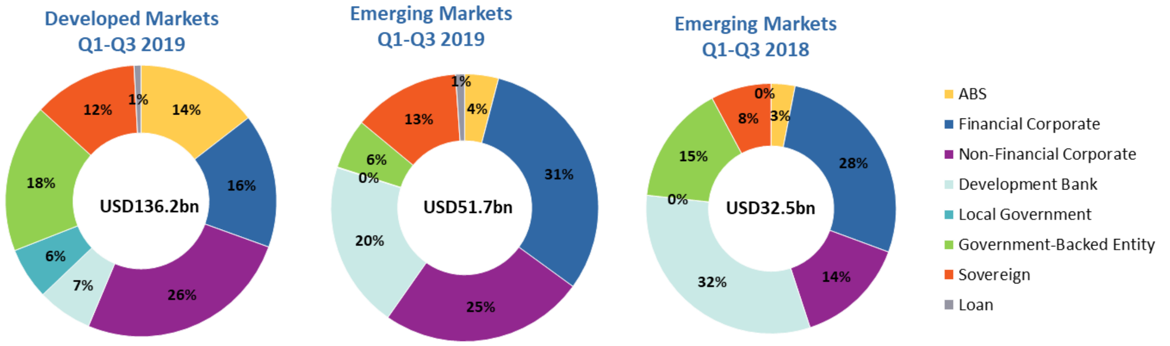
Green bonds from **local government** and **government-backed entities** totalled USD10.3bn for the quarter (Q3 2018: USD6.7bn). German **KfW** was a key issuer in the **development bank** segment, providing the market with 5 bonds worth USD3.6bn in Q3 2019, or 44% of the total.

Sovereign issuance represented 6% of Q3 volume (Q3 2018: 14%). **Chile**, which issued the first Latin American green Sovereign in June (USD1.4bn), returned to the market with a EUR-denominated deal (EUR861m/USD972m).

Emerging market volumes on the rise

Emerging market issuance represented 26% of Q3 2019 volume. Latin American issuers from Brazil, Chile, Peru and Panama have been particularly active. A USD27m initial bond from Panama's **CIFI** was the country's green bond market debut, and forms part of a USD200m programme. See our recent report Latin America & Caribbean: Green finance state of the market 2019 for more on the region.

Absolute volume from EM has risen significantly in 2019.



Spotlight: Blue bonds

Evolving blue finance landscape

The first global framework for sustainable ocean financing, the *Sustainable Blue Economy Finance Principles*, was launched by the European Commission and UNEP FI only in 2018. Blue bonds show potential, albeit only two have been issued so far.

While blue bonds are more likely to be undertaken by public sector and multilateral issuers, private resources can still be involved in project implementation, and corporates operating in ocean-based activities could issue blue bonds to reduce or eliminate the negative impacts of their operations.

CASE STUDY: World's first sovereign blue bond

In October 2018, the Republic of Seychelles issued the world's first sovereign blue bond, a USD15m private placement. The proceeds will support the expansion of MPAs, improved governance of fisheries and the development of the Seychelles' blue economy.

A USD5m partial guarantee from the World Bank and a USD5m concessional loan from the Global Environment Facility (GEF) will partially cover interest payments. This illustrates how international agencies can help to de-risk and scale up sustainable investments.

CASE STUDY: First Nordic-Baltic blue bond

The Nordic Investment Bank (NIB) issued the first Nordic-Baltic blue bond in January 2019, a SEK2bn (USD221m) senior unsecured deal, which targets sustainable investors by supporting water projects around the Baltic Sea. Eligible projects include wastewater treatment, water pollution prevention and water-related climate adaptation.

The term 'blue economy' refers to the sustainable use of the ocean's resources for economic development. Its usage has increased with the growing understanding of human dependence on oceans: after all, every breath we take relies, in part, on oxygen produced by oceans.

Sustainable solutions

Valuing ecosystem services is complex, but it is estimated that marine resources hold USD24tn in assets and generate USD2-3tn in annual revenue. Having absorbed at least one half of GHG emissions since the Industrial Revolution, oceans are crucial for climate mitigation and adaptation.

Many drivers are harming global marine resources, e.g. deforestation, habitat loss and plastic pollution. There are, however, also huge opportunities for conservation, marine planning and sustainable development.

A successful blue economy approach, that accounts for all ocean-based industries and human impacts, is beyond urgent. The real long-term value of marine resources and biodiversity must be recognised. A live shark in the Galapagos, for instance, can bring in over USD5m in tourism revenue; a shark's fin only USD280.

Modern governance structures must address blue issues with a holistic, circular and ecosystems-based approach, rather than by focusing on single activities. Close cooperation between national and international stakeholders is necessary.

Some studies indicate that SDG 14 is receiving the least investment globally out of all the SDGs. Increasing this would also contribute to many other SDGs (see below).

Our recent *Green finance in Latin America and the Caribbean* report looks at the blue economy in detail.

Co-benefits of *SDG 14: Life below water* targets on other SDGs

Note: From *EC International Oceans Governance* report. Bubbles show relative size of *net* benefits. Full impacts shown in a *Marine Policy paper*

Spotlight: Green loans

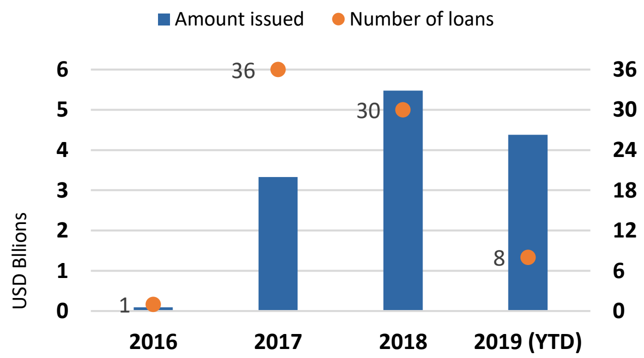
Green loans are labelled credit facilities that are aligned with the [Climate Bonds Taxonomy] and meet the requirements of the CBI green bond database methodology for inclusion in the green bond database. Labelling is often accompanied with an borrower statement that the deal is aligned to the [Green Bond Principles] or the [Green Loan Principles].

Eight borrowers arranged labelled green loans worth USD4.4bn in the first nine months of 2019. This translates for 2.2% of the total green debt issuances in the same time period, including green bonds.

OVG, a Dutch real estate developer, pioneered the first green loan in 2016. The proceeds were used to finance the retrofitting and upgrading of existing buildings to meet the [Low-Carbon Buildings] Criteria under Climate Bonds Standard. This was the first Certified green loan.

Since then, 75 green loans amounting to USD13.3bn have been put in place. Ten are Certified (USD4.6bn or 35%).

Average green loan size growing

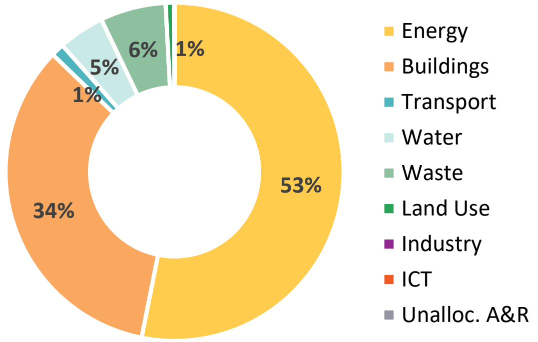


Green loan count rocketed from 1 in 2016 to 36 deals in 2017. Since then, the number of loans has decreased but their average size (defined as total amount/total count) has increased from USD93m in 2017 to USD547m in 019. During the same period in 2018, green loans stood at USD4.7bn with a total of 24 deals.

The **largest credit facility** to date is USD2.7bn, and is a project finance loan . The borrower is **Noor Energy 1**, a concentrated solar power plant development in Dubai, which is a collaboration between developer ACWA Power (Saudi Arabia), Silk Rad Fund (China) and Dubai Electricity and Water Authority (UAE). The loan was put in place in January 2019, and Certified under the Solar Criteria of the Climate Bonds Standard in October.

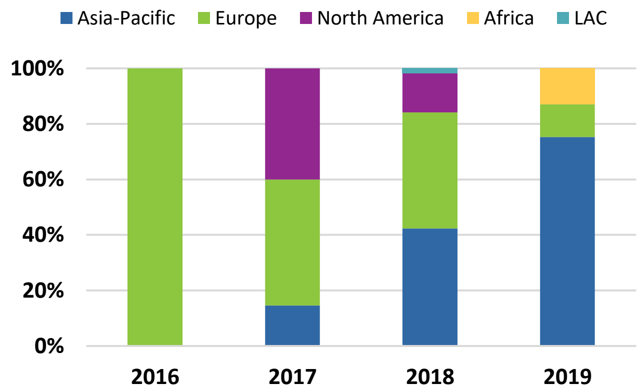
Fannie Mae is the **largest repeat issuer** with 42 green loans worth USD1.96bn. **Contact Energy** (USD487.5m) and **Iberdrola** (USD1.4bn) are also repeat green loan borrowers with three deals each.

Similar to green bonds, energy dominates green lending



About half of green loan proceeds are allocated to **Energy** projects, followed by **Buildings** at just over a third. Transport, Water, Waste and Land use are the remaining allocation categories but with much smaller shares.

Asia-Pacific's share of the green loan market is growing



The first green bond was issued in Europe but since then Europe has seen decreasing green loan issuance, whereas the share of Asa-Pacific loans has grown consistently. Around 46% of the total volume of green loans was taken out by borrowers from Asia-Pacific (USD6.1bn), followed by Europe at 33% (USD4.4bn).

Green loans are less popular in North America, with no deals in 2019 so far. Africa has shown green loan activity this year with the Redstone Solar Thermal Power Plant in South Africa, a joint venture between ACWA Power and SolarReserve, being financed through a ZAR8bn (USD567m) green loan in July 2019.

What else? Over the last year or so we have also seen the emergence of sustainability, social and SDG loans, in which allocations are made to defined climate and social projects, typically a mix. We have also seen SDG-, ESG- and sustainability-linked loans which finance general improvements in corporate sustainability KPIs but do not define eligible categories. Green loans, CBI defines, as loans financing climate solutions with defined catetories.

Trading venue league table

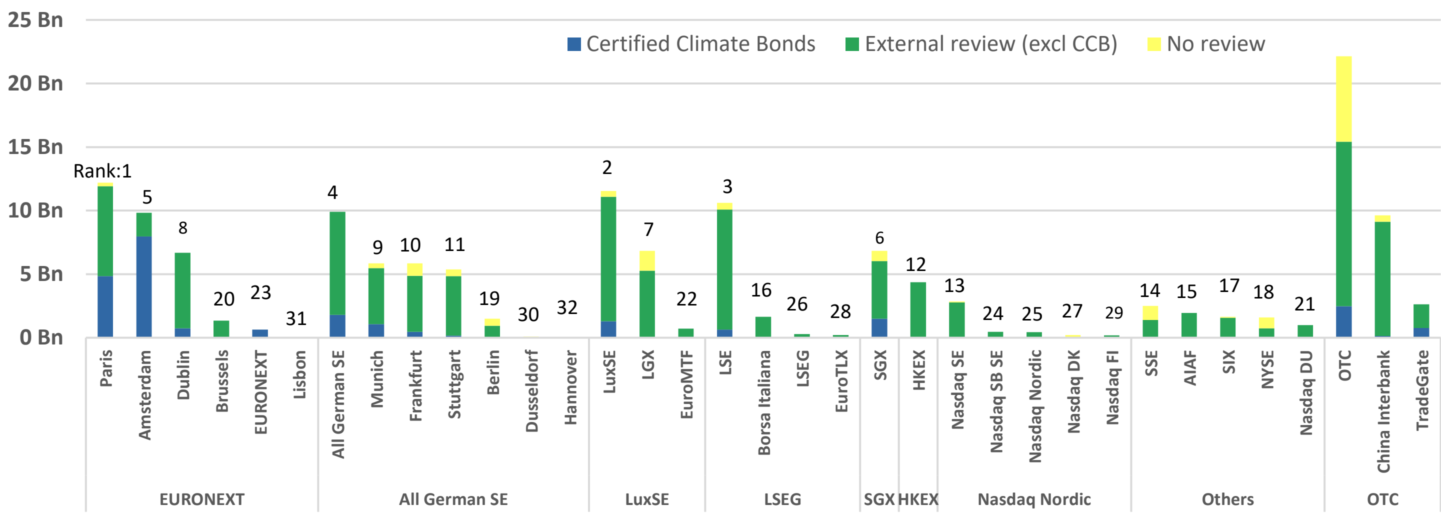
In the first nine months of 2019, USD156.3bn worth of green bonds were listed on various stock exchanges, representing 83% of the total GB issuance for the period (USD187.7bn).

Green bonds issued in over-the-counter (OTC) markets, including China Interbank market and Trade Gate, account for 18%. The remaining 17% of volume is not listed or information is not available.

In the league table below, we have grouped venues by stock exchange group, if applicable. The numbers on top of the bars indicate the ranking of each venue.

Euronext Paris was the most popular GB listing venue, with USD12.2bn worth of deals during Q1-Q3 2019, of which 40% are Certified Climate Bonds, driven mainly by EUR4.1bn (USD4.6bn) of taps of Republic of France's Green OAT. The second most popular venue was LuxSE (Luxembourg) followed by LSE (London).

Euronext Paris at the top of green bond listing venues so far in 2019



Data sources: *Climate Bonds Initiative, Refinitiv, Bloomberg*

Listing venue league table: Methodology

Primary data sources for listing venues include Thomson Reuter EIKON, Bloomberg Terminal and Wind Financial Terminal. They are further supplemented by information collected from stock exchanges with a dedicated green bond segment, such as Luxembourg Green Exchange, London Stock Exchange, Borsa Italiana, Shanghai Stock Exchange and Taipei Exchange.

- At most four listing venues are recorded for calculation purposes. If a bond is listed on multiple exchanges, primary vs. secondary listing venues are not differentiated.
- When a green bond is listed on more than one venue, the issued amount is divided by the number of venues and each venue is allocated an equal share.
- We have not allocated bonds listed on All German SE, EURONEXT and Nasdaq Nordic to the constituent stock exchanges.
- A bond listing venue is treated as "Not listed" when the bond is not listed or relevant information is not available from the sources identified in this methodology.
- Bond volumes allocated to each listing venue are categorised into Certified Climate Bonds, bonds with external reviews (other than Certified Climate Bonds) and bonds with no external reviews. Commentary:
- Bonds issued before the Green Bond Principles were first published in 2014 generally do not have external reviews. Many of the early issues have now matured.
- Some external reviews may not be available until an assurance audit is completed. For instance, KPMG provides an annual independent review of EIB's Climate Awareness Bonds. The 2017 assurance report was published in November-2018.
- All LGX deals without a review relate to those most recent EIB CAB, for which an assurance report has not been published yet.
- If a bond is traded on LuxSE and displayed on LGX at the same time, only LGX is recorded as it's trading venue to avoid double counting.

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Green bond underwriter league tables

HSBC was the largest green bond underwriter in the global market in 2019 year-to-date. Its top three underwritten GB deals include bonds from Engie (USD1.7bn), ICBC (USD1.5bn) and Republic of Chile (USD1.4bn).

BAML retains the second spot. Green US Muni deals comprise 20% of its underwritten volume. So far this year, BAML is the largest US green Muni deal underwriter with USD1.45bn, followed by Morgan Stanley (USD1.14bn). In Q3 2019, **Morgan Stanley** was the largest green US Muni deal underwriter with USD1.04bn.

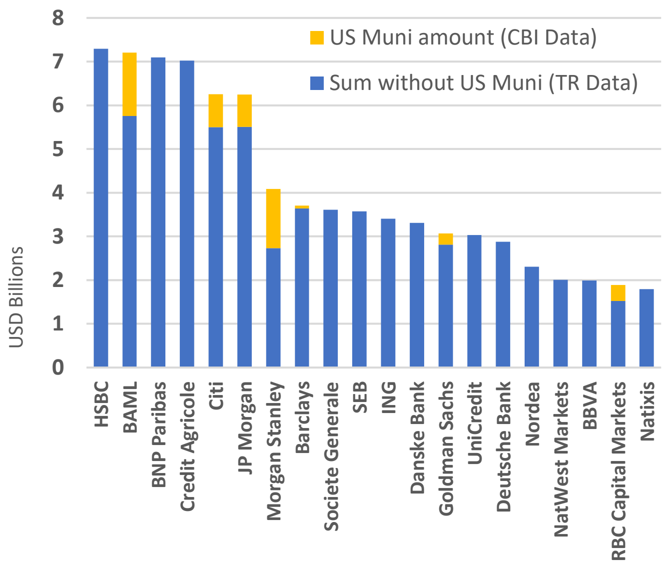
BNP Paribas came in third (USD7.09bn), with **Credit Agricole** at almost the same level (USD7.03bn).

HSBC was the top underwriter in emerging markets (EM) as well for the first nine months of 2019. The majority of its underwritten deals are from China and the Philippines.

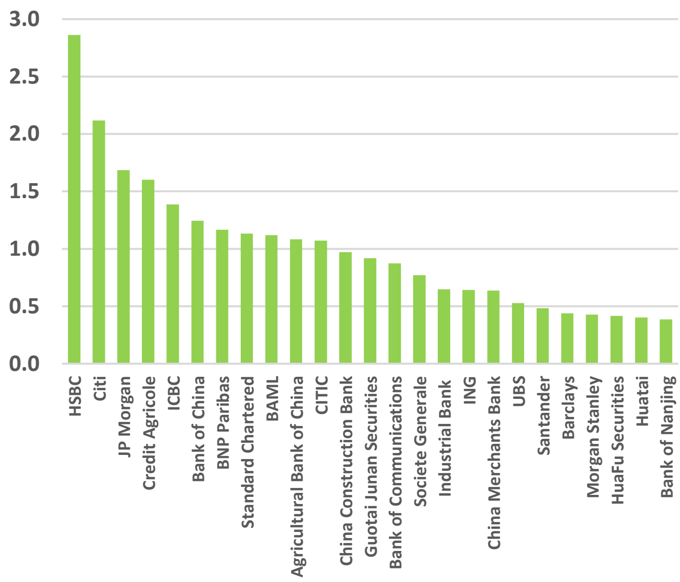
Citi and **JP Morgan** retain second and third position, respectively.

Ten Chinese banks and securities firms made their way in the Top 20 EM League Table. HuaFu Securities, Industrial Bank Co Ltd., Guotai Junan Securities, etc. are amongst the new joiners. Chinese issuers drive volumes for EM issuance, which underpins the continued expansion of Chinese underwriter list featured in these league tables.

HSBC, BAML and BNP Paribas: top GB underwriters for Jan-Sep 2019



HSBC was the largest GB underwriter in EM for first nine months of 2019



Data: sources: CBI, Refinitiv

Underwriter league tables: Methodology

Since Q3 2016, the underwriters league tables are collated using data from Refinitiv except for US municipal bonds which are calculated by the Climate Bonds Initiative. As such, ranking volumes differ from Refinitiv tables. Volumes may differ from other league tables as they include ABS deals and US Muni bonds and only include bonds which have 95% or more of proceeds going to assets or projects, aligned to the Climate Bonds Taxonomy.

Refinitiv data methodology:

- Primary Issuance only. Excludes tax exempt US Municipal bonds
- Underwritten transactions only
- The global table includes transactions that mature at least 360 days after settlement
- Transactions that mature or are callable/puttable less than 360 days after settlement are excluded
- Self-funded straight debt transactions are excluded (excluding mortgage and asset securitizations) unless two or more managers/ underwriters unrelated to the issuer are present.
- Transactions with an issue size of less than USD 1m (equivalent) are included; sole led MTN take downs with a minimum size of USD50m for core currencies are included, USD10m for non-core
- Deals must be received within 5 business days of pricing
- For a transaction to be green league table eligible, deals must have 100% of proceeds formally earmarked for green projects
- Issuances where there is a mixed use of proceeds designated across different projects, are not eligible: e.g. ESG bonds that combine social and green projects
- Securitisation deals and private placement will be included provided they meet the standard criteria

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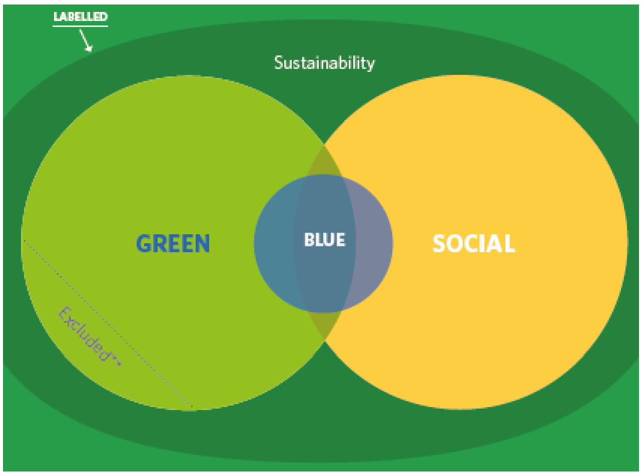
The wider labelled bond universe

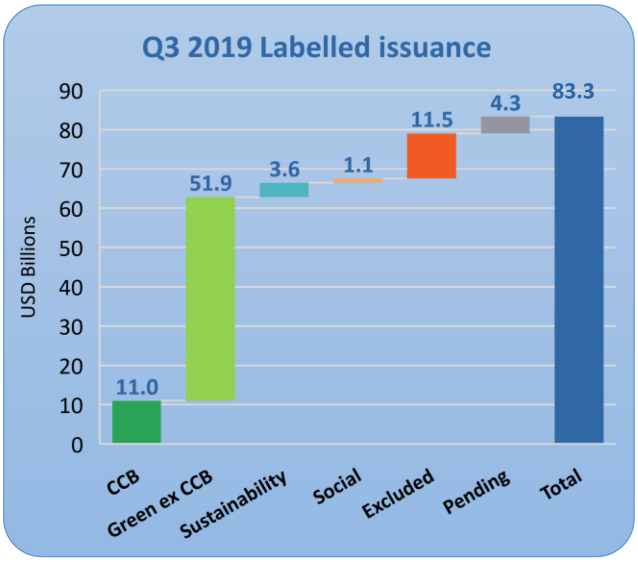


**Labelled green bonds not aligned with the Climate Bonds Taxonomy (e.g. green bonds financing so-called "clean coal")

The labelled bond market has expanded beyond green bonds. Sustainability and social bonds have been around for several years, but they really came into their own in 2018, with SDG bonds also emerging as issuers and investors started adopting policies and strategies linked to the UN's 17 Sustainable Development Goals.

Climate Bonds support the Sustainable Development Goals (SDGs) overall and see many links between green bond finance and specific SDGs, in particular SDGs 6, 7, 9, 11, 13, 14 and 15. Notwithstanding this, CBI remains focused on green bonds, which are specifically linked to climate-change-change mitigation, adaptation and resilience. Consequently, the proportion of proceeds allocated to social projects which are not also green needs to be no more than 5% for inclusion in the CBI green bond database.

Total labelled issuance for the first nine months of 2019 is 52% higher year-on-year. Sustainability/SDG bonds remain the largest category with USD16.3bn issued so for this year, or 10% higher compared to the same period last year (USD14.9bn). Social bonds, however, have seen a significant dip with the amount decreasing by 43% from USD12.1bn in 2018 to USD6.9bn this year. Exclusions are up 37% year-on-year: Chinese green bonds account for about half of this volume, mainly due to working capital allocations which is allowed under the Chinese green bond catalogues.



The top 3 sustainability and social bond markets for Q3 2019 were: **Italy** (USD1.5bn), the **Netherlands** (USD0.7bn) and the **UK** (USD0.6bn). The Netherlands kept its second place, while Italy and the UK took over from France and China. Overall, social and sustainability issuance volume was down by 38% year-on-year.

Non-financial corporates made up more than half (57%) of the quarter's sustainability and social bond issuance. Financial corporates accounted for just under a quarter (23%). The rest was split **between government-backed entities** and **local governments**.

The largest **sustainability bond** issuers in Q3 2019 were Italian Energy utility **Enel** (USD1.5bn, repeat issuer), Dutch food retailer **Ahold Delhaize** (USD678m, debut issuer) and British bank **Standard Chartered** (USD565m, debut issuer).

Enel's bond was an example of the emerging "sustainability-linked" segment in the labelled market. In this case the company's performance on select SDGs is tied to the terms of general corporate purpose debt.

Another recent development in the market has been the emergence of so-called "**transition bonds**". An example of this type of instrument in Q3 came from Brazilian food processing company **Marfrig** (USD500m), which we covered in Market Blog #31 in early September.