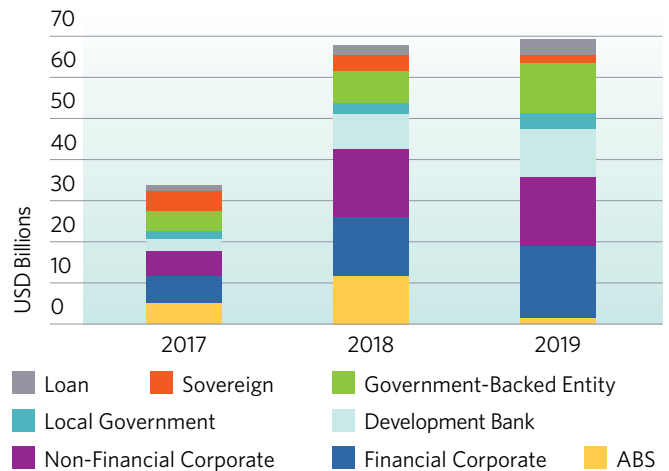


Green Bond Market Summary Q3 2020

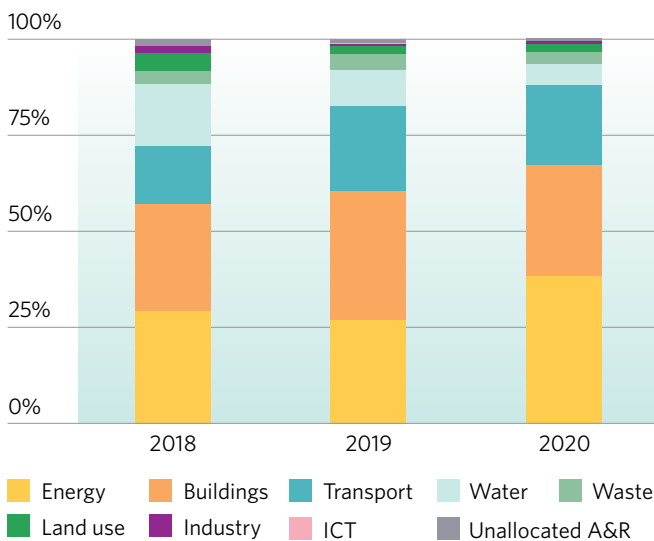
Key figures

- **USD69.4bn of issuance**, the highest recorded in any third quarter period¹
- **314 deals** from 191 individual issuers
- **52 benchmark issues** of at least USD500m
- **Representation from 39 countries** including 71 deals from the USA, 48 from Germany, 40 from Sweden, and 30 from Japan
- **73 debut green bond issuers** from 29 countries

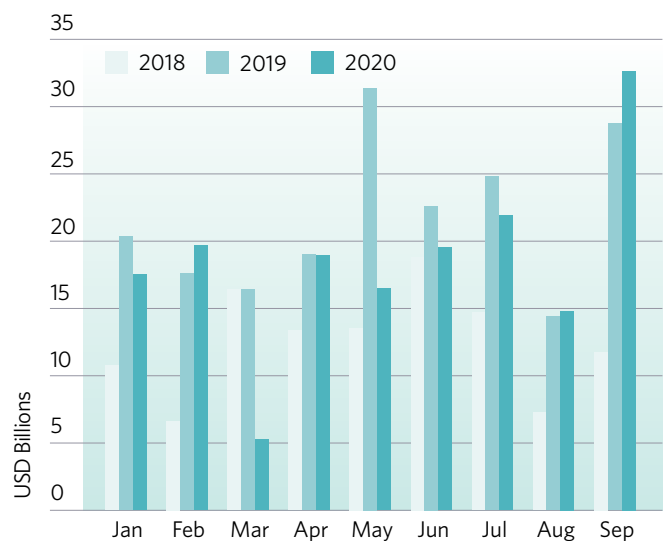
Q3 Issuer types 2018-2020



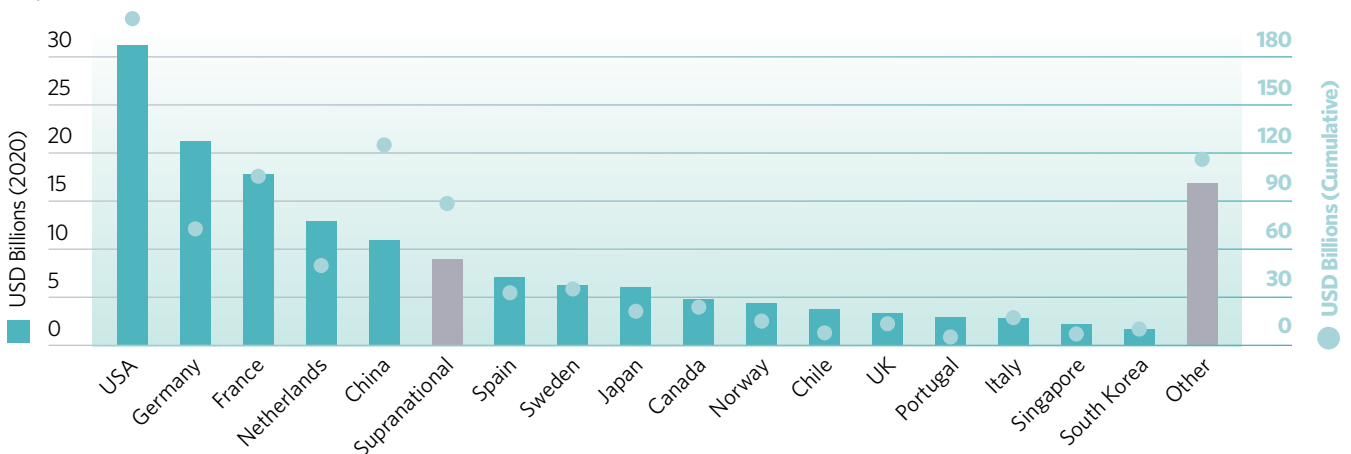
Q3 Use of Proceeds 2018-2020



Monthly issuance volumes 2018-2020



Top 2020 countries: Amount issued (2020 vs. Cumulative)



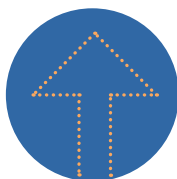
Q3 2020 green bond issuance highlights

Green bonds, loans and sukuk added to the Climate Bonds Database for Q3 2020 reached USD69.4bn, the second highest recorded amount in any individual quarter (following Q2 2019 at USD73.1bn), and 21% more than Q2 2020. Cumulative issuance volume since inception reached **USD948bn**. We expect the Climate Bonds Database to breach the USD1tn milestone in Q4. While other data sources have already reached this mark, the Climate Bonds Database only includes bonds with 100% of net proceeds dedicated to green assets or projects aligned with the Climate Bonds Taxonomy.²



Renewed confidence supported by strong policy signals

Green bond issuers dipped a cautious toe in the market towards the end of Q2, but confidence returned in abundance in Q3 resulting in the most prolific third quarter recorded. Entities that had postponed coming to the market earlier in the year decided to take the plunge, and momentum grew with each month. The COVID-19 pandemic has shone a spotlight on the investment community and the role it can play in a sustainable and green recovery. The policy narrative has supported this sentiment with a strong focus on building back better. In late September, Chinese President Xi Jinping announced a target for China to become carbon neutral before 2060 following dozens of other countries who have pledged similar goals. China is already the source of the second largest amount of green bonds after the USA with cumulative issuance of USD117bn and this commitment will likely require multiples of that investment. The EU has committed to reach net zero by 2050 and is combining this ambition with a digital transition and post COVID-19 recovery. In mid-September, European Commission President Ursula von der Layen confirmed EU plans to issue EUR225bn in green bonds over the next few years. This could galvanise a substantial shift into green bonds by both issuers and investors. Issuers will be inclined to align themselves with these developments by transforming their entities into climate compatible operations, and investors will be encouraged to commit funds to green investment strategies if there is a steady supply of available paper.



Corporates embrace the green label

Financial and non-financial corporate issuers have been the biggest source of green bonds in every quarter since Q3 2018. In Q3 2020, financial corporate issuance reached 17.6bn, an 18% increase compared to the same period in 2019 and included 71 individual deals. Two thirds of the amount (USD11.6bn) came from 15 benchmark sized deals of USD500m or more. The USD16.6bn of non-financial corporate issuance matched that of Q3 2019 and was spread across 82 deals.

The largest of the **financial corporate deals** was a debut green bond from **Munich Re** in the form of an EUR1.25bn (USD1.39bn) subordinated fix-to-float deal. **ING** and **Rabobank** also favoured the fixed-to-float structure, each issuing USD1bn. Norwegian residential mortgage lender **Sparebank 1 Boligkreditt** priced a EUR1bn (USD1.11bn) 7-year covered green bond in mid-September. We expect that the strong policy support mentioned earlier will translate into more green lending opportunities for banks and we therefore look for continued growth in this sector.



Non-financial corporate deals featured multiple stalwart utility and real estate issuers, and a peppering of household names from other sectors. The largest of these were German auto manufacturers **Daimler** and **Volkswagen**, both of which issued green bonds to support their transition to electric vehicles. This is good news for green bond investors seeking diversification.³ The transition to electric vehicles is business as usual for most auto manufacturers and bonds issued to meet the associated costs are often labeled as 'general corporate purposes'. Volkswagen issued the largest single non-financial corporate bond of Q3 in the form of an EUR1.25bn (USD1.39bn) 8-year deal, together with an EUR750m (USD834m) 12-year bond. The Daimler debut was an EUR1bn (USD1.1bn) green bond. US telecom provider **Verizon** came to the market for the second time with a USD1bn 10-year bond to finance long-term renewable energy purchase agreements. Mexico domiciled **Coca-Cola FEMSA** entered the green bond market in early September with a USD705m 12-year deal to finance a variety of projects including energy efficiency, and recycling facilities for its packaging.

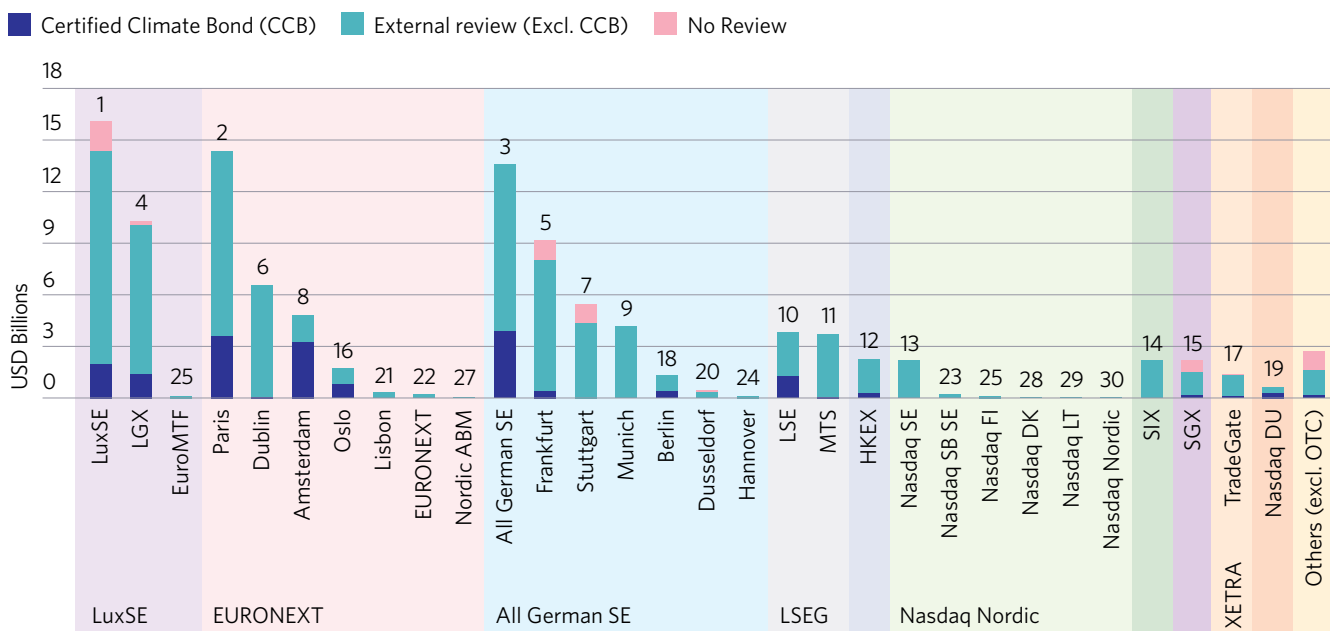
Government backed entities experienced 35% growth compared to Q3 2019. The largest individual deal was a USD1.2bn 10-year from Hong Kong public transport network **MTR**. The proceeds will be divided between five project categories the largest being Low Carbon Transport.

USA tops the country rankings

The country rankings for 2020 to the end of Q3 are led by USA (USD32.3bn), Germany (21.4bn) and France (17.8bn). While Chinese issuance (USD9bn) still has a way to go to meet its total for 2019 (USD31.4bn), it remains the country with the second largest cumulative total (USD105bn) after the USA (USD205bn). The US has experienced record bond issuance in 2020. Issuers have been keen to exploit the magic cocktail of low interest rates and the FED's commitment to buy corporate bonds by refinancing or shoring up capital. This has extended to green bonds with US issuers printing 71 in Q3 2020. All except one were denominated in USD (Digital Realty Trust priced an EUR750m/USD834m 12-year in late September) with the smallest being a USD0.5m 2-year note from Mountaintop Area Joint Sanitary Authority and the largest, a USD1.36bn deal from LA County MTA which was split into 22 tranches.



LuxSE top green bond listing venues in Q1-Q3 2020



Listing venue league table

In Q1-Q3 2020, USD115.6bn worth of green bonds were listed on various stock exchanges, representing 69% of the total green bond issuance for the period (USD166.7bn).

In the league table above, we have grouped venues by stock exchange group, where applicable.

The numbers on top of the bars indicate the ranking of each venue.

The **Luxembourg Stock Exchange** is the most popular green bond listing platform, with USD16.3bn worth of deals traded across its venues in Q1-Q3 2020, of which 12% were Certified

Climate Bonds (CCB). The largest listed green bond in Q3 was a EUR3.0bn (USD3.5bn) 8-year bond from **KfW**.

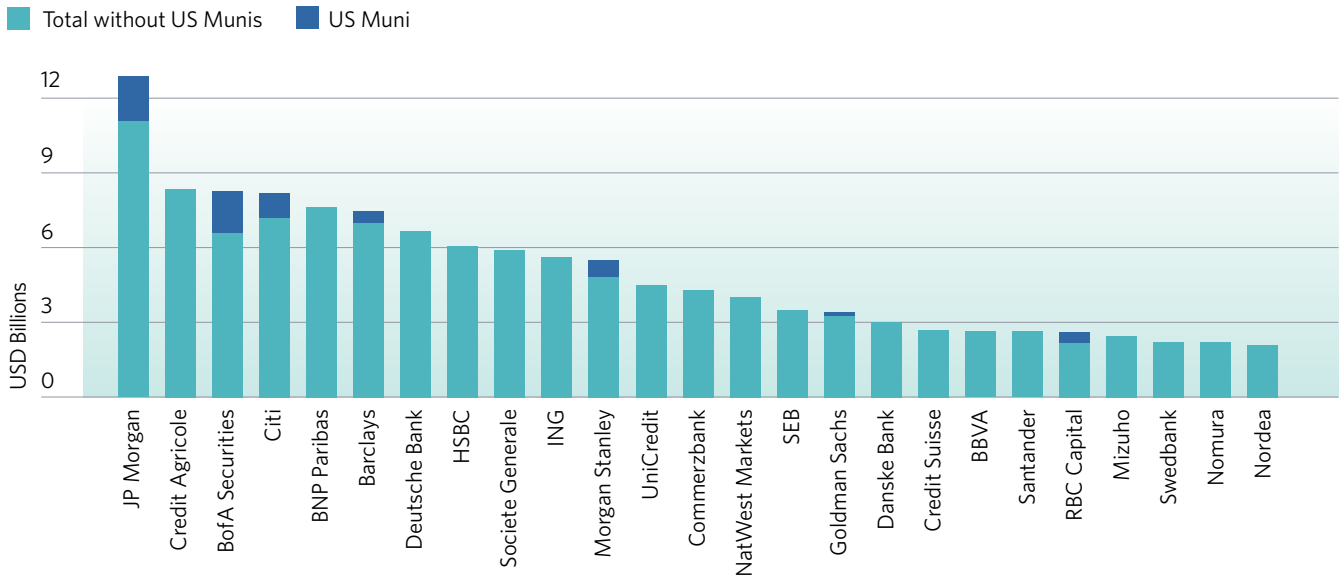
Euronext Paris was the second largest stock exchange with USD14.3bn, followed by all the **German Stock Exchanges** and **Luxembourg Green Exchange**.

Listing venue league table: Methodology

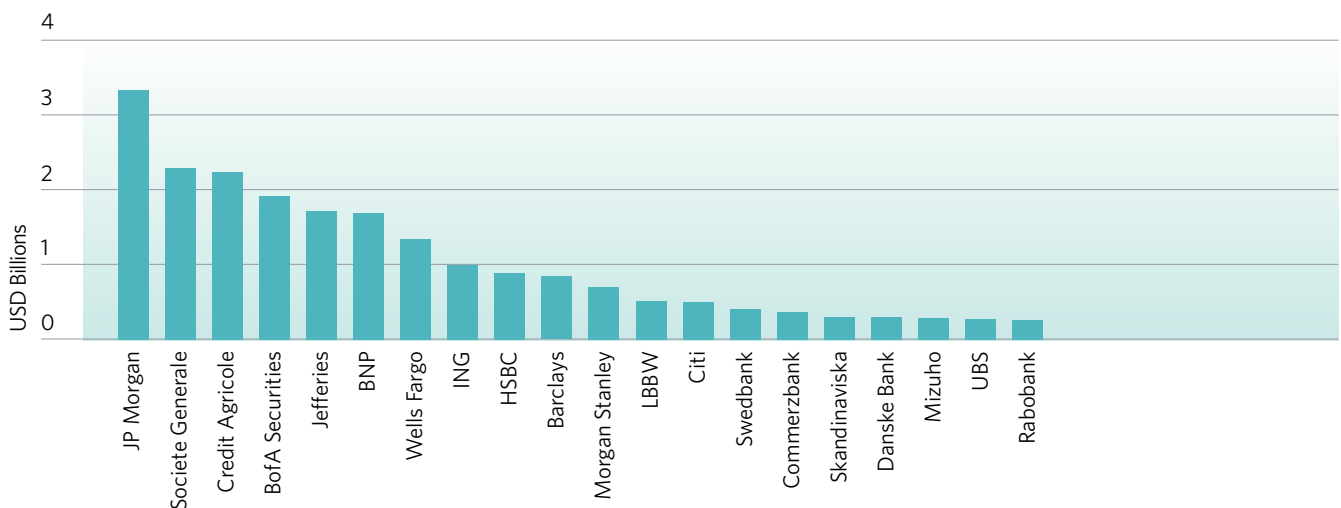
Primary data sources for listing venues include Refinitiv EIKON, Bloomberg Terminal and Wind Financial Terminal. They are further supplemented by information collected from stock exchanges with a dedicated green bond segment, such as LGX, LSE, Borsa Italiana, SSE and Taipei Exchange.

- 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 (CCB), bonds with external reviews (other than Certified Climate Bonds) and bonds with no external reviews.
- 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.
- If a bond is traded on LuxSE and displayed on LGX at the same time, only LGX is recorded as its trading venue to avoid double counting.

JPM, CACIB and BoFA in top 3 of Green Bond Underwriters League Tables in Q1-Q3 2020



JP Morgan, Societe Generale and Credit Agricole in top 3 of Certified green bond underwriters League Tables in Q1-Q3 2020



Green bond underwriter league tables

JP Morgan was the largest green bond underwriter in the global market in Q1-Q3 2020 with a total of USD12.9bn. Its top three underwritten deals in Q3 came from Rentenbank (EUR1.5bn/USD1.6bn), AIB Group (EUR1.5bn/USD1.1bn) and CPPIB (EUR1bn/USD1.1bn). Of the total underwritten amount by JP Morgan, 14% came from green US Munis.

The second spot went to **Credit Agricole**, which racked up total bookrunner volume of USD8.4bn in the first three quarters of 2020.

BofA securities was a close third with USD8.2bn, of which 19% came from US Munis. **JP Morgan** was the top underwriter of CCB in the first three quarters of 2020 with the total underwritten amount of USD3.4bn. In Q3 2020 JP Morgan underwrote deals from New York Metropolitan Transportation Authority (\$900mn), China Merchants Bank (\$800mn) and China Construction Bank (\$700mn).

Credit Agricole came in second with USD2.3bn. It was joint lead underwriter for China Merchant Bank (USD800m) and China Construction Bank (USD700m).

BofA securities took third place in the CCB underwriter rankings. It was a joint lead underwriter for Metropolitan Transportation Authority (\$900mn) and China Construction Bank (\$700mn).

Underwriter league tables: Methodology

Since Q3 2016, the underwriter league tables have been collated using data from Refinitiv except for US municipal bonds which are calculated by Climate Bonds. As such, ranking volumes differ from Refinitiv tables. Volumes may differ from other league tables as they include ABS deals and US Muni bonds, as well as only including bonds which have 95% or more of proceeds going to assets or projects aligned with 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 USD1m (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 five business days of pricing
 - For a transaction to be green league table eligible, deals must have 100% of proceeds formally earmarked for green projects
 - Deals with mixed use of proceeds designated across different projects are not eligible: e.g. Sustainability bonds that combine social and green projects
 - Securitisation deals and private placements will be included provided they meet the standard criteria

Endnotes

1. All charts and analysis are based on preliminary figures for Q3 issuance volume and number of deals, pending the inclusion of 243 deals still being assessed for inclusion in the Climate Bonds Database. 79 of those deals were issued in Q3 2020.

2. The minimum threshold for green projects was increased to from 95% to 100% on 1st October 2020. All bonds issued prior to that were evaluated for inclusion based on at least 95% of the proceeds being allocated to projects in compliance with the green definitions set out in the Climate Bonds Database Methodology."

3. <https://www.climatebonds.net/resources/reports/green-bond-european-investor-survey-2019>

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