Germany

Green finance state of the market – 2019 update

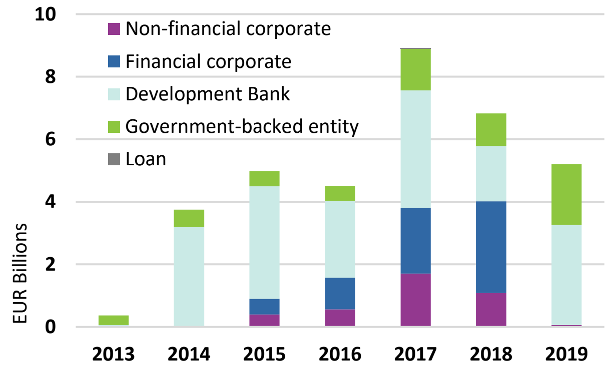
July 2019

Cumulative green bond (GB) issuance: EUR33.6bn, 4th in global country rankings

2018 green bond issuance: EUR6.6bn (2017: EUR8.7bn), 4th in 2018 country rankings

Green bond market growth expected from corporates and government-backed entities

Financial corporates drove 2018 GB volume

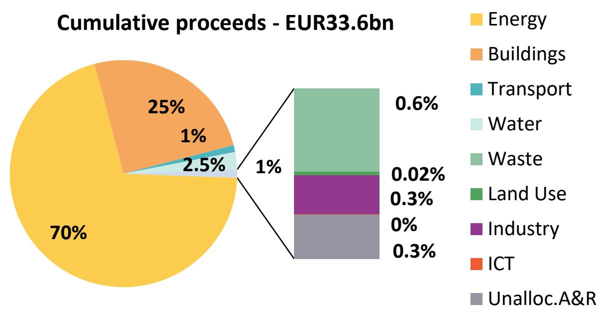


Note: *All green bond data as at 31 May 2019, unless otherwise stated.*

In 2018, financial corporates made up 43% of issuance in a clear rise from their 23% share in 2017.[1] Nearly three-quarters of this came from mortgage banks, including repeat issuers **Berlin Hyp** and **Deutsche Hypo**, the 3rd and 5th largest German issuers by cumulative volume. Debut GB issuers **Commerzbank** (EUR500m) and **DZ Bank** (EUR250m) raised funds for renewables.

Another 25% of 2018 volume came from development bank **KfW**, Germany's largest green bond issuer with EUR17.7bn issued since its debut in 2014. It also issued the largest green bond of 2018 (EUR1bn), and in May 2019, it issued the largest German green bond to date: EUR3bn.

Renewables dominate use of proceeds

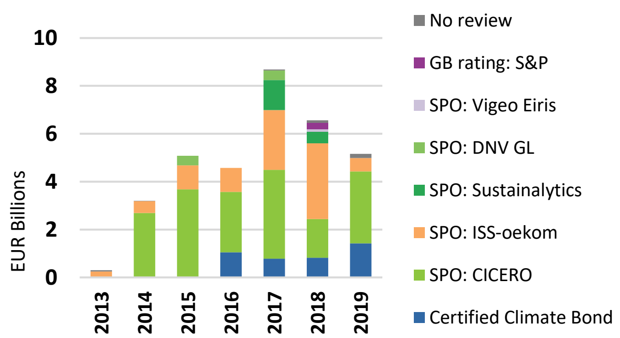


Note: *As much as possible, CBI tries to assign adaptation and resilience allocations to sectors. "Unalloc.A&R" could not be allocated to a sector.*

Clean energy dominates cumulative proceed allocations at 70%, as well as those of 2018 (60%). Most of this has come from financial institutions: development, state and commercial banks. Market entrants in 2018 include utility provider **EnBW**, which raised EUR500m for wind, solar and electric vehicle charging points, and pureplay wind firm **enercity** with its EUR100m deal.

Low-carbon buildings are the second largest sector: 25% overall, 37% in 2018. This is driven by mortgage banks, including the EUR500m debut green bond from **MünchenerHyp**. Real estate company **Volkswagen Immobilien** entered the market with a EUR107m Certified Climate Bond to finance residential buildings.

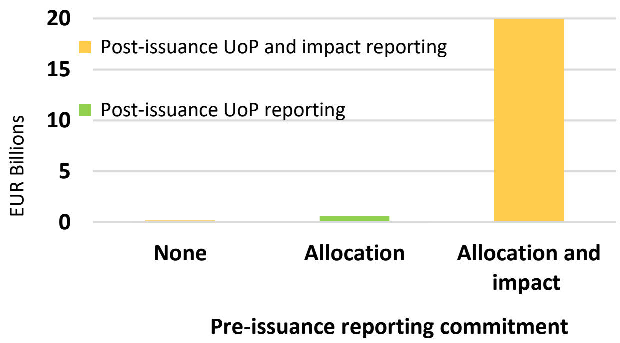
99% of GB issuance has an external review



Nearly all German green bond issuance benefits from an external review: 86% of deals by volume have a Second Party Opinion (SPO), 12% are Certified under the Climate Bonds Standard and 1% have a green bond rating. CICERO is the largest SPO provider by volume with 51% of the market to date. ISS leads by number of deals (34%) and was first in 2018 by volume and deal count.

ISS is the largest Approved Verifier for Certified Climate Bonds in Germany with seven deals, including the largest Certified Climate Bond so far: a EUR750m bond issued by **LBBW** in December 2017. DNV GL has acted as the Verifier for two Certified bonds.

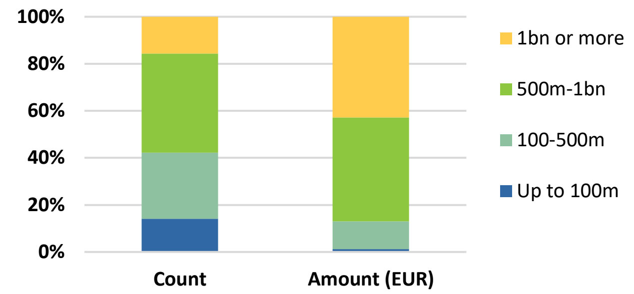
90% of volumes benefit from reporting



Post-issuance disclosure is very good. German green bond issuers have reported on 91% of deals by number and 90% by volume for bonds issued prior to November 2017. 27 out of 34 bonds have both use-of-proceeds and impact reporting, and account for 78% of issuance volume.

The vast majority of issuers committed to reporting both allocations and impact metrics. All issuers complied with their pre-issuance commitments. Further, 57% of bonds with no reporting intentions did, in fact, disclose either allocations (3 bonds) or use of proceeds and impact metrics (1 bond).

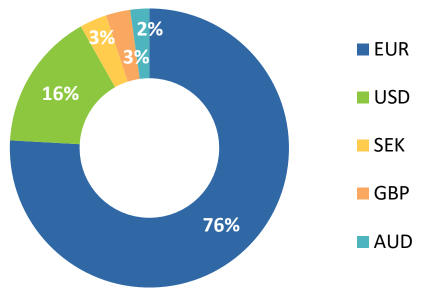
87% of GB issuance is EUR500m or above



KfW's EUR3bn green bond from May 2019 is the largest to date in Germany, and KfW is the sole issuer of green bonds in the EUR1bn+ size category. Deals within the EUR500m-1bn size bracket are the most frequent both by number of deals (45%) and volume (49%). All types of issuers have placed such deals, but financial corporates make up the largest share at 42%.

The smaller size buckets also include a variety of issuers, such as wind company Encavis AG and mortgage bank Deutsche Hypo. The latter issued the smallest bond to date (EUR10m).

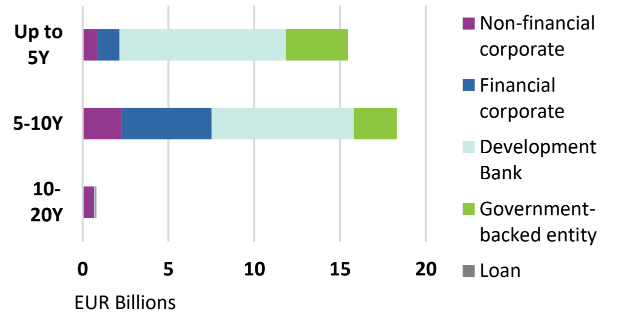
76% of deal volume is EUR-denominated



EUR-denominated deals prevail at 76% of cumulative volume. They represent 89% of 2018 green bonds and 84% of issuance, up from 2017 when EUR bonds comprised 69% of deals and 79% of volume. The second most popular currency is USD.

USD issuance includes deals from **KfW** and **Landwirtschaftliche Rentenbank**. The two development banks also represent the other three currencies in the German green bond market: SEK, AUD and GBP. About a tenth of issuance is in these three minority currencies.

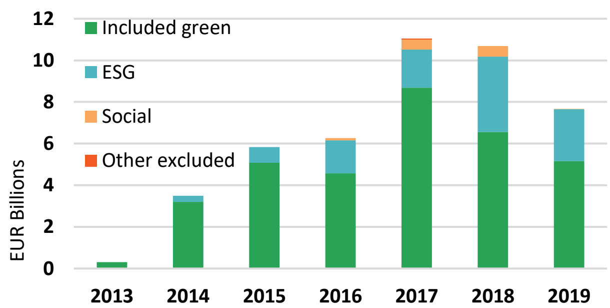
Corporates favour tenors of 5-10 years



45% of green bonds from German issuers have tenors of up to 5 years and over half (53%) between 5 and 10. Development banks are the primary issuers of shorter-term debt, while financial and non-financial corporates favour medium-term debt.

Only 2% of green bonds have original tenors exceeding 10 years. These include deals from non-financial corporates **MEP Werke** (20-year term), **EnBW** and **Volkswagen Immobilien** (15 years). **Landwirtschaftliche Rentenbank** is the only financial institution to issue a long-dated bond: a 15-year AUD100m bond (EUR62m).

Spotlight: Beyond the green bond label



Other labelled instruments from Germany total EUR11.8bn, with ESG/sustainability bonds being the most popular. An example is the first ESG Pfandbrief issued by MünchenerHyp in 2014.

The data on ESG and social bonds is indicative, not comprehensive, as such deals are identified solely in the screening process for determining inclusion in the CBI Green Bond Database. Still, label diversification suggests growth potential. We foresee further sustainability bond issuance as corporates and the public sector invest to meet the UN Sustainable Development Goals.

Top 5 underwriters for German GB

Underwriters	Number of deals	Amount (EUR)
HSBC	12	2.9bn
Crédit Agricole CIB	16	2.8bn
Société Générale	6	2.0bn
LBBW	10	1.9bn
BAML	6	1.8bn

Source: *Refinitiv. Cumulative data: 2013 - Q1 2019*

Top 5 trading venues for German GB

Trading venue	Number of deals	Amount (EUR)
All German SE	34	10.2bn
LGX	25	8.9bn
Stuttgart	8	3.6bn
Frankfurt	8	2.3bn
Munich	4	1.9bn

The largest underwriter is **HSBC** with 11% market share by volume and 12 deals. **Crédit Agricole CIB** follows closely behind. Only one of the Top 5 underwriters of German deals is based in Germany: **LBBW**. It has participated in 10 deals and holds a ca.7% market share. In 2018, however, Commerzbank was the top underwriter, while LBBW was 4th in the 2018 league table.

Cumulatively, EUR27.6bn worth of German green bonds have been listed on a variety of trading venues, but with a clear preference for domestic listings. Listed volumes account for 91% of total issuance. Bonds listed on multiple **German exchanges** top rankings, followed by the **Luxembourg Green Exchange**. Many bonds are dual-listed in Germany and on LGX.

2019 issuance picking up

As of the end of May 2019, the German green bond market is showing promising movement. Five deals have closed so far: a EUR500m bond from NRW.BANK in February and another from Landwirtschaftliche Rentenbank (SEK2bn/EUR188.6m) in April, as well as two EUR750m issuances from LBBW and EUR3bn from KfW. KfW recently expanded its green bond framework to include low carbon buildings and announced plans for EUR5-6bn of green issuances in 2019.[2] The German government is also looking into the possibility of issuing green Bunds (sovereign green bonds) from 2020 onwards.[3]

Fully-aligned and strongly-aligned companies as potential GB issuers

The **climate-aligned universe** highlights investment opportunities to finance low-carbon assets and includes:

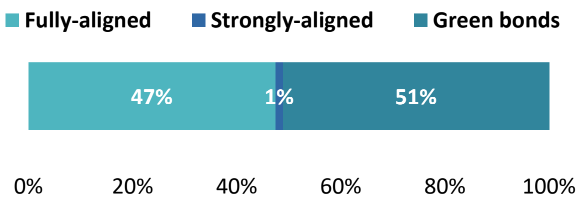
- **green bonds**: CBI uses the CBI Green Bond Database Methodology to screen *labelled* bonds and identify bonds with *at least 95%* of proceeds going to assets and projects that are *aligned* to the Climate Bonds Taxonomy;[4, 5]
- **bonds from fully-aligned issuers:** fully-aligned issuers derive 95% or more of revenues from 'green' business lines; and
- **bonds from strongly-aligned issuers:** strongly-aligned issuers derive 75-95% of revenue from 'green' business lines.

Climate-aligned issuers can discover additional value from the green bond label. For example, wind turbine manufacturer Nordex entered the market with a green Schuldschein in 2016 and issued a second one in 2018, totalling USD963m (EUR862m).

Fully-aligned issuers account for 47% of outstanding climate-aligned volumes

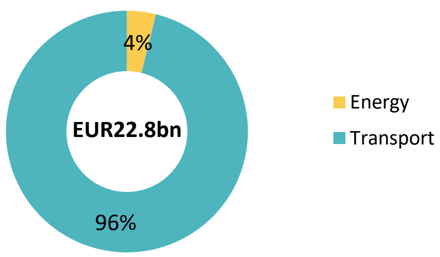
At EUR46.7bn (USD52.2bn) of outstanding volume, Germany placed 5th in country rankings for climate-aligned issuance and 4th among developed countries, as of end June 2018.[6]

Fully-aligned companies contribute EUR22.2bn, accounting for 47% of the climate-aligned universe. This points to significant scaling opportunities for green bond issuance. Strongly-aligned issuers make up only 1% of the universe at EUR682m.



The overwhelming majority (99%) of outstanding climate-aligned deals are investment grade, the rest are not rated. AA is the largest rating band at 96%.

Transport dominates the EUR22.8bn climate-aligned issuer universe



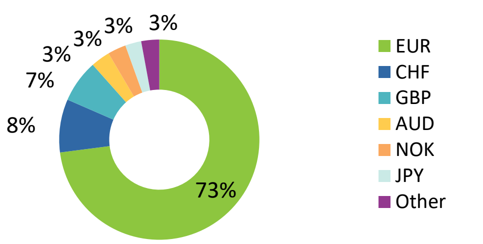
Nearly all of Germany's climate-aligned volume comes from the transportation sector, and more specifically the financing arm of state railway operator Deutsche Bahn. The company has pledged to reduce emissions from rail, road, air and ocean transportation by 30% compared to 2006.[7] This suggests further issuance potential, which could be labelled green.

Energy constitutes the remaining 4% with issuers ranging from solar and wind to bioenergy and distributed power companies. Further growth is expected from the sector given Germany's plans to move away from fossil fuels, especially by shutting down coal-fired power plants (see below). Future green bond market entrants could include fully-aligned firms **PNE Wind** and **CARPEVIGO**. Strongly-aligned issuers that could enter the market include bioenergy company **German Pellets GmbH** and distributed power solutions firm **Heliocentris Energy Solutions AG**.

An example of a fully-aligned issuer that has entered the green bond market is **UmweltBank AG**, a retail bank which exclusively finances ecological projects with loans funded by customer deposits. Its EUR40m junior green bond from July 2018 had a minimum investment of EUR2,500, enabling rare direct access to the bond market for retail investors.[8]

Innogy, a subsidiary of RWE acquired by E.ON, is an existing green bond issuer. It originally raised EUR850m for onshore and offshore wind farms. Subsequently the funds were reallocated to grid-related investments to connect renewables above 30kW to the grid and improve it to cope with the fluctuating feed-in, as well as smart meters.[9] The reallocation was due to an asset swap deal by E.ON and RWE, where RWE took control of Innogy's renewables business and its bonds were assumed by E.ON group.

Climate-aligned issuers favour EUR deals



EUR-denominated deals represent nearly three-quarters of aligned outstanding bonds from climate-aligned issuers. This is similar to green bond currency preferences. CHF is the second most popular currency at 9%. Other currencies include GBP (7%), AUD, NOK and JPY (3% each). Deutsche Bahn is the sole issuer in the minority currencies, which include SEK, SGD and HKD, too.

Non-financial corporate issuers in transition

Thinktank Corporate Knights estimates that 17% of current investment by large public corporations is already green but reiterates the urgent need to mobilize even more capital to help the transition to a low-carbon economy.[10] It identified **Volkswagen Group** and **BMW AG**, both of which are investing heavily in electric vehicles (EV), as prospective green bond issuers. VW has committed to 50% EV sales by 2030 and is targeting net zero emissions by 2050.[11] BMW plans to sell half a million EVs by year-end 2019 (in 2018, 2.08 million EVs were sold globally),[12] and Corporate Knights estimated that it will need at least USD6bn of green investments a year in 2019 and 2020 to meet its wider targets. Also, Corporate Knights classified nearly half (47%) of **Siemens AG's** revenue in 2017 as green, based on revenues from the Energy Management Division, Building Technologies Division and the Gamesa Renewable Energy (SGRE) unit, and estimated that the company will make USD3.9-4.8bn of green investment a year in 2019 and 2020.

Germany green bond policy update

Germany is considered a climate policy pioneer with its 1980s energy transition policy, *Energiewende*.[13] It is well on its way to meeting its target of 45% of energy production from renewables by 2030, having reached 33% in early 2018.[14, 15] Renewable energy power capacity surpassed that of coal as the main primary energy source for the first time in 2018.[16] EVs are another priority area: Germany passed the Electromobility Law in 2014 and set itself a target of 1 million EVs by 2020, together with targets for EV battery capacity improvements.[17]

Action point	Action in 2018 and early 2019	Policy considerations for 2019 and beyond
Issuance of sovereign and public sector green bonds	There has been no sovereign issuance yet, but public sector issuers have placed green bonds, e.g. state bank NRW.Bank, which has issued 7 (EUR3.25bn) since pioneering them in 2013. More broadly, NRW State has issued 5 sustainability bonds (EUR8.4bn), Hanover and IFB Hamburg one each. The German State Finance Agency has announced it is considering the issuance of green Bunds from 2020.	Issuing a sovereign green bond would send a strong signal to the market. In early 2019, the Ministry of Finance announced a feasibility study for a sovereign green bond. Also, local governments can issue green bonds.
Awareness raising and stakeholder dialogue	The **Green and Sustainable Finance Cluster Germany** (GSFC), a member of the EU Technical Expert Group (TEG), has produced a baseline report, which outlines the state of sustainable finance in Germany and defines four action fields: i) sustainable finance innovation; ii) data and digitalisation; iii) metrics and standards; iv) dialogue and knowledge development. Separately, the **German Council for Sustainable Development**, has been organising open stakeholder round tables under its H4FS (Hub for Sustainable Finance Germany) umbrella since 2017.	Implement the recommendations from the EU TEG. Establish projects in all four "action fields" to support financial system change. Continue inviting contributions from a variety of stakeholders to ensure that future priorities are as equitable as possible and diverse in scope.
Policy framework development	In early 2019, the **GSFC** and **WWF** published a Policy Roadmap for the Financial Sector, which sets priorities for transparency and disclosure; stability and risk management; location policy and supporting framework-setting; and responsibility. Dialogue and strategy are named as pre-requisites to success. Simultaneously, the **German State Secretaries' Committee for Sustainable Development** adopted a resolution to work towards making Germany a leading sustainable finance hub and announced a plan to develop a German Sustainable Finance Strategy.	Build a policy framework that is conducive to scaling up different types of financing for sustainable development. Encourage dialogue and focus on strategy development. Implement the Sustainable Finance Strategy, including specific targets and objectives.
***Energiewende* picks up speed**	In January 2019 a **government-appointed commission** imposed a phasing out of all coal power generation in Germany by 2038. By 2022, operators including EnBW, RWE and Vattenfall will need to shut down power plants with a 12.7GW capacity.[18]	Promote and incentivise additional opportunities for investments into renewable energy generation, transmission and storage.

Endnotes (weblinks): **1**. For a historical overview and green bond market commentary, see *Germany*, The Green Bond Market in Europe 2018, CBI, 2018. **2**. Khadbai, B. (Global Capital), 2019. **3**. Johanssen, K. (Boersen-Zeitung), 2019. **4**. CBI Green Bond Database Methodology. **5**. Climate Bonds Taxonomy. **6**. Bonds and Climate Change: State of the Market 2018, CBI, 2018. **7**. Deutsche Bahn, 2019. **8**. See *Spotlight on green retail products*, Green Bonds: State of the Market 2018, CBI, 2019. **9**. Innogy, 2018. **10**. Global Corporate Green Investment and the UN Sustainable Development Goals, Corporate Knights & CBI, 2019. **11.** Ewing, J. (The New York Times), 2019. **12**. Perkins, R. (S&P Global), 2019. **13.** Energiewende, 2019. **14**. Sawin, J. L. (Worldwatch Institute), 2007. **15**. Federal Ministry for Economic Affairs and Energy, Germany, 2019. **16**. Eckert, V. (Reuters), 2019. **17**. Electromobility in Germany: Vision 2020 and beyond, Germany Trade & Invest, 2015/2016. **18**. Wacket, M. (Reuters), 2019.

Supported by:

Deka

DZ BANK Bank on Germany