

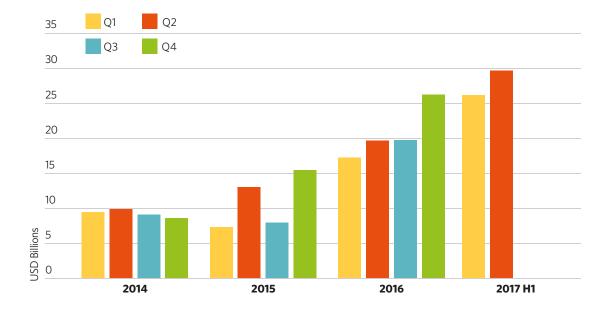
Global Green Bonds Mid-Year Summary 2017

Climate Bonds Initiative

Headline figures for the Half Year (H1)

- 2017 issuance for H1: USD55.8bn
- Records broken: Quarter 2 (Q2) is the largest quarter of issuance on record at almost USD30bn
- 82 green bond deals issued in Q2 from 74 issuers, with 50% of first timers
- Green Bond transactions accounted for 3% of global bond market transactions in Q2
- Top 5 largest issuers of H1: Republic of France (USD7.6bn), EIB (USD2.8bn), KfW (USD2.5bn), Bank of Beijing (USD2.2bn), TenneT (USD2.2bn)

Figure 1: Growth Comparisons 2014-2017 H1



So Far So Good

Nearly USD56bn in green bonds were issued in H1 with record issuance of almost USD30bn in Q2:

So far, USD19bn more have been issued in the first half of 2017 than for the corresponding period last year! While this is encouraging, the current market growth is not quite on track to reach the highest initial estimates for the year.

Climate Bonds current view is closer to USD130bn than our January estimate of approximately USD 150bn. While Moody's preliminary forecast was USD206bn (they revised this down in April), SEB in May projected between USD125-150bn and others were wide ranging, from under USD100 to up to 150bn.

The good news is that we're optimistic the market will reach at least USD130bn, because the second half of the year is always bigger than the first, China has a huge number of bonds approved but not yet issued, several sovereign issuers are expected to come to the market and, of course, demand is still strong.

Some scenarios for the rest of the year...

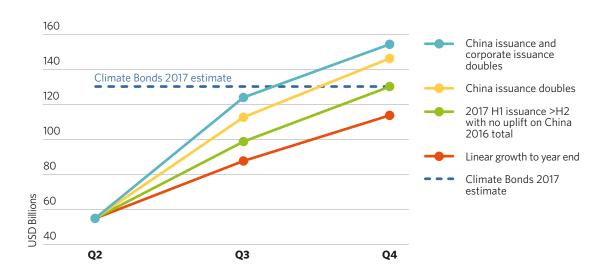


Figure 2: End 2017 Growth Projections:

Headline figures for the Half Year

Issuance from China started slowly but is picking up. After a record-breaking 2017, everyone had big expectations of Chinese issuance in 2017 with some estimates at USD80bn. Q1 was slow with issuance amounting to less than USD1bn (less than 4% of the market) but is now picking up.

Q2 has seen China regain its top spot with over USD6.8bn issued (by comparison, Chinese issuance in Q2 last year was lower at USD1bn). Accordingly China could be well positioned again in the green bond market in 2017. Further, the domestic green bond market has seen increasing signs of diversification with another green ABS issued.

Out of interest, why has Chinese issuance started slowly? The slowdown in Q1 was largely due to tightened liquidity, domestic interest rate volatility and hence increase of funding cost. The market has rallied again so issuance could pick up even more in the second half of the year. We know of at least 30 issuers who have been given approval to issue green bonds already and there will be others. More information on the Chinese market is available here.

General corporate issuance is growing but only in some markets. There are a lot of rumours that the corporate market is stagnant. Well, the good news is: this isn't really true. Issuance from non-financial corporates has almost doubled compared to this time last year both in number of deals and in total amount issued.

Plus, of the 74 new issuers in Q1 and Q2, 22 of them were non-financial corporates – almost a third.

However, while corporate issuance is on the up, it's not increasing everywhere. In some countries, non-financial corporates make up a large proportion of issuance – e.g. the Netherlands (58% by value or 43% by number of deals) and Sweden (35% by value and 69% by number of deal). In other countries, this is not the case – in the U.S. non-financial corporates account for just 18% of the value of issuance or just 5% by number of deals.

As the just released BNEF Green Bonds 2016 report noted, there's plenty of headroom.

External reviews are a rising trend, accounting for 74% in terms of number of deals in Q2. This is up from an average of 70% of deals with reviews in 2016. The rising trend of issuers seeking reviews is encouraging and is now evident across most markets.

Geographic base is expanding. Europe still makes up the majority of the market (48%), though issuance is broadening with first-time issuers from Argentina, Singapore, Slovenia and Switzerland. Issuance from emerging markets is still quite small with Brazil taking the lead, but encouraging signs are still coming out of Africa.

Kenya and Nigeria both have working groups on green bonds with a sovereign green bond expected out of Nigeria before the end of the year, Moroccan issuers continue to issue small but important bonds for solar and South Africa's City of Cape Town issued their debut green bond in early Q3.

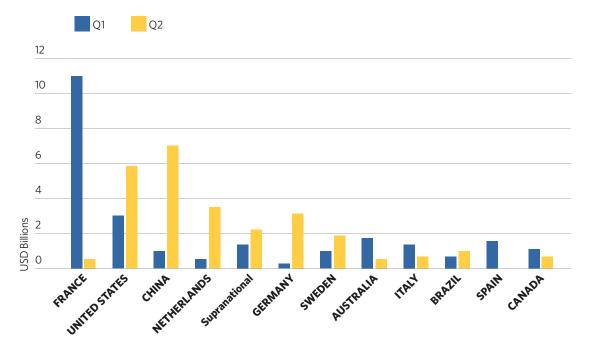


Figure 3: Green Bonds issuance by volume 2017 YTD

Plenty of US municipalities are tapping the market. Issuance amounts to almost USD5bn in 2017 in the first half of 2017 (total issuance in 2016 was USD7.1bn), meaning that US muni issuance could reach USD10bn this year. US municipalities are the backbone of the US market, accounting for 56% of US green bonds issued in H1 2017 by value and around 70% by number of bonds.

League tables for Q1 and Q2. Crédit Agricole is on top, followed by Morgan Stanley and Citi. Thanks again to Thomson Reuters for providing their Q1 and Q2 league table data to us. Please see Methodology Notes** about league tables at the end.

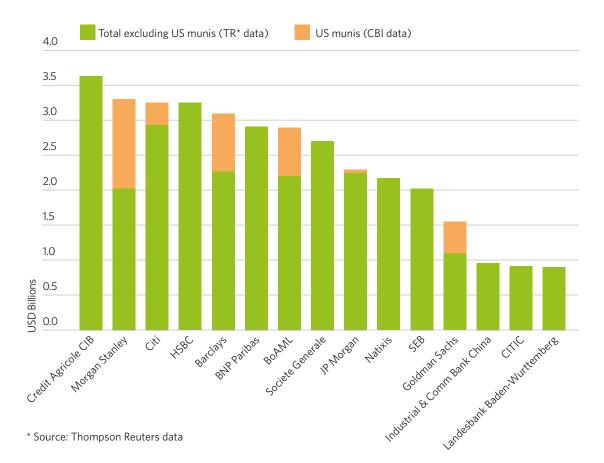


Figure 4: Green Bond Underwriters League Table O1-O2 2017

Predictions for the rest of 2017...

Sovereign issuance will increase – we have counted 8 different sovereigns that have made commitments to issuing green bonds. We're not sure they will all be issued in 2017, but watch out for Nigeria, Kenya and Morocco.

Chinese issuance will pick up exceeding 2016 issuance. We know there have been a lot of deals approved for issuance by PBoC, so when the market conditions are right, more issuance will come.

Harmonisation of standards looks increasingly likely. Many conversations have been convened by the Green Bonds Principles and others to strengthen harmonisation between standards, external reviews and Certification schemes.

Further the European High Level Expert Group on Sustainable Finance published its Interim Report, which among other things calls for an EU wide approach to green standards and labelling.

Guidance on impact reporting may be forthcoming. *Post-issuance reporting in the green bond market*, the Climate Bonds study released in June, revealed that impact reporting is on the rise, but that there is little consistency and comparability.

Large development institutions have initiated some progress with the Harmonized Framework for Impact Reporting in 2015 but our view is that this has become a hot topic and we will see more detailed guidance for the corporate market.

USD130bn for the year looks possible – we expect issuance to increase over the rest of the year and possibly exceed the Climate Bonds estimate for 2017 of USD130bn. The big questions would be: is USD1trn a year by 2020 possible?

Traction on USD1 trillion by 2020

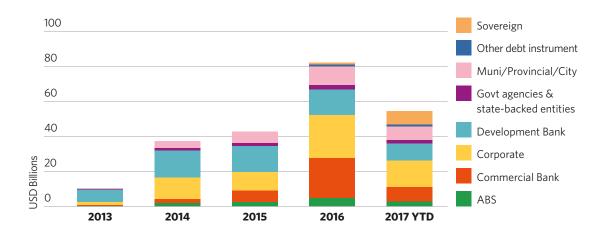
In an article for Nature, Christiana Figueres and colleagues have set out six milestones for turning the tide of the world's carbon dioxide by 2020. Together, the six milestones reflect the urgent need to accelerate action to address climate change.

Among the actions is call for a tenfold increase in green bond issuance. Milestone six is USD1 trillion by 2020. That's almost three and half years and four COP conferences (COPs 23-26) away.

So now's the time for the global financial sector to get busy on their big 2020 contribution to emissions reduction.

OK, one last chart...

Figure 5: Green Bond issuance by type 2013-2017



Coming Up Soon

Don't miss our China Report out soon and our 2017 State of the Market launch later in September.

Methodology Notes and Disclaimer

**Methodology Notes League tables and data

Since Q3 2016, the Underwriters league tables are collated using data from Thomson Reuters except for US municipal bonds which are calculated by the Climate Bonds Initiative. As such, ranking volumes differ from Thomson Reuters tables. Volumes may differ from other league tables as they include all ABS deals and US municipal bonds and exclude bonds which have less than 100% of proceeds going to environmental assets/projects or aren't within the Climate Bonds taxonomy.

Note: Data includes

- Primary Issuance only
- Underwritten transactions only
- Thomson Reuters data excludes tax exempt muni bonds
- The global table includes transactions that mature at least 360 days after settlement, for international 18 months and above.
- Transactions that mature or are callable/puttable less than 360 days after settlement are excluded, for international 18 months and above.
- Self-funded straight debt transactions are excluded (excluding mortgage and asset securitizations) unless two or
 more managers/ underwriters unrelated to the issuer are present. The unrelated firm in a self-funded transaction
 with only two book runners in the syndicate will receive league table credit.
- Transactions with an issue size of less than USD 1 million (equivalent) are included, sole led MTN take owns with a
 minimum size of USD 50m for core currencies are included, USD 10m for non-core.
- Deals must be received within five business days of pricing to be eligible.
- 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 for example, ESG bonds that combine both social and green projects.

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