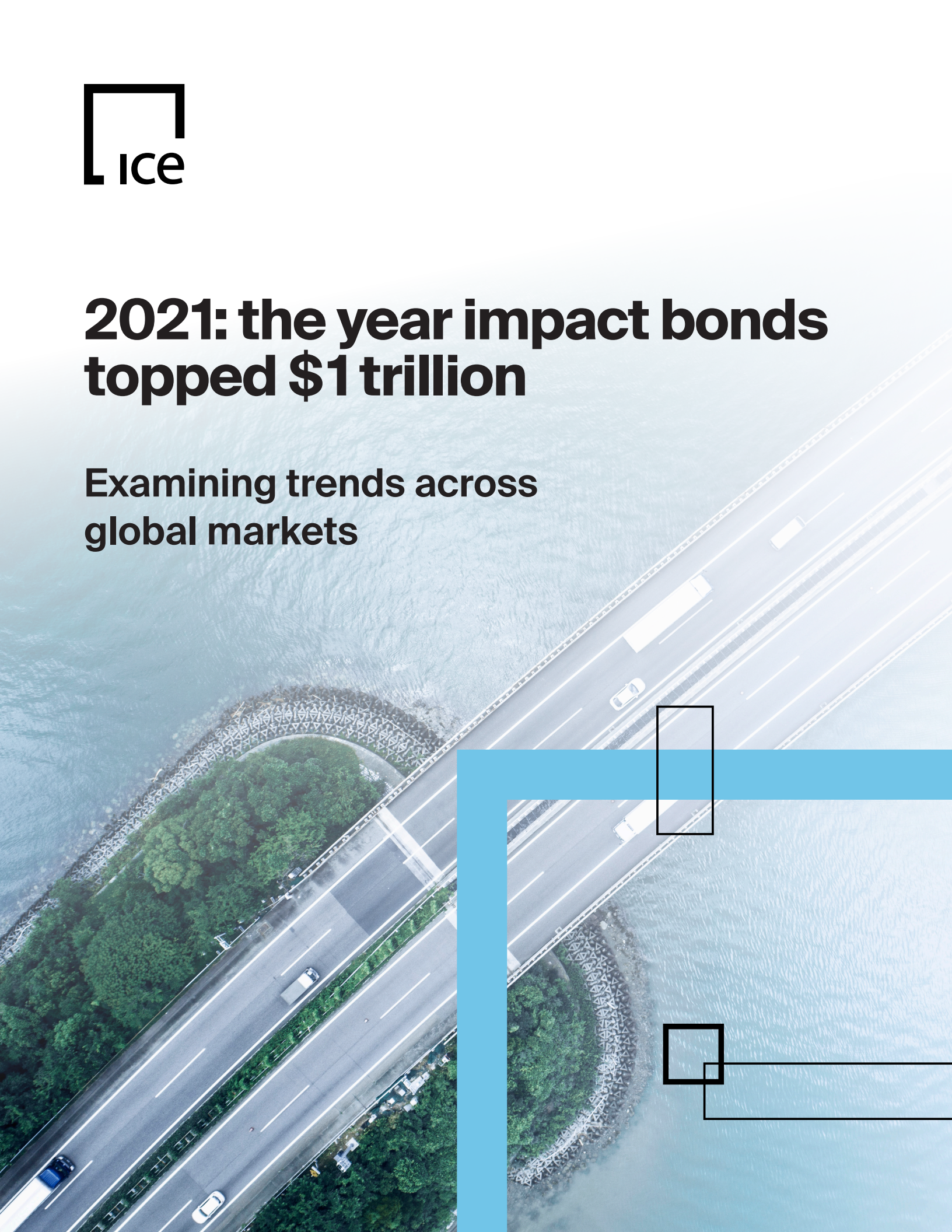




2021: the year impact bonds topped \$1 trillion

Examining trends across global markets



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Definitions:

Green Bonds are any type of bond instrument where the proceeds will be exclusively applied to finance or re-finance projects with clear environmental benefits

Social Bonds finance projects that directly aim to address or mitigate a specific social issue and/or seek to achieve positive social outcomes, especially but not exclusively for a target population(s).

Sustainable Bonds are bonds where the proceeds will be exclusively applied to finance or re-finance a combination of both green and social projects.

<https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/>

Executive Summary

Impact bond issuance soared past \$1 trillion last year, growing 77% to \$1.036 trillion as of 31 December 2021.

For the purpose of this report, we define impact bonds as green bonds, social bonds and sustainable bonds that are either declared as such by the issuer or certified by a third party. All data and charts are based on data obtained by ICE Data Services and available via its product offerings.

EMEA was the largest contributing region in 2021 compared to APAC and America, launching \$474 billion of impact bonds during the year excluding supranational entities. Meanwhile, APAC topped the list in terms of the number of securities issued during the year. The largest issuance of the year was launched by the European Union at €12 billion (US\$14 billion) in October.

The top single issuing countries in 2021 were France, China and Germany, noting that 30% of impact bonds issued in China were not certified by a third-party. Nonetheless, the number had improved from 62% in the previous year amid regulatory efforts in the country to align local rules with global standards.

Green bonds remain the largest category of impact bond by issuance over the past five years, followed by sustainable bonds and social bonds. In 2021, \$583 billion of green bonds were issued globally, reflecting a 138% increase year on year. China surpassed Germany to become the largest single issuing country of green bonds. The largest green deal in the country was issued by the China Development Bank at CNY 19.2 billion (US\$3 billion) in March. Significant growth was also seen in the UK as the government issued two green gilts amounting to £16 billion (US\$22 billion) in the run-up to the UN Climate Change Conference (COP26). 2021 was also the year where regulation entered the space via [the proposal of the EU Green Bond Standard](#). As this develops, we will comment further, especially as the European Commission expands into other impact bonds such as social bonds.

Issuance by corporates, governments, investment vehicles and private entities have all grown in 2021, with only supranational entities issuing 3% less year on year in terms of dollar amount of issuance. Among government impact bonds, EMEA had a higher issuing dollar amount than APAC but a lower number of securities issued, highlighting the larger average size of EMEA government impact bonds. Among corporate impact bonds, financials was the largest issuing sector, with two-thirds from EMEA. The biggest corporate issuance of the year was a €2.5-billion (US\$2.9 billion) green bond launched by DekaBank Deutsche Girozentrale in January.

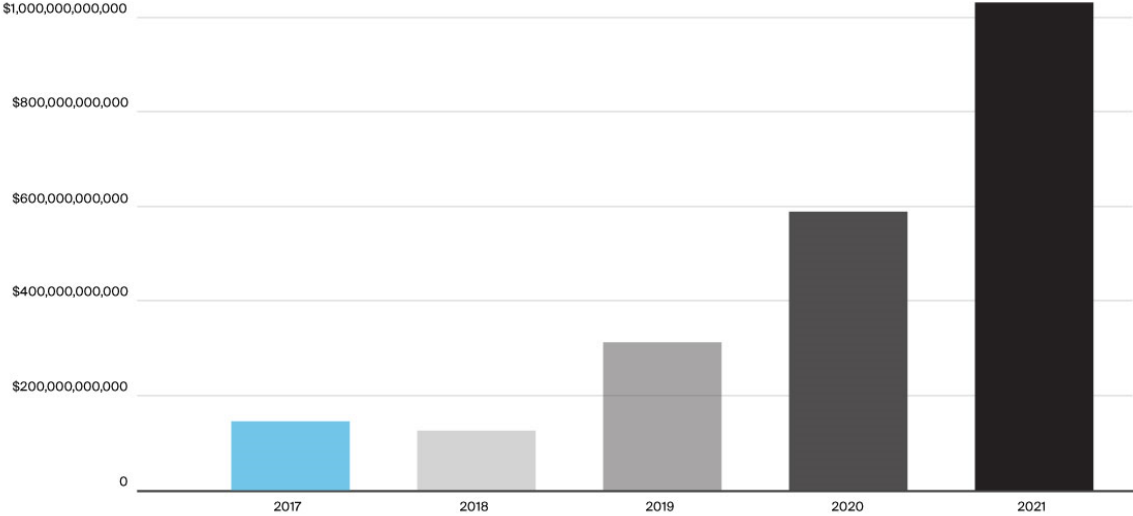
In the US municipals market, \$44 billion of impact bonds were issued in 2021, with California the largest issuing state by dollar amount, followed by New York and Washington. Multi-family housing and single-family housing surpassed mass/rapid transport to become the top categories of project funded by US impact municipal bonds.

In Germany, we observed that the yield of a few sovereign green bonds was consistently below that of their non-green twins. The premium spread of the green bond issue against its non-green equivalent, often referred to as Greenium, widened over the year. In particular, the premium spread of a 5-year Green Federal Bond and its conventional twin was more volatile and sensitive to market changes when compared to longer dated Bund issues.

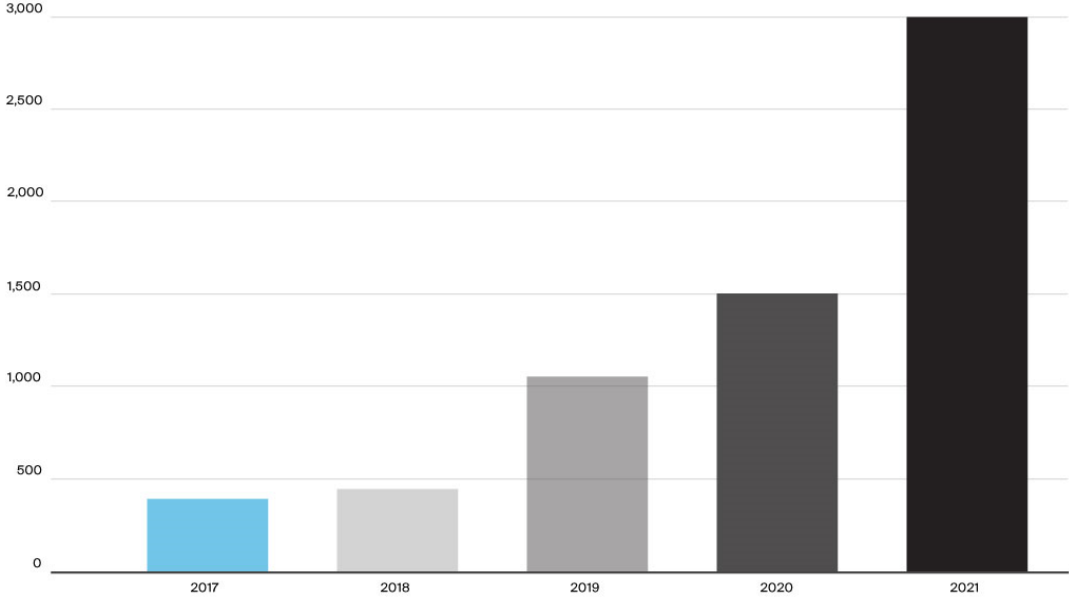
Issuance

Global Issuance

Dollar amount of impact bonds issued globally



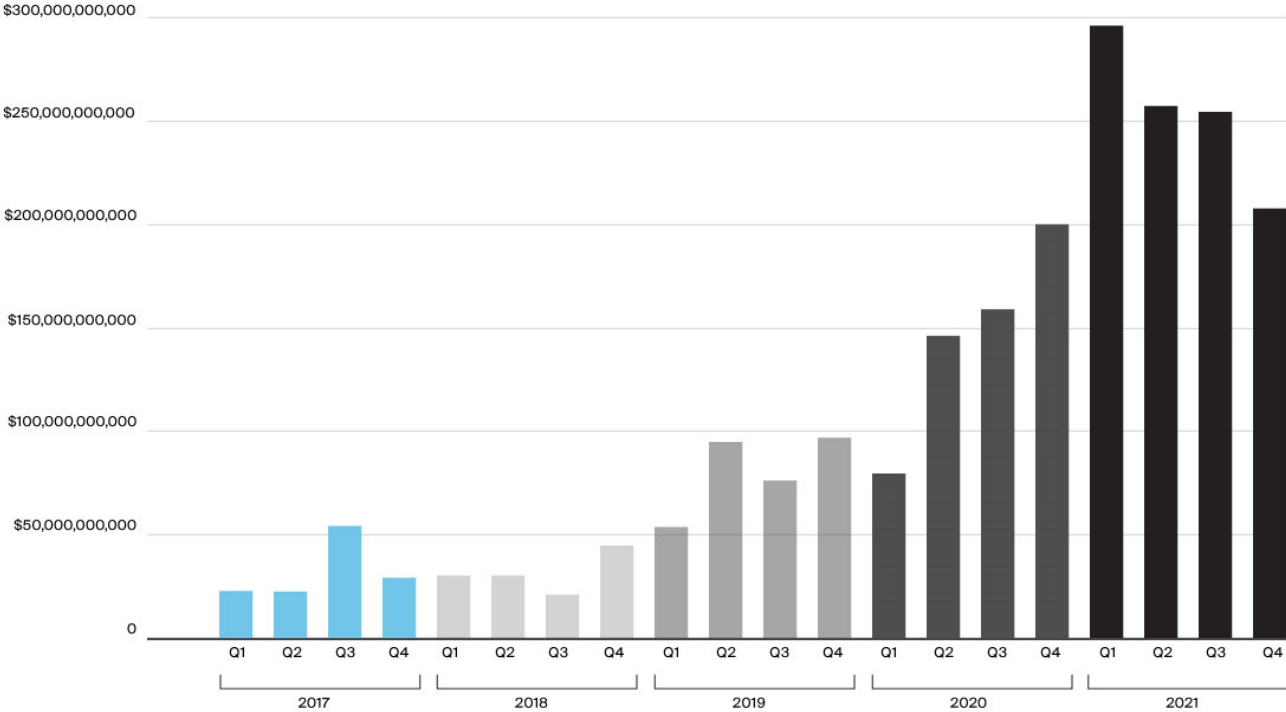
Number of impact bonds issued globally



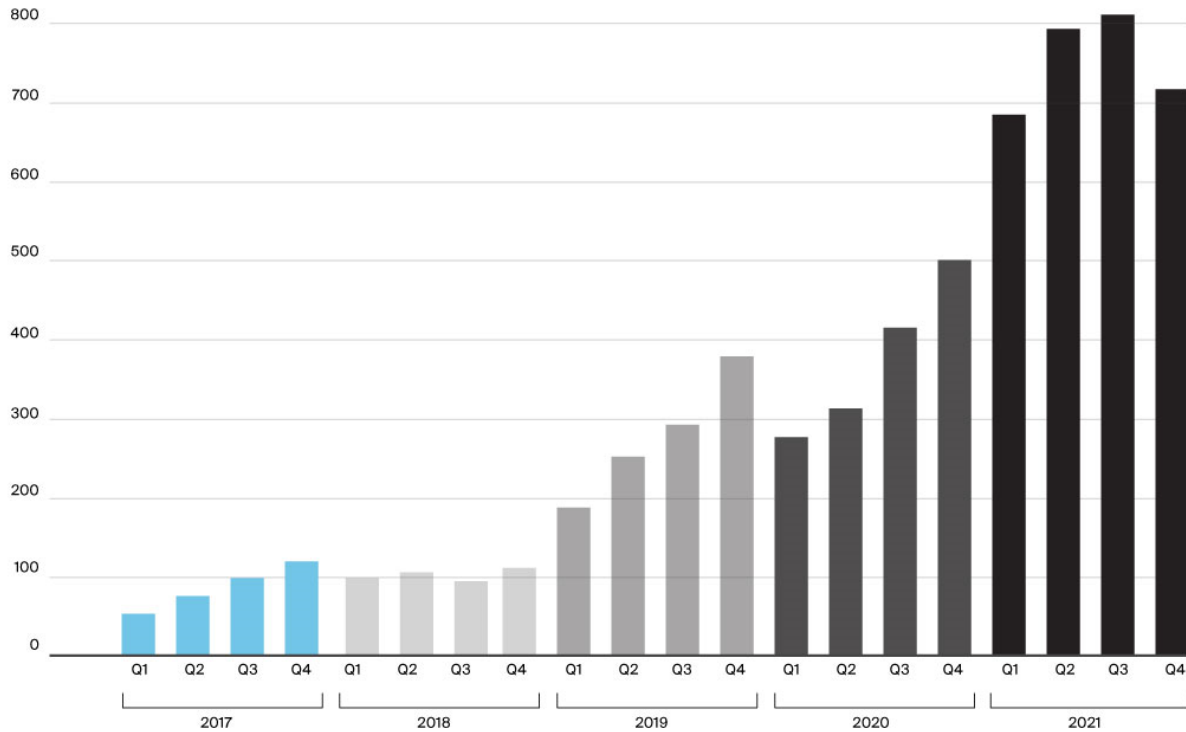
The dollar amount of impact bond issued in 2021 was \$1,036 billion, rising 77% year on year. In terms of the number of securities, 3,020 impacts bonds were issued globally in 2021, showing a 99% increase compared to the previous year.

Over the past five years, the dollar amount and number of issuances increased by 670% and 746% respectively.

Dollar amount of impact bonds issued globally by quarter



Number of impact bonds issued globally by quarter



In 2021, Q1 had the largest dollar amount of impact bonds issued. \$289 billion of impact bonds were launched in the first quarter, including four social bonds issued by the European Union at a combined amount of €32 billion (US\$36 billion) between February and March. The dollar amount of issuance decreased in the subsequent quarters.

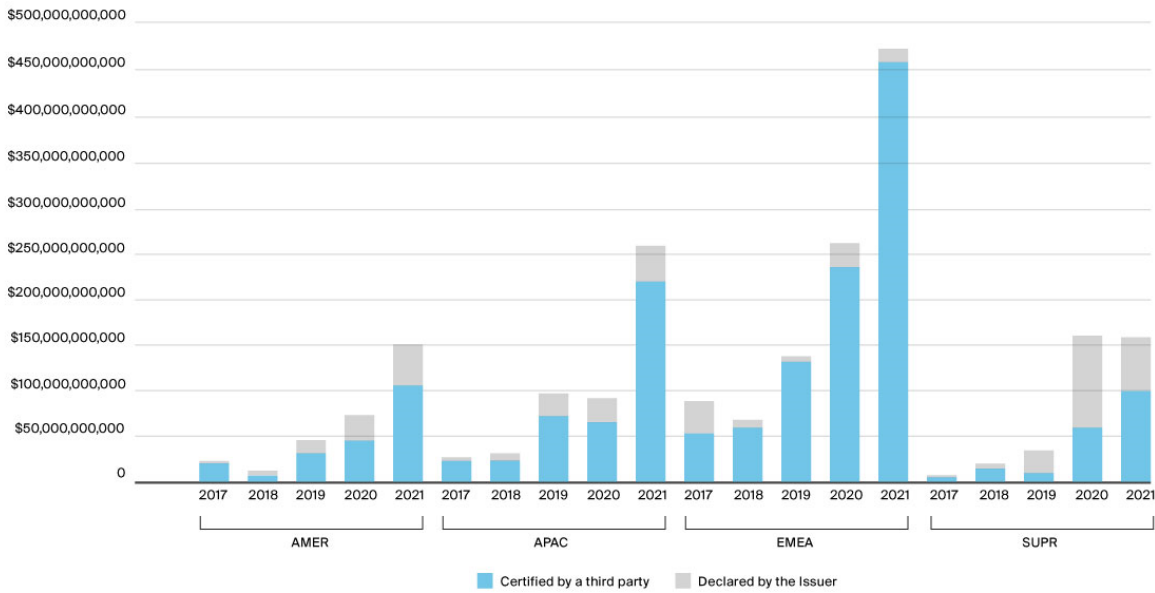
In terms of the number of securities issued, Q3 had the largest count of impact bonds issued in 2021. 818 impact bonds were issued in the third quarter, with almost one-third of the issuance coming from China and Korea. The number of securities issued globally in Q4 dropped by 11% quarter on quarter, breaking the upward trend seen in most of the previous years.

Issuance by Location

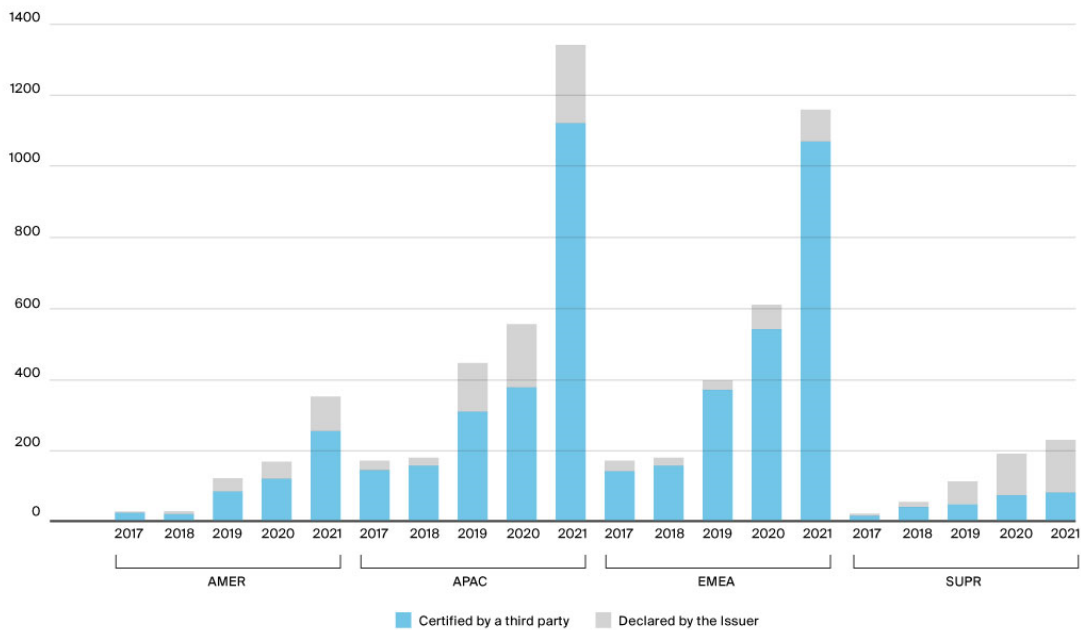
By Region

*See note for both charts

Dollar amount of impact bonds issued by region



Number of impact bonds issued by region



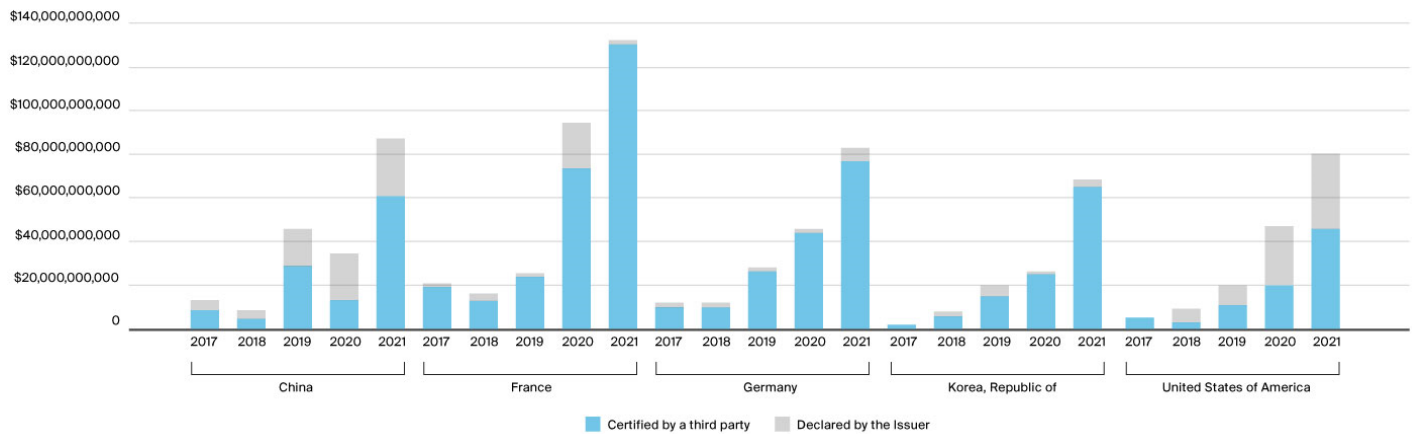
In 2021, EMEA entities issued \$474 billion of impact bonds excluding supranational entities, which was an 84% increase year on year. APAC entities issued \$253 billion of impact bonds during the year, 179% higher than the previous year. American entities issued \$149 billion in 2021, indicating a 102% increase year on year. The largest issuance of the year was launched by the European Union at €12 billion (US\$14 billion) in October.

In terms of the dollar amount of issuance, EMEA was the largest issuing region of impact bonds over the past five years, contributing a cumulative dollar amount of \$1,020 billion or 47% of the global value of issuance excluding supranational entities.

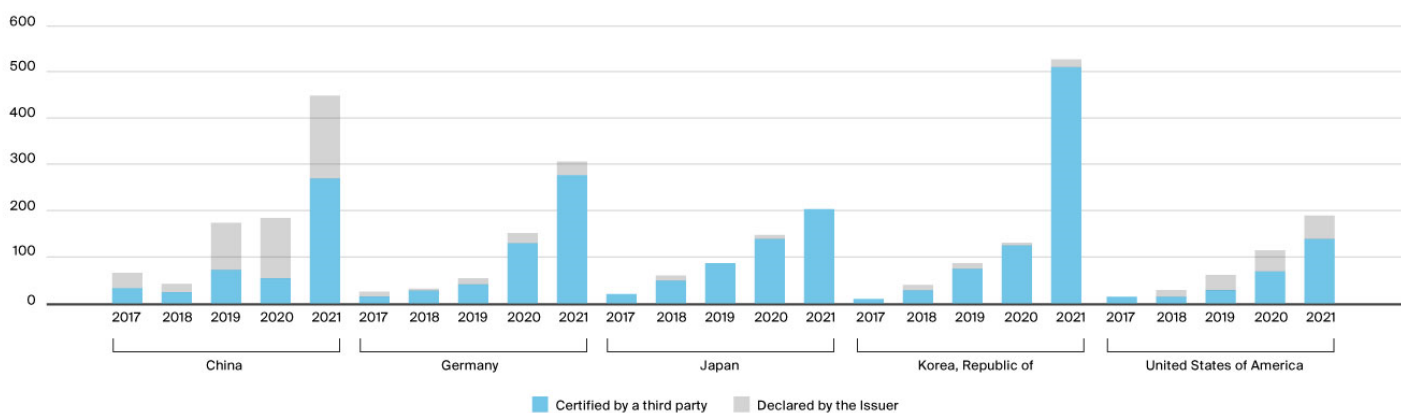
In terms of the number of securities issued, APAC had been the top issuing region over the past five years, contributing a cumulative 2,626 securities or 41% of the impact bonds issued globally.

By Country

Dollar amount of impact bonds issued by top issuing countries of 2021



Number of impact bonds issued by top issuing countries of 2021

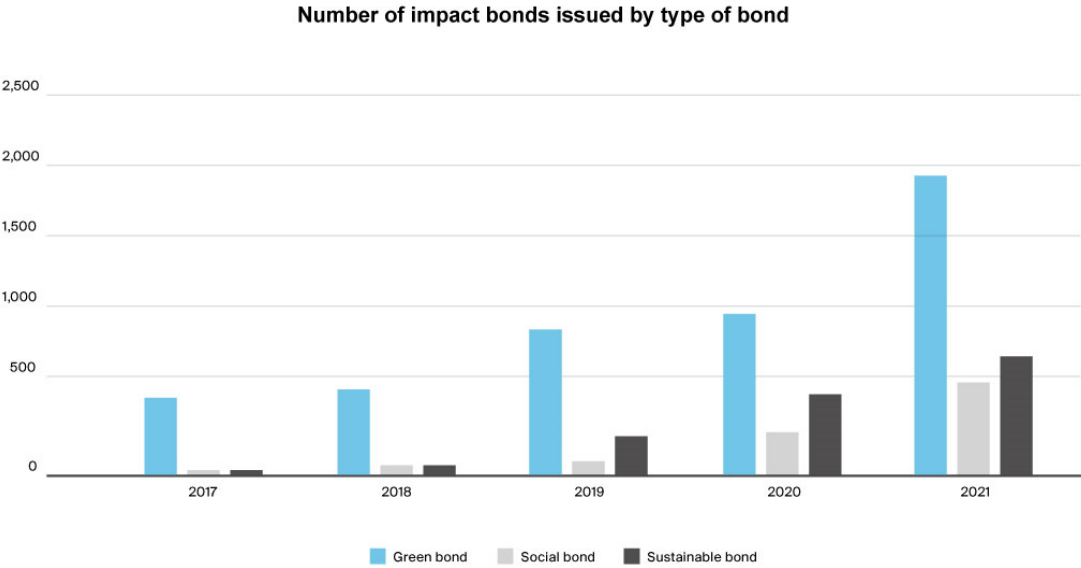
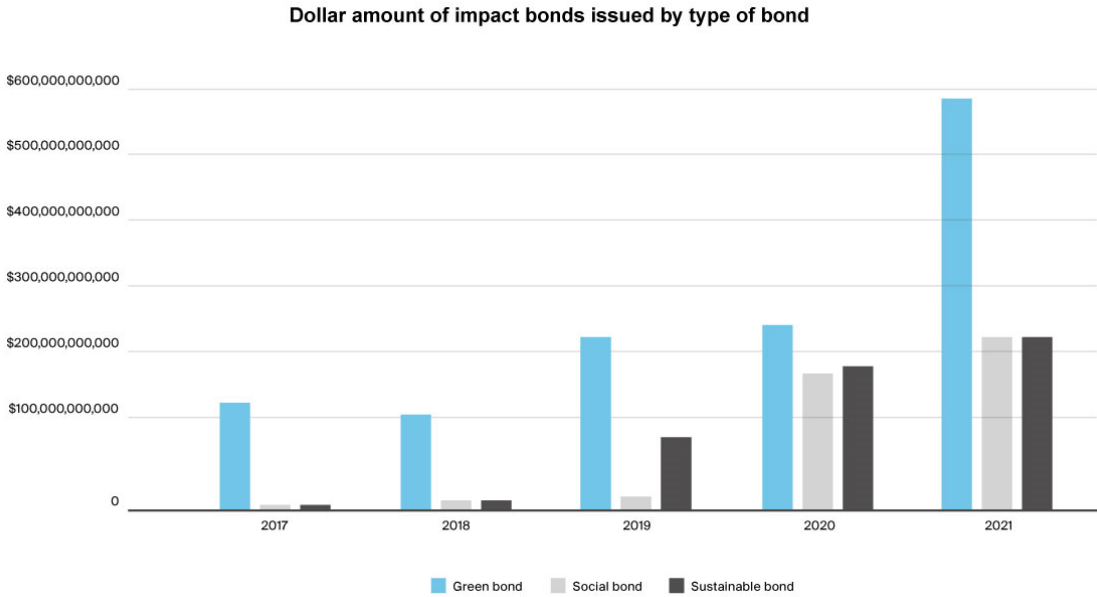


The top issuing countries in terms of dollar amount in 2021 were France, China and Germany, which issued \$129 billion, \$87 billion and \$82 billion respectively.

However, our data shows that 30% of China's issuance in 2021 were not certified by a third party. Nonetheless, the number could be seen as an improvement from 62% of non-certified bonds in 2020. Chinese issuers may have increasingly seen the benefits of attaining third-party certifications to attract foreign investors, as the country's regulators have been actively trying to align its regulations with global standards, such as removing clean coal projects from its revised Green Bond Endorsed Project Catalogue and co-publishing a Common Ground Taxonomy with the EU regulators.

Considering only certified bonds, Germany would be the second largest issuing country ahead of China, issuing \$77 billion or 94% of certified bonds. Korea issued the largest number of impact bonds in 2021, followed by China and Germany. They issued 507 securities, 444 securities and 304 securities respectively.

Issuance by Bond Type

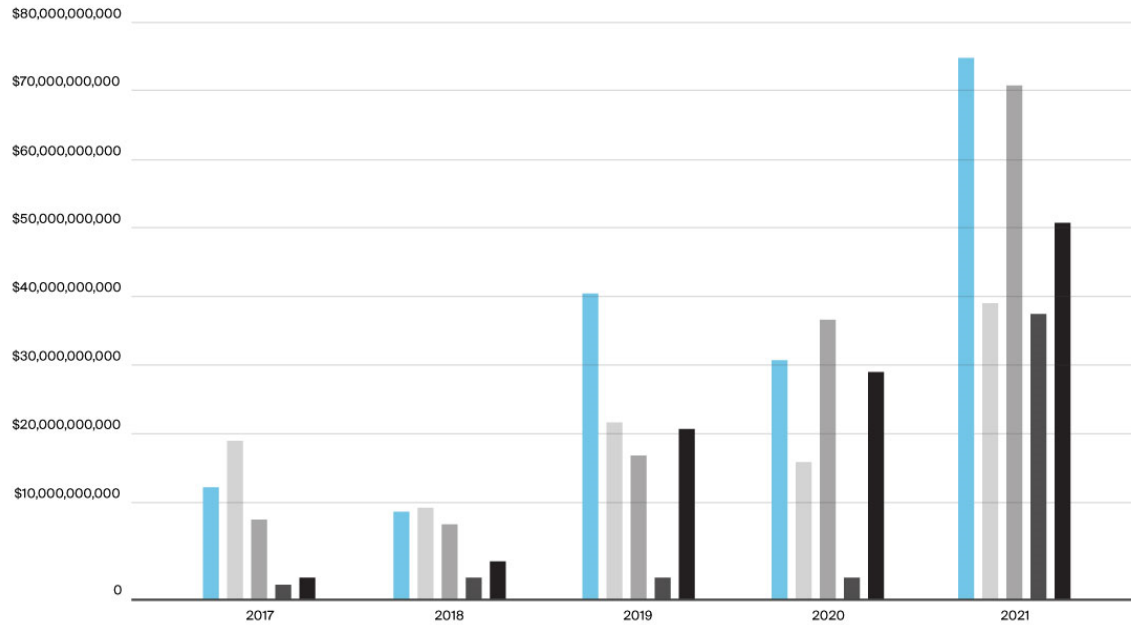


Among green bonds, social bonds and sustainable bonds, green bond was the largest category by both the dollar amount and number of issuances in the past five years. Its growth rate remained strong in 2021, with \$583 billion or 1,916 securities issued during the year, representing a 138% increase in terms of the dollar amount of issuance and a 97% increase in terms of the number of issuance year on year.

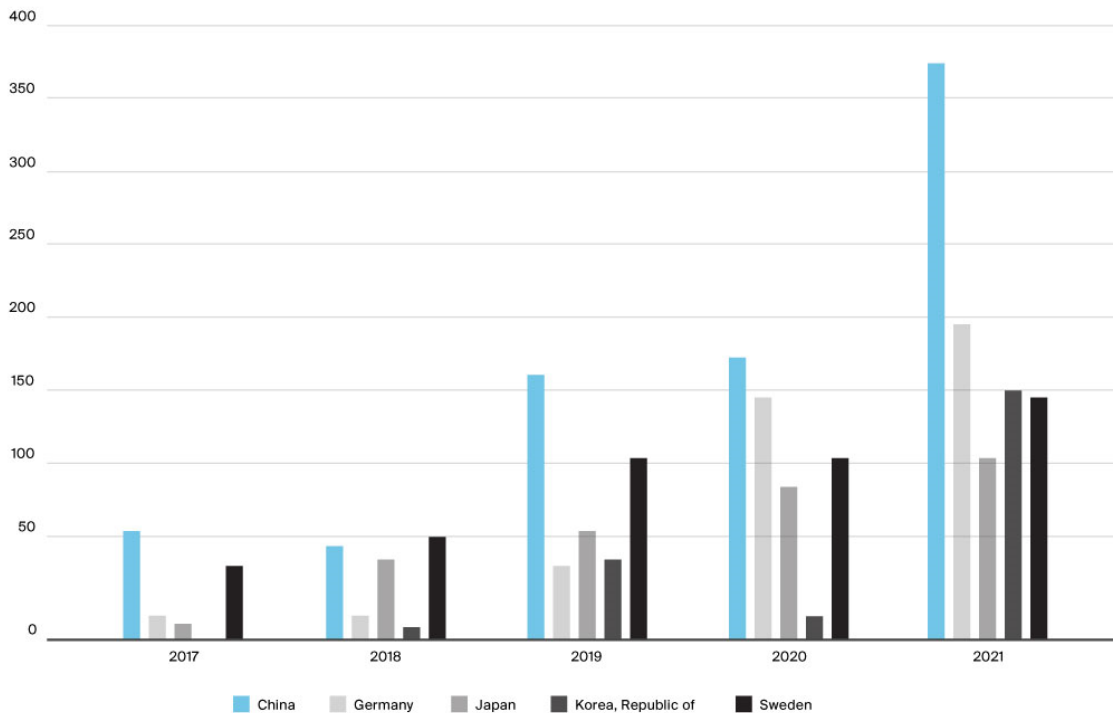
The issuance of sustainable bonds came second, with a total of \$228 billion or 624 securities issued in 2021, 28% and 81% higher than the previous year respectively. Meanwhile, the issuance of social bonds was \$225 billion or 477 securities in 2021, indicating a 39% and 135% year-on-year growth respectively.

Green Bonds

Dollar amount of green bonds issued by top issuing countries of 2021



Number of green bonds issued by top issuing countries of 2021



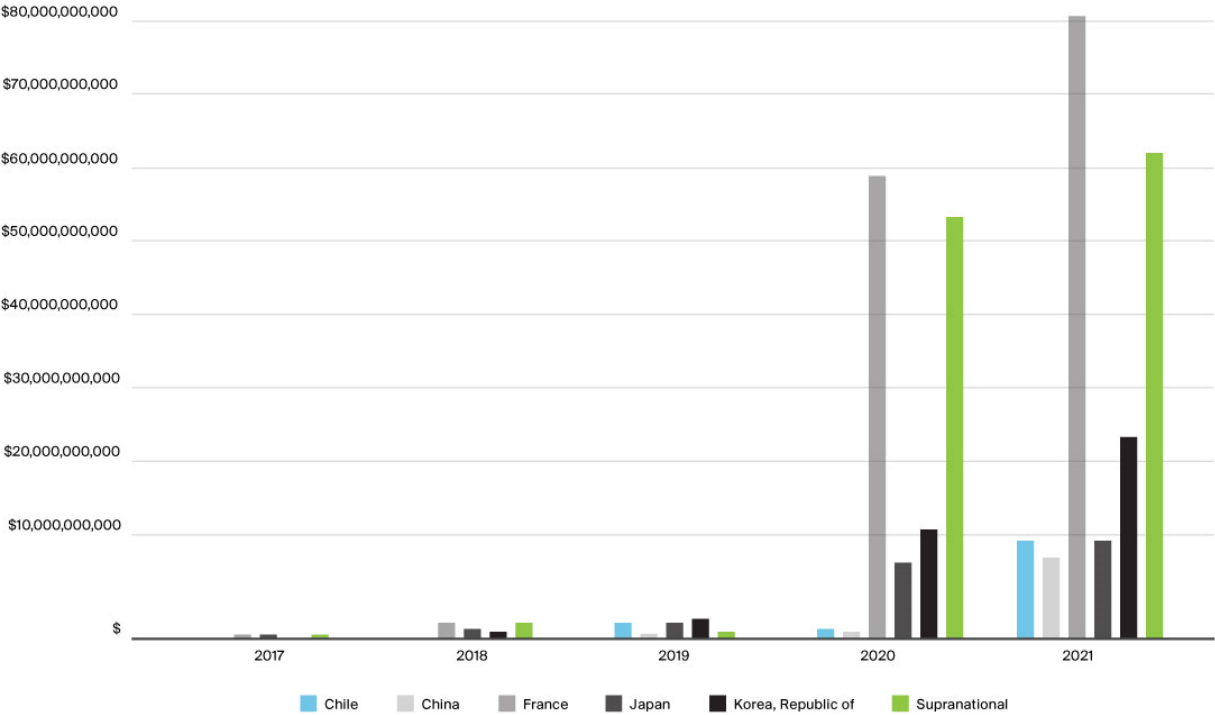
China surpassed Germany to become the largest issuing country of green bonds in terms of dollar amount of issuance. China launched \$74 billion in 2021, a 143% jump versus 2020. The largest green deal in the country was issued by the China Development Bank at CNY 19.2 billion (US\$3 billion) in March.

Significant growth was seen in the UK, where the dollar amount of green bond issuance has grown more than 10 times from \$3 billion in 2020 to \$37 billion in 2021, including two government bonds amounting to £16 billion (US\$22 billion) issued in the run-up to COP26 held in Glasgow.

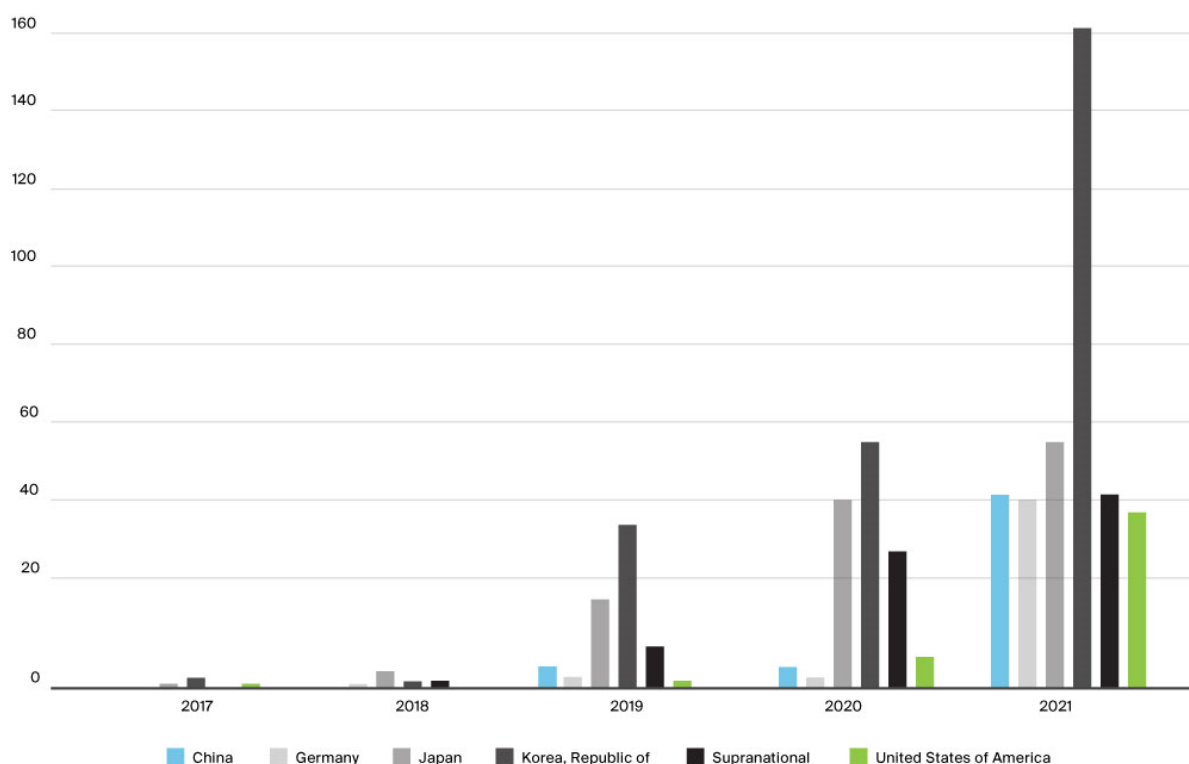
For the number of securities issued, green bond issuance in Korea leapt almost 10 times from 2020 to 2021, but the dollar amount it represented remain at 4% of the global amount of green bond issuance.

Social Bonds

Dollar amount of social bonds issued by top issuing countries of 2021



Number of social bonds issued by top issuing countries of 2021



France was the largest issuing country of social bonds by dollar amount of issuance in 2021. It launched \$81 billion of social bonds in 2021, which was 37% higher year on year.

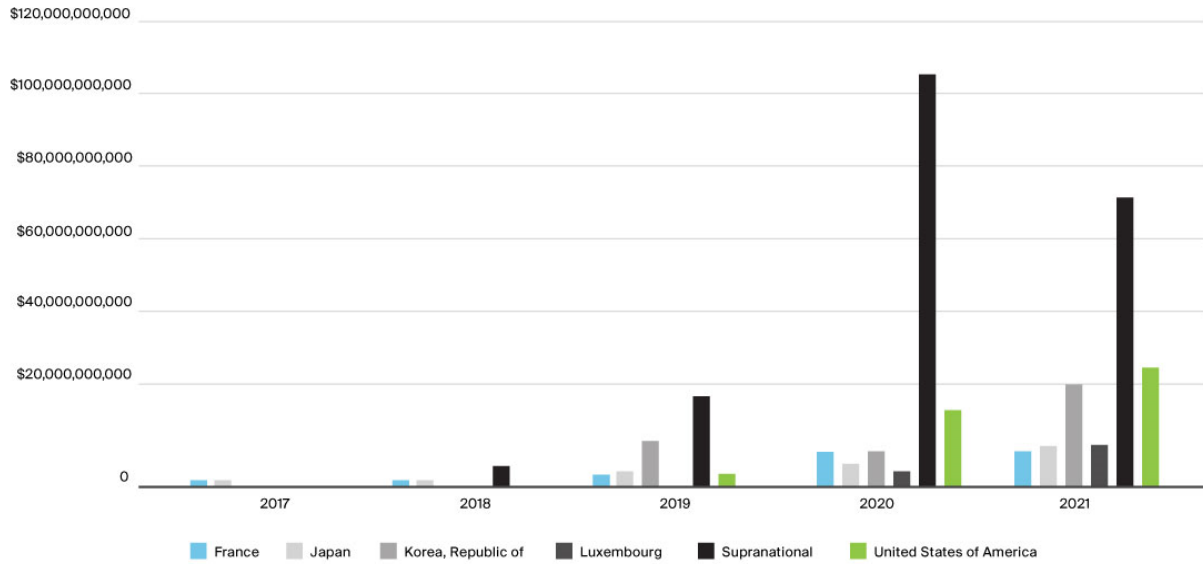
Korea followed as the second largest single issuing country by the dollar amount of issuance in 2021. It launched \$23 billion of social bonds in 2021, which was 106% higher year on year. The country also issued a significantly higher number of securities compared to its peers, although each bond had a smaller size of approximately \$1 billion or less.

Growth was observed in Chile and China in 2021. Chile launched \$9 billion in 2021 with a growth of 633% year on year, whereas China launched \$7 billion with an 529% increase.

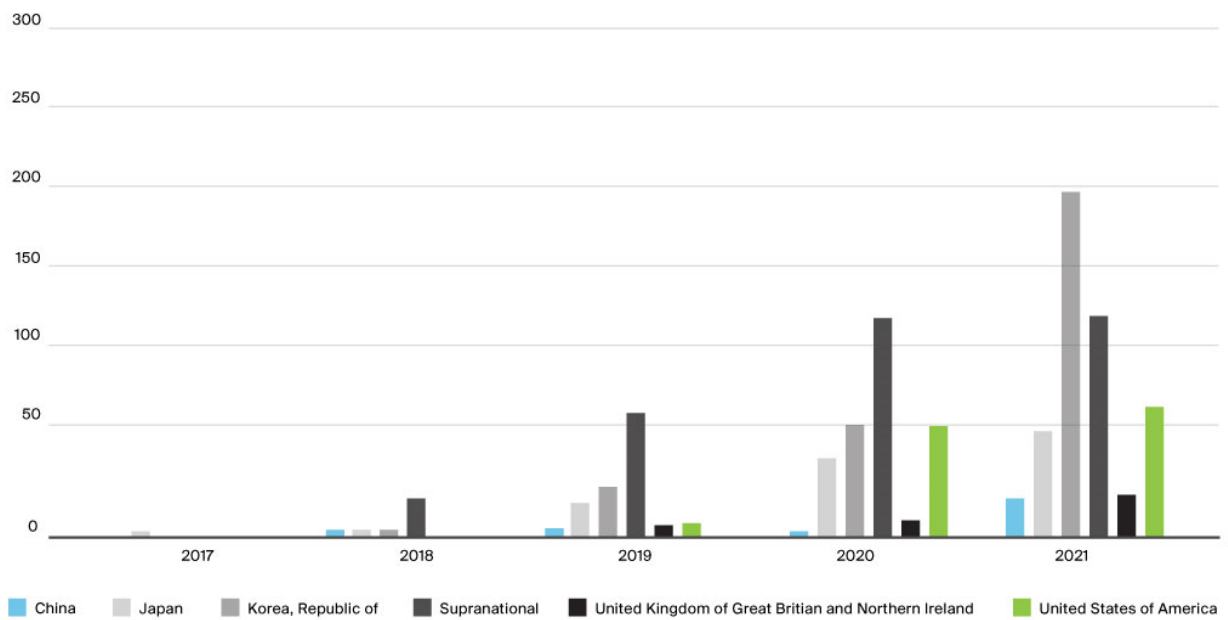
Meanwhile, supranational entities contributed significantly to the issuance of social bonds in 2021. They launched over \$62 billion of social bonds during the year, among which \$52 billion were issued by the European Union.

Sustainable bonds

Dollar amount of sustainable bonds issued by top issuing countries of 2021



Number of sustainable bonds issued by top issuing countries of 2021



Supranational agencies were a significant issuer of sustainable bonds in 2021, launching \$72 billion of sustainable bonds. Although it was a 30% drop from the previous year, its contribution remains strong at 32% of the full-year issuance.

US was the largest single issuing country of sustainable bonds in terms of the dollar amount of issuance in 2021. It launched \$25 billion of sustainable bonds, showing an 86% growth year on year.

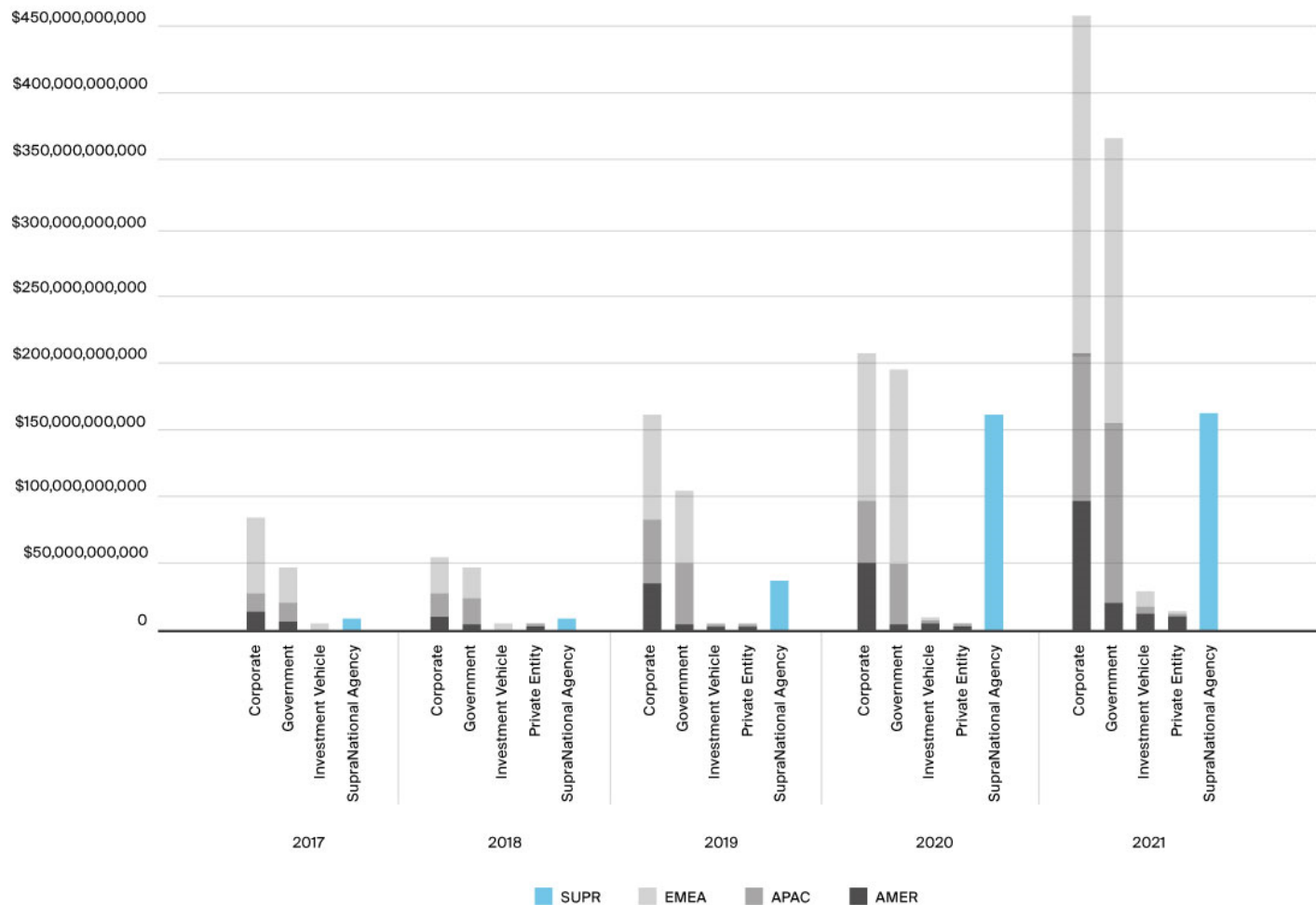
It was followed by Korea, which issued \$20 billion of sustainable bonds during the year, reflecting a 137% increase from the previous year. Similarly, Korea issued a larger number of securities than other countries, including the US, but often in smaller sizes of \$0.6 billion or less.

Issuance by Issuer Type

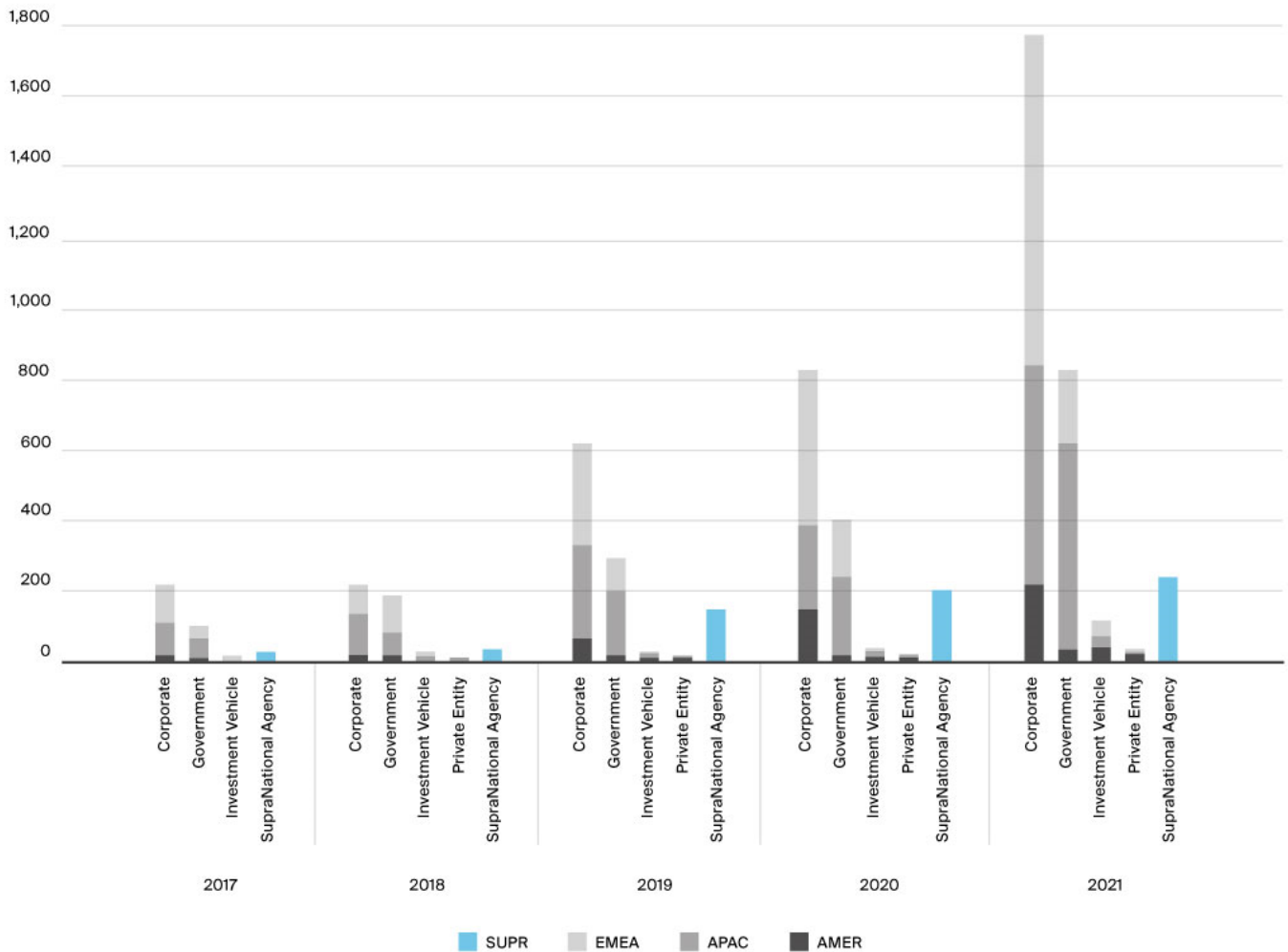
Issuer and Region

See note for both charts**

Dollar amount of impact bonds issued by type of issuer



Number of impact bonds issued by type of issuer

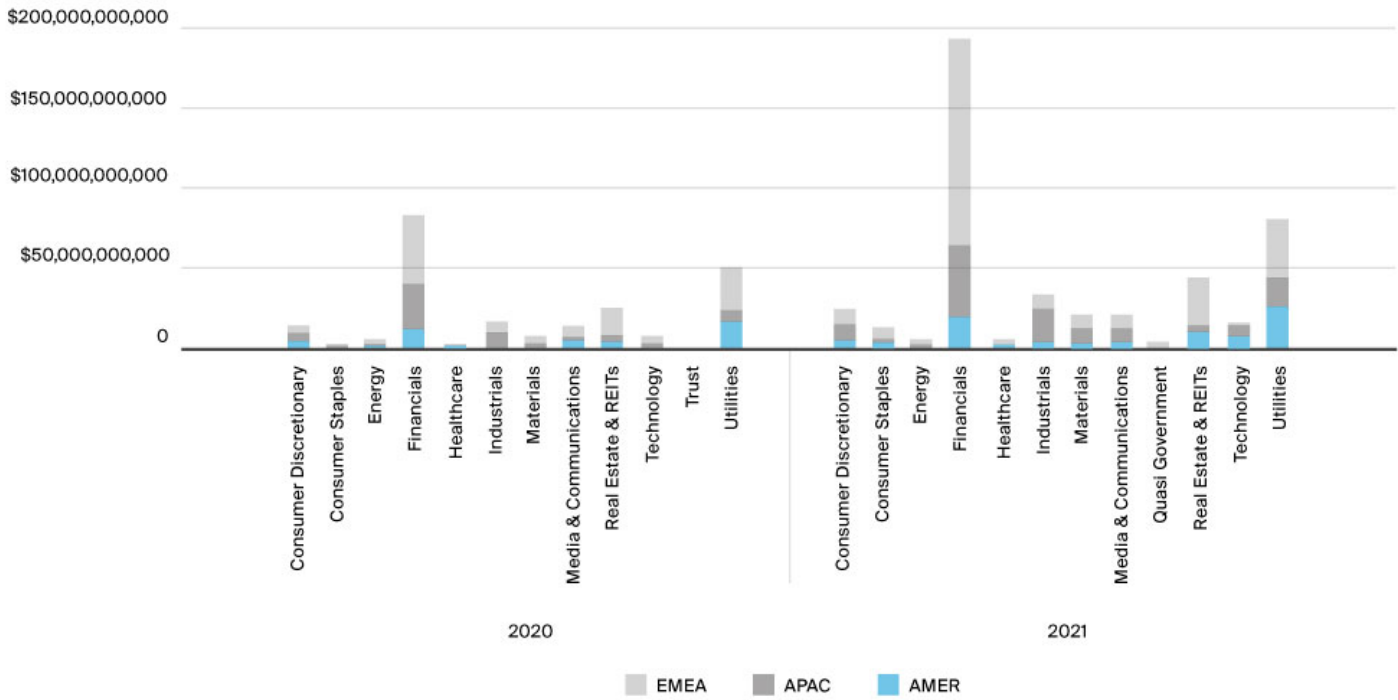


Growth in impact bond issuances were observed across all types of issuers in 2021 except for supranational agency. Supranational agencies issued \$161 billion of impact bonds in 2021, which was 3% lower than 2020.

Noticeably, the gap between issuances of corporate and government impact bonds widened in 2021. Corporates issued \$456 billion of impact bonds during the year, which was 22% higher than the \$372 billion of impact bonds issued by governments. In 2020, the dollar amount of impact bonds issued by corporate was only 7% higher than that of governments.

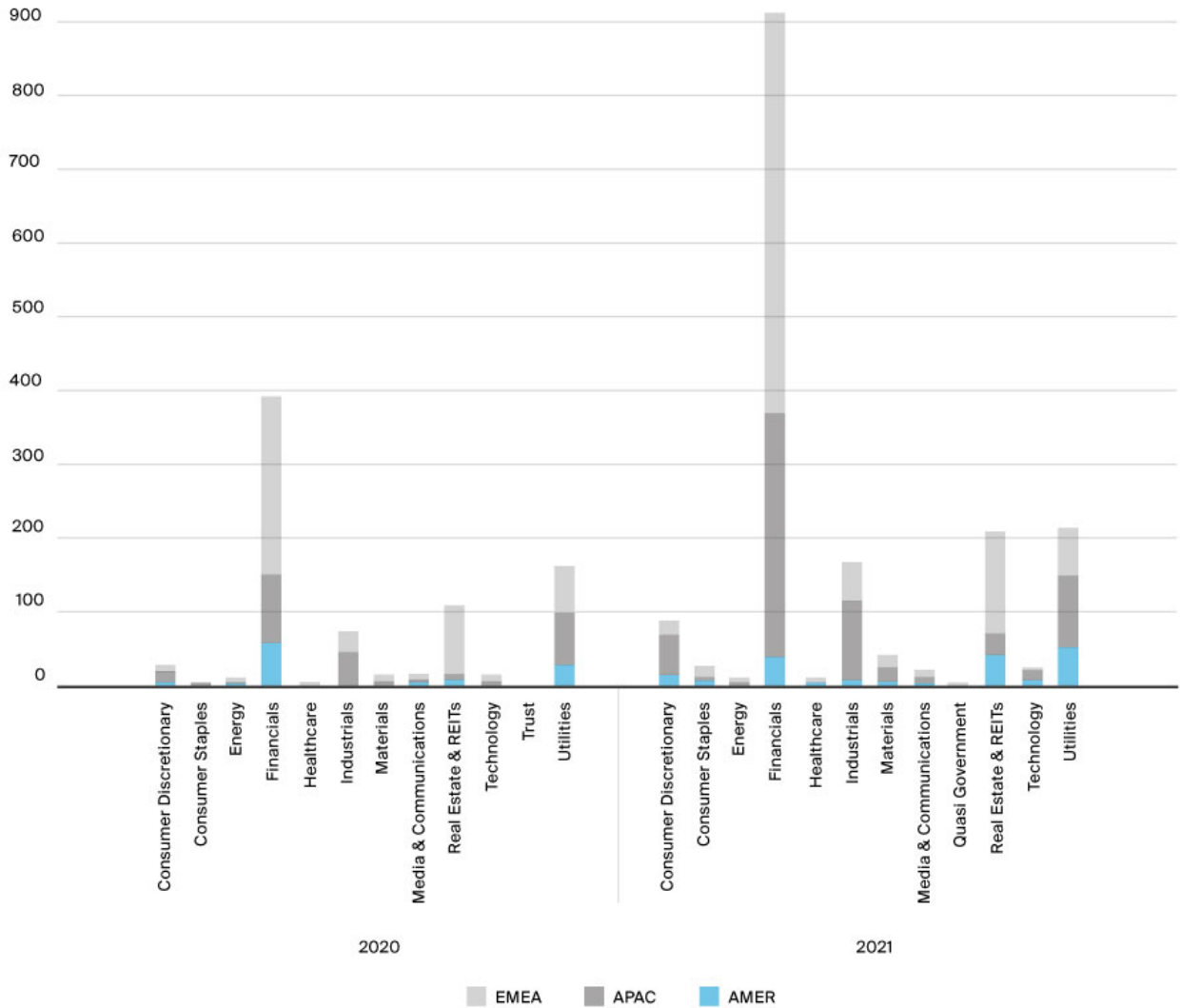
Among government bonds, EMEA issuers had a higher issuing dollar amount than APAC despite having a much lower number of securities issued, highlighting a larger average size of EMEA government bonds compared to its peers in the APAC region. The average size of EMEA government bonds was \$1.2 billion while that of APAC government bonds was \$0.2 billion.

Dollar amount of corporate bonds issued by sector



Note: Sector classification is based on the ICE Uniform Entity Sector Classifications schema. *See note

Number of corporate bonds issued by sector



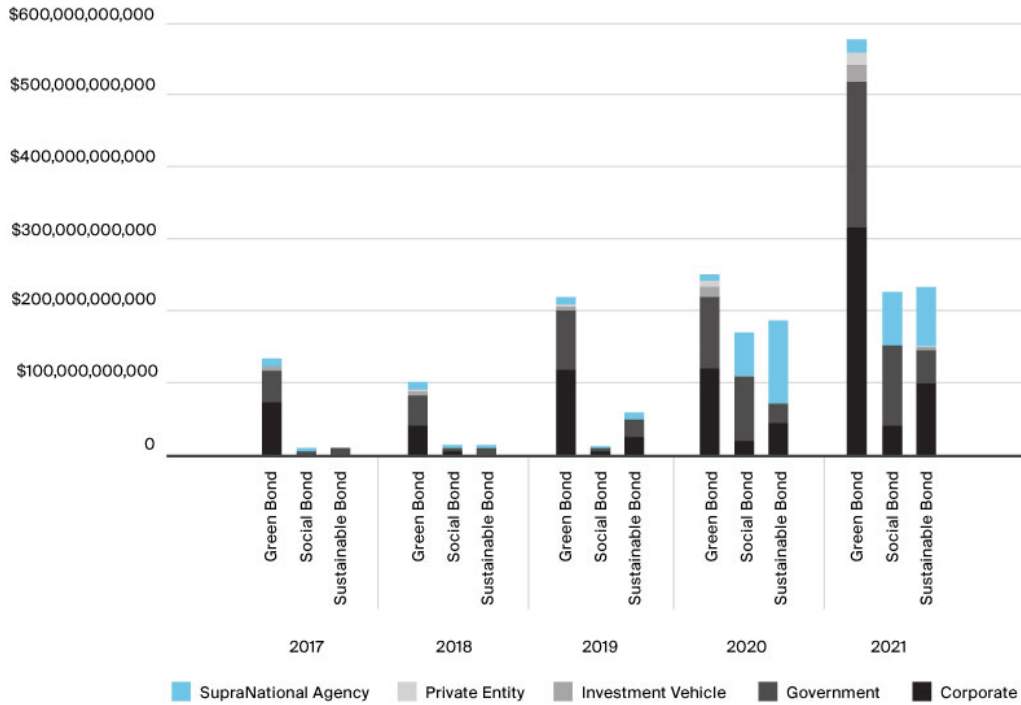
*See note

Among corporate bonds, financial sector was the largest issuing sector in 2021, followed by the utility sectors and the real estate sector. The financial sector alone contributed to 43% of total issuing dollar amount of corporate impact bonds in the year, with two-third of the amount coming from EMEA. The biggest corporate issuance of the year was a €2.5-billion (\$2.9-billion) green bond launched by DekaBank Deutsche Girozentrale in January.

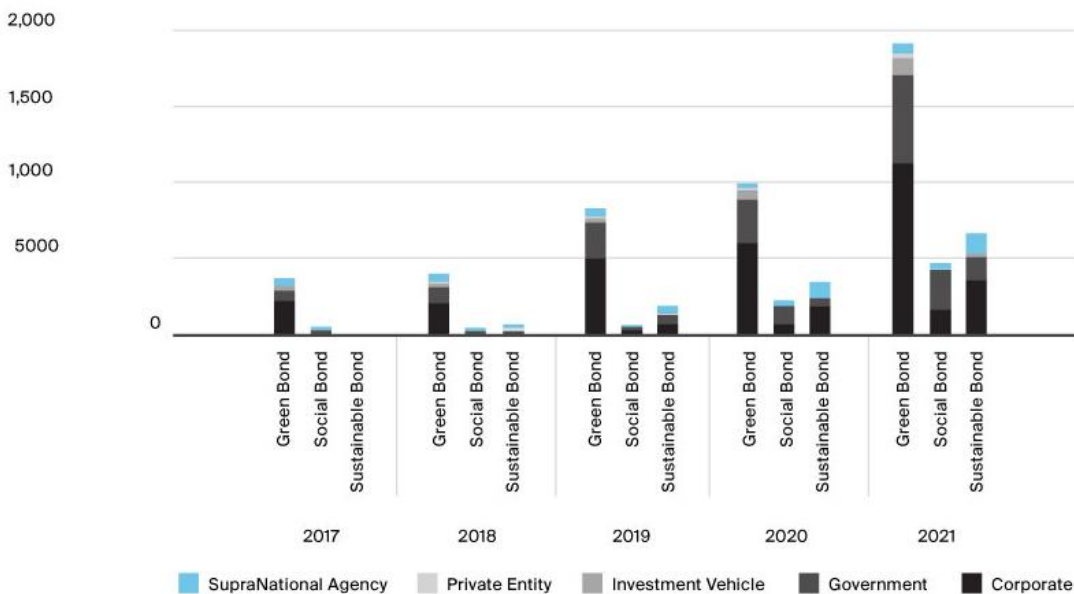
Issuer and Bond Type

**See note for both charts

Dollar amount of green, social and sustainable bonds by type of issuers



Number of green, social and sustainable bonds by type of issuers



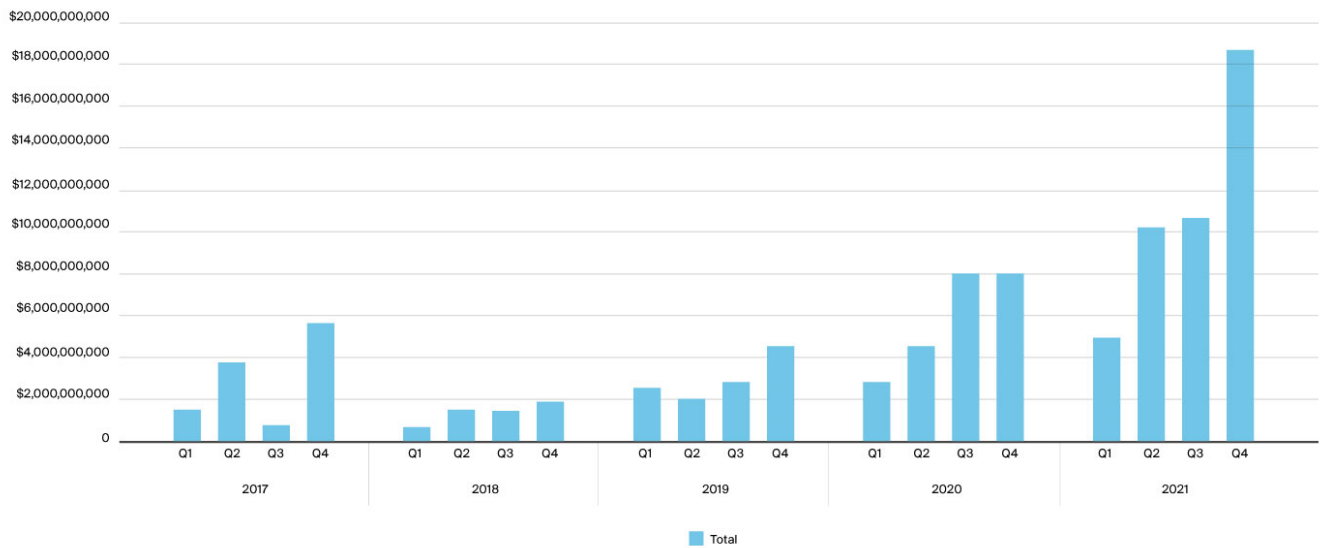
Corporate was the largest type of issuer of green bonds in 2021, contributing \$318 billion or 55% of total dollar amount of green bonds issued in the year.

Issuance of social bonds was dominated by government-related issuers in 2021, launching \$123 billion or 55% of total dollar amount of social bonds issued.

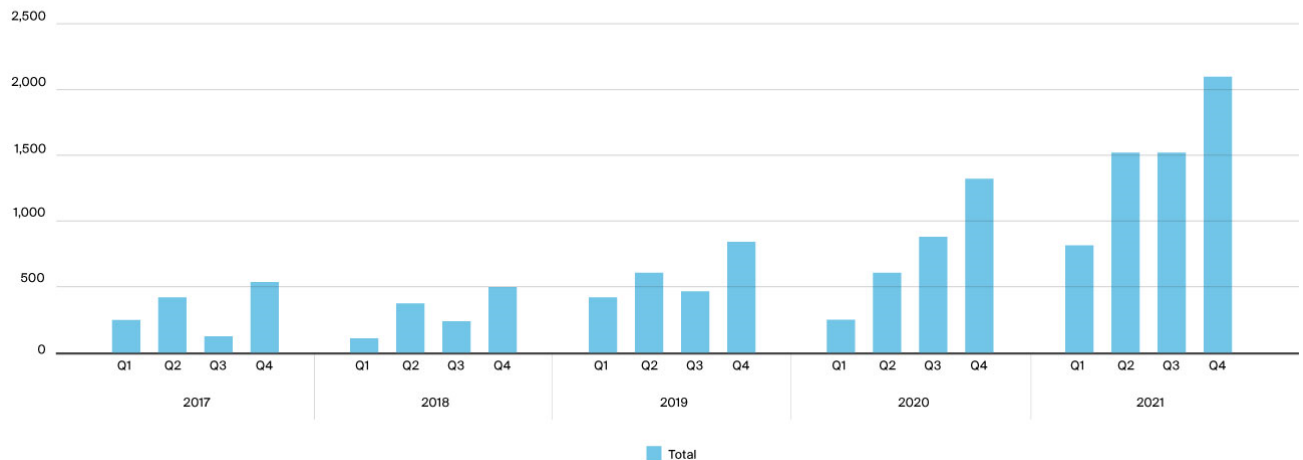
For sustainable bonds, corporates surpassed supranational entities to become the largest issuer type in 2021, contributing \$98 billion or 43% of total dollar amount of sustainable bonds issued in the year. Meanwhile, supranational entities launched \$72 billion of sustainable bonds in 2021, contributing to 32% of total sustainable bonds issued in the year.

US Municipals

Dollar amount of US municipals issued by quarter



Number of US municipals issued by quarter

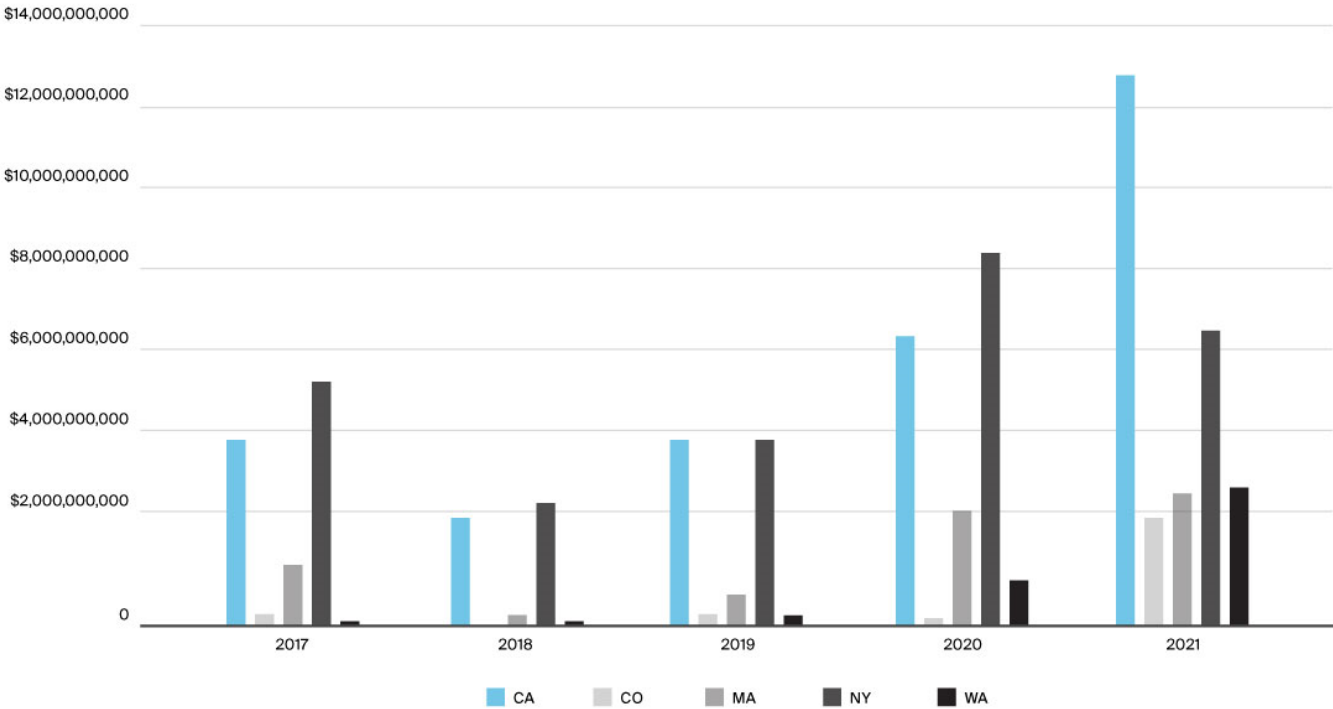


US Municipalities issued \$44 billion of impact bonds in 2021, which was 83% higher than 2020. In terms of the number of securities, the count of issuance grew 102% to 5,990 bonds year on year.

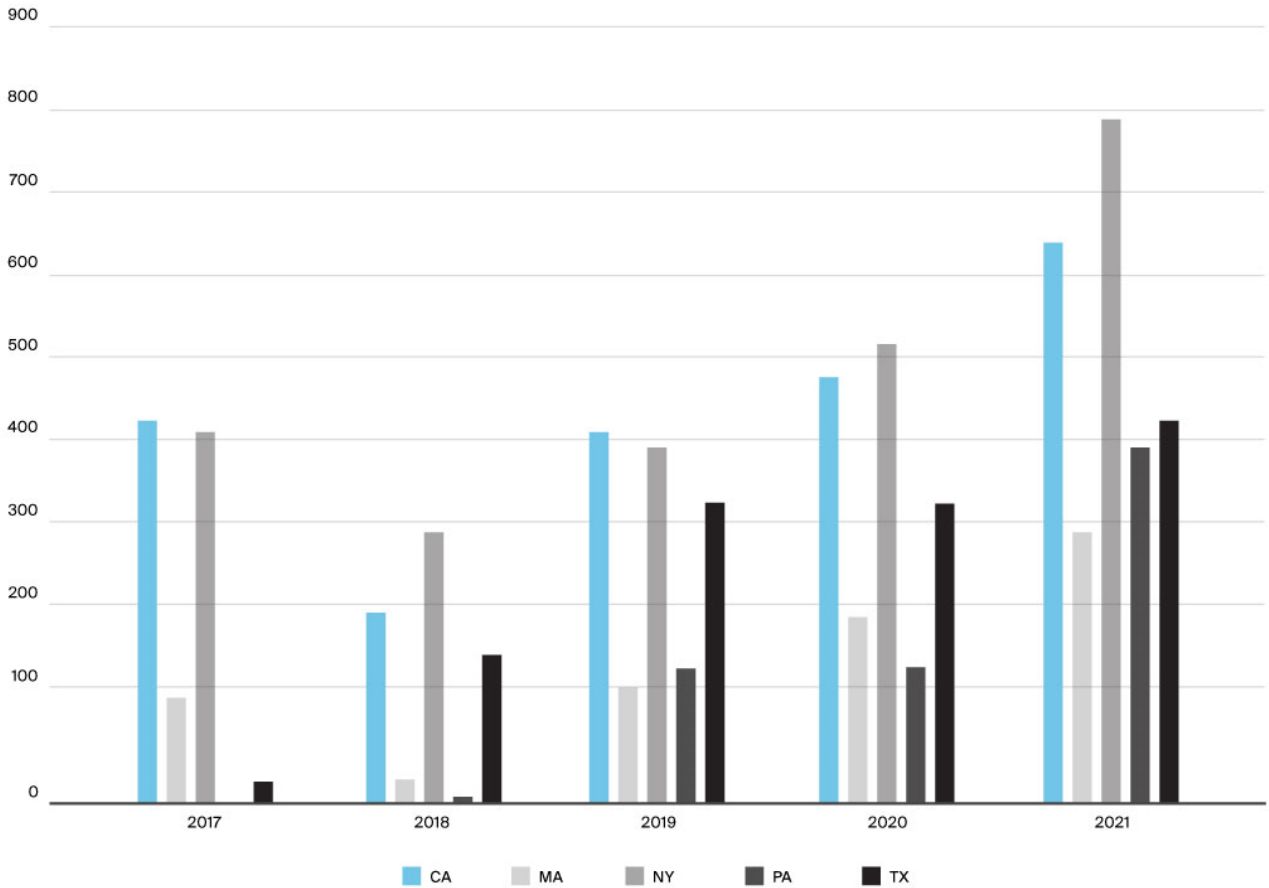
Over the past 5 years, the dollar amount of issuance increased by 272% while the number of impact bonds issued jumped by 347%.

Issuance by States

Dollar amount of US municipals issued by top issuing states of 2021



Number of US municipals issued by top issuing states of 2021

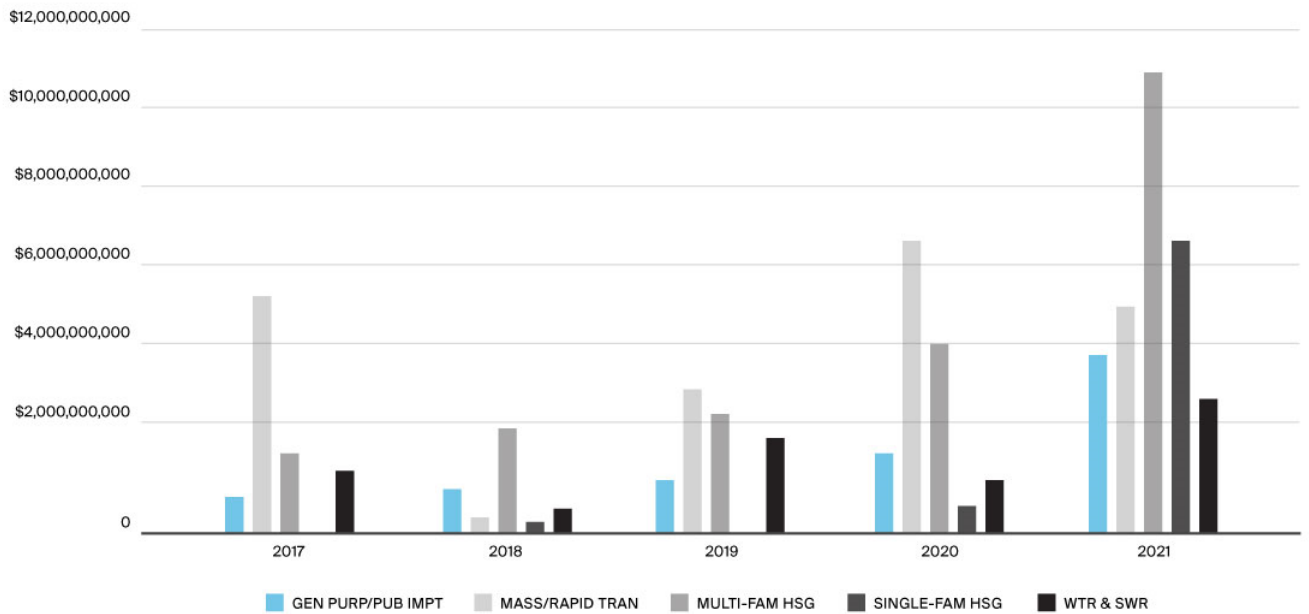


California was the largest issuing state of 2021 by the dollar amount of issuance. It launched \$13 billion of impact bonds, representing 29% of total dollar amount of impact bonds issued by municipalities during the year.

The second largest issuing state was New York, which launched \$7 billion of impact bonds or 795 securities in 2021. It surpassed California in the number of securities issued, but still lagged in terms of the total dollar amount of issuance.

Issuance by Use of Proceeds

Top uses of proceeds of US impact municipal bonds in 2021

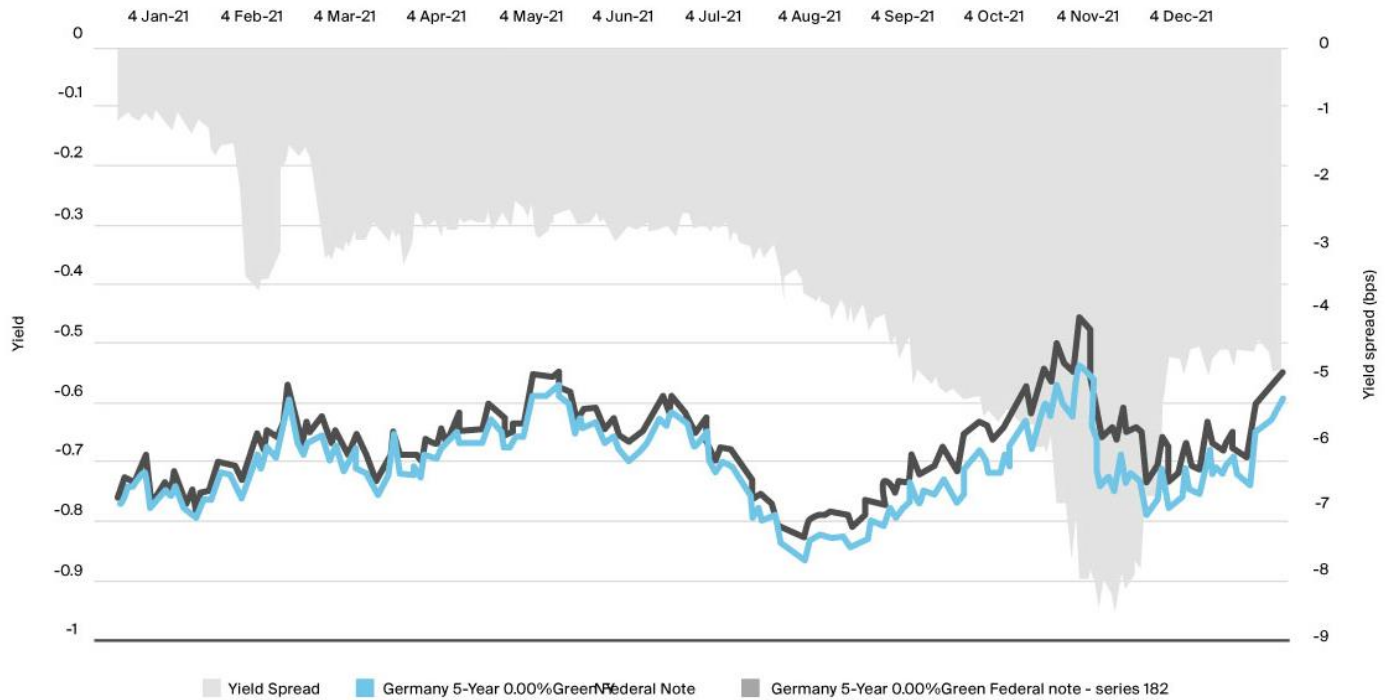


Multi-family housing surpassed mass/rapid transport to become the top use of proceeds among US impact bonds issued by municipalities in 2021. A total of \$11 billion of issuances were involved in multi-family housing projects, accounting for 25% of total issuance of the year.

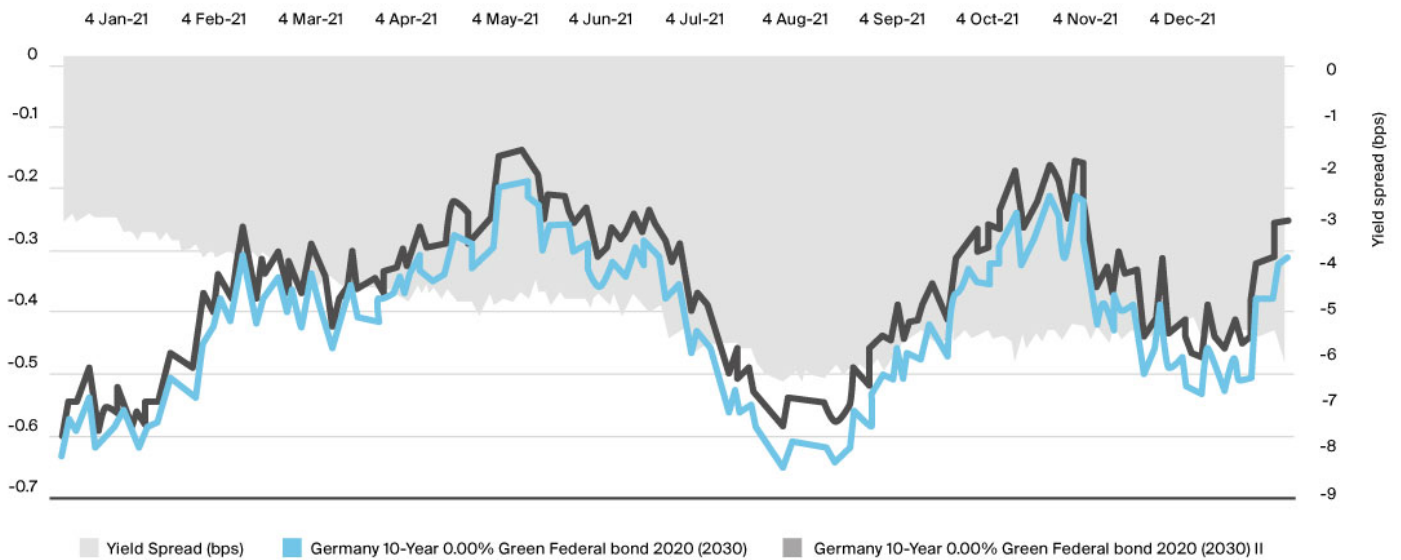
The second largest category was single-family housing, which involved \$7 billion of US impact bonds issued by municipalities and accounted for 15% of total issuance of 2021.

Mass/rapid transport was the most funded category in the previous two years but its issuance dropped 26% to \$5 billion in 2021, accounting for only 11% of total issuance of the year.

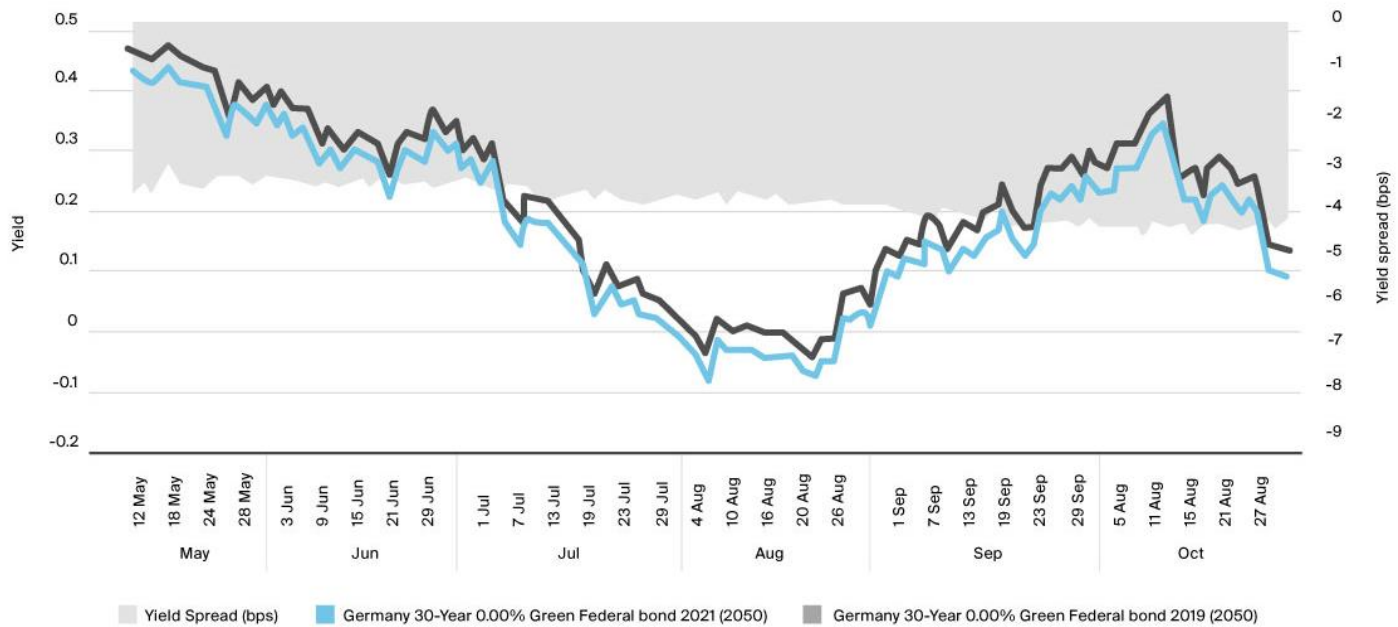
Yield spread of Germany's 5-year Green Federal Bond vs its conventional twin



Yield spread of Germany's 10-year Green Federal Bond vs its conventional twin



Yield spread of Germany's 10-year Green Federal Bond vs its conventional twin



The yield of Germany's 5-year Green Bobl issued in November 2020 was consistently below that of its non-green twin in 2021. The premium spread of the green bond issue against its non-green equivalent, often referred to as Greenium, widened from around 1.0 bps in January to 4.6 bps in December. The yield spread peaked at 8.5 bps in early November.

Greenium can also be observed for the longer outstanding Green bond maturities. The yield spread between the 10-year German Green Federal Bond and its conventional twin widened from around 3.4 bps in January to 6.2 bps in December, peaking at 6.8 bps at the end of August. Meanwhile, the spread of the 30-year German Green Federal Bond and its twin widened from 3.6 bps in May to 4.2 bps in December, peaking at around 4.6 bps in mid-October.

The premium spread of the 5-year bond was more volatile and sensitive to market changes in the region when compared to longer dated Bund issues. It widened from 1.5 bps to 3.1 bps within March when Italy and France launched a total of €16 billion (\$18 billion) sovereign green bonds in the same month. The yield spread spiked again from 5 bps in mid-September to around 8.5 bps in early-November as the UK launched two green gilts amounting to £16 billion (\$22 billion) during the period.

* AMER includes Bermuda, Brazil, Canada, Cayman Islands, Chile, Mexico, Paraguay, Peru, United States of America, Virgin Islands, Argentina, Colombia, Costa Rica and Panama. APAC includes Australia, China, Hong Kong, India, Indonesia, Japan, Korea, Malaysia, Macao, Marshall Islands, Mauritius, New Zealand, Pakistan, Philippines, Singapore, Taiwan, Thailand, Uzbekistan, Vietnam, Fiji, Seychelles, and Sri Lanka. EMEA includes Andorra, Austria, Belgium, Benin, Bosnia and Herzegovina, Czechia, Denmark, Egypt, Finland, France, Georgia, Germany, Greece, Guernsey, Hungary, Iceland, Ireland, Isle of Man, Israel, Italy, Jersey, Liechtenstein, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, Rwanda, Serbia,

Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Togo, Turkey, Ukraine, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland, Estonia, Latvia, Lithuania, Namibia, Nigeria and Qatar.

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