

U.S. Muni Sustainable Bonds: Momentum To Continue In 2023

Feb. 9, 2023

A clear fit between the purpose of many municipal entities and the objectives of sustainable bonds is likely to spur ongoing use of the instruments, although headwinds persist.

This report does not constitute a rating action



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On Feb. 7, 2023, S&P Global Ratings published its global forecast for green, social, sustainability, and sustainability-linked bond (GSSSB) issuance over the year ahead (see "[Sustainable Bond Issuance Will Return To Growth In 2023](#)," Feb. 7, 2023). In that report, we forecast that the share of GSSSB issuance in the total global bond market will rise slightly, reaching 14%-16%.

Below, we provide our outlook for the U.S. municipal GSSSB market for 2023. In addition, we present more detailed analysis of key topics relating to GSSSB issuance by U.S. municipal entities. Our research draws on S&P Global Ratings' proprietary dataset, which contains data from our review of municipal GSSSB offering statements. The report below is best read alongside the slide deck, "[U.S. Municipal Sustainable Bond Issuance Outlook 2023: Momentum To Continue](#)," Feb. 9, 2023, which contains more data.

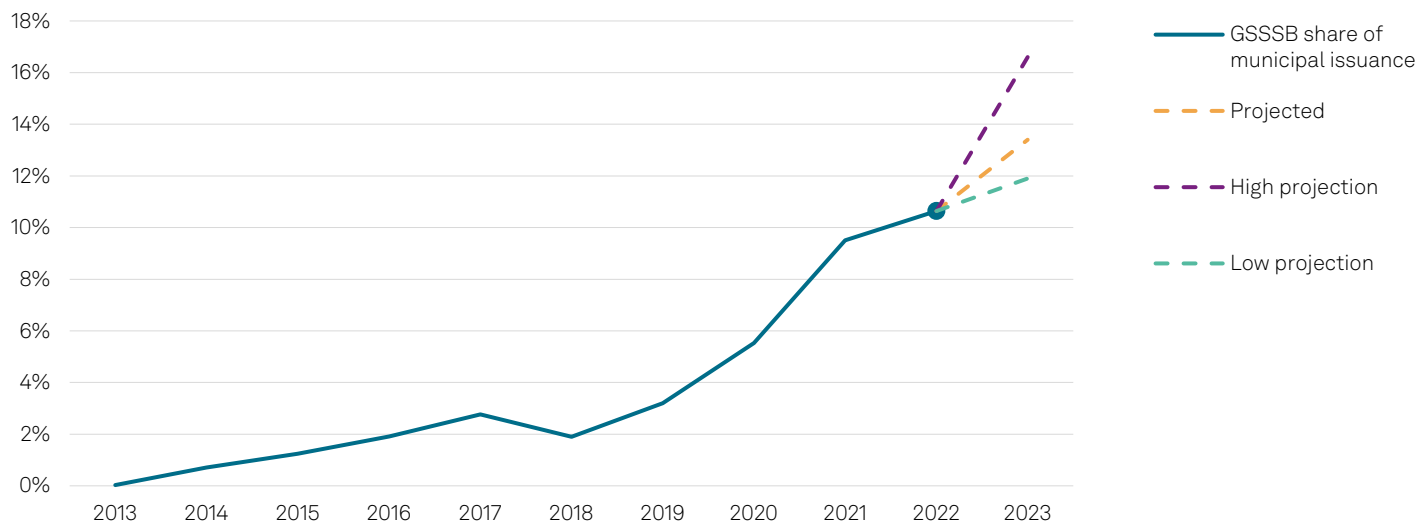
Key Takeaways

- **Continued robust growth:** Total GSSSB issuance by U.S. municipal entities will reach approximately \$54 billion; we expect market share to increase for a fifth consecutive year, likely ranging from 12% to 17% of total municipal bond issuance.
- **Mixed impact from policy:** The U.S. Inflation Reduction Act may boost GSSSB issuance, but objections to environmental, social, and governance (ESG) factors--as discrete investments or financial considerations--from some policymakers, issuers, and investors may hinder growth.
- **Prominence for social:** The affordable housing sector will continue to drive municipal GSSSB issuance under the social label, in contrast to lagging green bond issuance for the struggling mass transit sector.
- **Municipal entities to seek fresh funds:** Rising interest rates through mid-2023 will limit the refunding opportunities that typically bolster GSSSB issuance.

Chart 1

GSSSB will take an increasing share of the U.S. municipal market

GSSSB as a percentage of total municipal market bond issuance: historical and projected



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U.S. Municipal GSSSB Issuance To Rise By About A Third

We expect that in 2023, U.S. municipal GSSSB issuance will resume its five-year growth trend, with total issuance likely to reach approximately \$54 billion. Our forecast follows a year in which adverse macroeconomic conditions resulted in an 11% drop compared with 2021 (see below, 2022: Key points).

Below we identify the GSSSB-specific trends that could either drive or limit issuance growth. We see the most significant of the drivers as the clear match between the public purpose served by many municipal entities and the objectives of GSSSBs. Another positive trend driving issuance is segment momentum. Large municipal issuers increasing their GSSSB borrowings may encourage peers to follow suit. We see probable counterweights to these trends as: the lack of a clear pricing advantage for issuers opting for GSSSBs; potential political headwinds; and evolving disclosure requirements.

Social bonds will likely continue to dominate in 2023. The U.S. Inflation Reduction Act, passed in August 2022, may lead to increased municipal green bond issuance over the longer term. Issuers may seek to generate local financing by capitalizing on federal funds made available for green projects. Sustainability-linked bonds are likely to remain under-represented among U.S. municipal issuers.

In our view, the positive drivers behind growth in GSSSB issuance by U.S. municipal entities are powerful enough to outweigh countervailing forces. The share of GSSSBs will likely increase to 12%-17% of total municipal bond issuance (see chart 1).

Forward momentum:

- **Natural alignment.** Most municipal issuers provide public goods and services. This often includes efforts to improve environmental and social conditions. As a result, a significant portion of municipal issuance is inherently well suited for GSSSB labels, whether self-labeled or subject to an external review.
- **Major issuers.** Several large, frequent issuers with annual GSSSB issuance often exceeding \$1 billion have embraced GSSSB labels, and continue to drive annual issuance totals. We think large issuers with substantial capital requirements will keep underscoring growth.
- **Issuer focus and intent.** Many municipal entities formalize their focus on environmental and social initiatives by embedding these considerations in budgets and planning documents. In addition, hardening assets against the impacts of climate change has become a primary objective in some issuers' capital expenditure plans. Some issuers use GSSSBs to demonstrate commitment to these goals.
- **Sheer momentum.** GSSSB market share has increased as transactions are used by an increasing number of issuers in the municipal market, both large and small. For example, recently the cities of Chicago (in early 2023) and New York (in 2022) issued GSSSBs for the first time. A growing number of high profile issuers could spur peers to follow suit.

Slowing the momentum:

- **Unclear financial benefits.** The absence of a clear pricing advantage for GSSSBs remains a disincentive. Many GSSSB issuances are over-subscribed, with robust investor demand including demand from international investors who typically do not buy municipal bonds. Basic economic theory suggests that higher demand ought to translate to an advantage for issuers. However, the municipal market's smaller and more fragmented nature complicates the pricing outcomes.
- **Political headwinds.** We expect that GSSSB issuance may be tempered by some policymakers' objections to the consideration of ESG factors and/or issuers' and investors' choice not to offer or invest in bonds falling under the GSSSB label.
- **Evolving disclosure landscape.** Progress toward disclosure best practices and post-issuance regulatory guidance may bring clarity to the market and solidify demand from investors. At the same time, complex disclosure requirements could dampen growth, as could potential penalties imposed for misrepresentation of sustainability issues, or greenwashing.

Digging Into The Data

U.S. macro policy will provide long-term support for municipal green bonds

The U.S. Inflation Reduction Act may boost GSSSB issuance over the long-term. That's due to incentives such as tax credits it offers to investors in green initiatives, particularly in the energy sector. (See "[Inflation Reduction Act Update: Between Cheap, Firm, And Clean Power--Pick Any Two](#)," Sept. 8, 2022)

Consequently, issuers in the energy sector may look to GSSSB financing. As an example of this type of investment, the state of New Jersey issued its \$160 million series 2023A green bonds to finance investment in new technologies such as carbon capture techniques and storage, infrastructure, or greening the electric grid. These are initiatives consistent with green bond principles.

In addition, U.S. public finance entities could benefit from leveraging additional federal support for innovative strategies to quadruple U.S. climate finance investment to \$11 billion annually as U.S. President Joe Biden announced at COP27 at the end of 2022. Following the announcement, the president signed into law the Florida Keys' \$2.6 Billion USACE Coastal Storm and Sea-Level Rise Infrastructure Resiliency Project. About two-thirds of the federal authorization includes federal funds, with the remainder to be matched by state, local, and other non-federal entities.

With more federal funds available to support green projects, we anticipate municipal entities will increasingly use GSSSBs to generate matching funds and provide local support to advance projects. In addition, depending on how related federal policy initiatives are implemented, we believe dedicated adaptation and resilience bonds could increasingly emerge within the municipal GSSSB market.

Large issuances to underpin market share growth

Large and frequent issuers are likely to propel municipal GSSSB issuance growth in 2023. Already in 2023, the California Community Choice Financing Authority has issued \$1.3 billion of green bonds to finance renewable energy purchases.

Large and frequent issuers have historically driven segment totals. In 2022, the average municipal GSSSB issuance size was 2.5x the average municipal market bond issuance, up from 2.3x in 2021.

The return of certain major issuers pushed average issuance size to \$106.7 million in 2022, from \$84.9 million in 2021. 2022's top 10 GSSSB issuers contained considerable diversity (see table 1). The largest included a state, a public transportation agency, an airport operator, and six issuers financing affordable housing projects.

The social category already has the most momentum of the four labels. This momentum will gather steam if recent social bond issuances by New York City and Chicago's Sales Tax Securitization Corp. prove to be more than one-off additions to these cities' capital programs.

The state of Massachusetts was the first U.S. municipal GSSSB issuer, with its series 2013 green bonds. The state's \$2 billion social-labeled series 2022A special obligation revenue bonds were the largest GSSSB issuance in the municipal market's history. Combined with the state's \$684 million series 2022B special obligation revenue bonds, and \$200 million series 2022A sustainability bonds, the state accounted for 7% of total U.S. GSSSB issuance in 2022. The state's GSSSBs represented 50% of its total issuance in 2022.

Transit agencies have historically been key drivers of municipal green bond and GSSSB issuance totals. New York's Metropolitan Transportation Authority (MTA) is one prominent example of a major green bond issuer. However, GSSSB issuance in the sector has declined over the last two years, as the sector has faced ridership persisting below pre-pandemic levels, dwindling federal stimulus funds, and rising interest rates depressing refunding transactions. For more on our view of the mass transit sector's fiscal challenges, see "[Outlook For U.S. Not-For-Profit Transportation Infrastructure: COVID In The Rearview Mirror. Yet Transit Stuck In Second Gear](#)," Jan. 12, 2023.

One hindrance to the growth of GSSSB issuance could be a declining number of first-time labelers. First-time labelers fell to 78 in 2022, from 2021's all-time high of 185.

Table 1

Top Issuers Of U.S. municipal GSSSB in 2022

Issuer	GSSSB Issuance (\$ bil.)	% of total U.S. municipal GSSSB
Massachusetts (State of)	2.88	7.0%
New York City Housing Development Corporation	2.01	4.9%
New York MTA	1.45	3.5%
Department of Airports Of The City Of Los Angeles	1.36	3.3%
California Health Facilities Financing Authority	1.05	2.6%
New York State Housing Finance Agency	1.04	2.5%
California Community Choice Financing Authority	0.93	2.3%
Connecticut Housing Finance Authority	0.81	2.0%
Minnesota Housing Finance Agency	0.80	2.0%
Massachusetts Housing Finance Agency	0.78	1.9%
Grand total	13.11	32.1%

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Affordable housing will likely keep social bonds in the top spot

We believe affordable housing issuance will continue to drive GSSSB’s market share growth in 2023. Last year, we saw a clear trend towards GSSSB financing for single-family lending programs, the first year that GSSSB-financed single-family affordable housing surpassed the multi-family category. GSSSB issuance for the single-family category reached 58% of total affordable housing issuance in 2022, up from 32% in 2021 and 13% in 2020.

We expect housing finance agencies to shift toward bond financing for single-family homes, away from securitization on the secondary market (see “Outlook For U.S. Public Finance Housing: Economic Winds Won’t Blow The House Down,” published Jan, 19, 2023). The shift, combined with a clear alignment between issuers’ objectives and sustainable bond objectives, supports our expectation for growth in the social category.

Single-family affordable housing bonds are issued to fund mortgage loans for low to moderate income individuals. By contrast, multifamily affordable housing bonds are issued to fund loans for the development and preservation of rental housing. State or local housing finance agencies accounted for all single-family GSSSB issuance in 2022.

Affordable housing is the largest contributor to municipal sustainable bond market issuance (45%), accounting for most social bond issuance (75%). Over half of all U.S. municipal bond issuance for affordable housing included a GSSSB label in 2022, up from 49% in 2021, and from just 13% in 2020 (see chart 2).

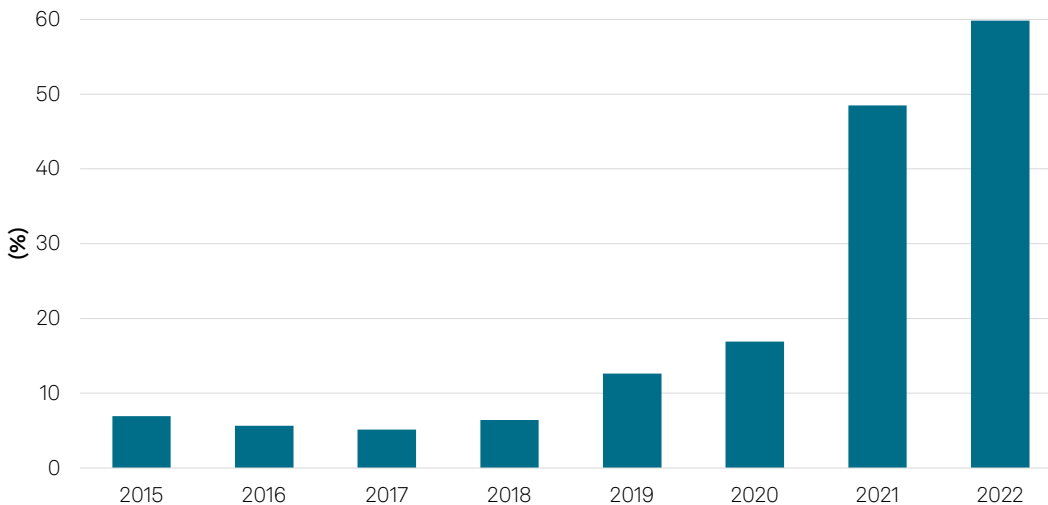
Overall, affordable housing bonds accounted for six of the top ten municipal GSSSB issuers in 2022 (including the California Health Financing Authority’s No Place Like Home Program social bonds; see table 1).

Housing financings often include both green and social elements, such as energy efficiency elements incorporated into a housing building project. This makes many issuances in the sector well-suited for the sustainability label. However, we observe that most housing sector GSSSB issuers opt for the social label, emphasizing the financings’ primary social purpose.

Chart 2

Housing-related bonds dominate municipal GSSSB

GSSSB as a percentage of total affordable housing sector issuance



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Sustainability-linked bonds' potential to remain unrealized

Increasing levels of scrutiny from stakeholders will challenge sustainability-linked bond (SLB) growth. Investors and policymakers have expressed concerns about the ability of SLBs to achieve meaningful targets, as well as difficulties in measuring and evaluating sustainability benchmarks.

In 2022, SLBs represented 8% of global GSSSB issuance, but they were less than 1% of municipal GSSSB issuance.

We think that as more municipal market issuers gain experience with sustainability metrics and goals, they may find SLBs simpler to execute and more appealing to offer than other labels, but it is unclear how long that will take.

The U.S. municipal market's first bond using the sustainability-linked bond (SLB) label was issued in 2022 as the Arizona Industrial Development Authority issued \$199.7 million in conduit bonds over two series linked to forest restoration for NewLife Forest Restoration. Key performance indicators for the financing include total acres restored, total biomass removed from the forest, and total conversion of biomass into carbon-sequestering products.

SLBs typically include repayment terms which vary based on the issuer's performance against certain sustainability performance targets. This potentially raises their appeal to impact investors who wish to align their investments with measurable environmental and social outcomes.

Rate of external review declines

As municipal GSSSB issuance has matured, investors' appetite for transparency has driven growth in second party opinions. These external reviews assess the alignment of a municipal GSSSB's use of proceeds with environmental or social outcomes.

Surprisingly, the percentage of GSSSBs issued in the municipal market with second party opinions has declined each of the past two years (see chart 3).

In 2022, the percentage of municipal issues with external reviews fell to 46% from 54% in 2021. That makes 2022 the first year since 2019 in which most municipal GSSSBs were self-labeled.

For the fourth consecutive year, external reviews were performed on most green issuances (74% in 2022, up from 65% in 2021). However, only 26% of sustainability bond issuances had an external review in 2022, down from 30% in 2021.

Most of the decline was in the social category. External reviews of social-labeled issues dropped to 36% in 2022 compared with 52% in 2021. Issuers have increased their usage of Fannie Mae and Freddie Mac's frameworks for affordable housing bonds over the past few years. These frameworks provide opinions on the alignment of the mortgage-backed securities underlying certain housing bonds with an International Capital Market Association (ICMA) principles. But because they do not opine on the use of proceeds of the individual transactions, our analysis does not count them as having been externally reviewed.

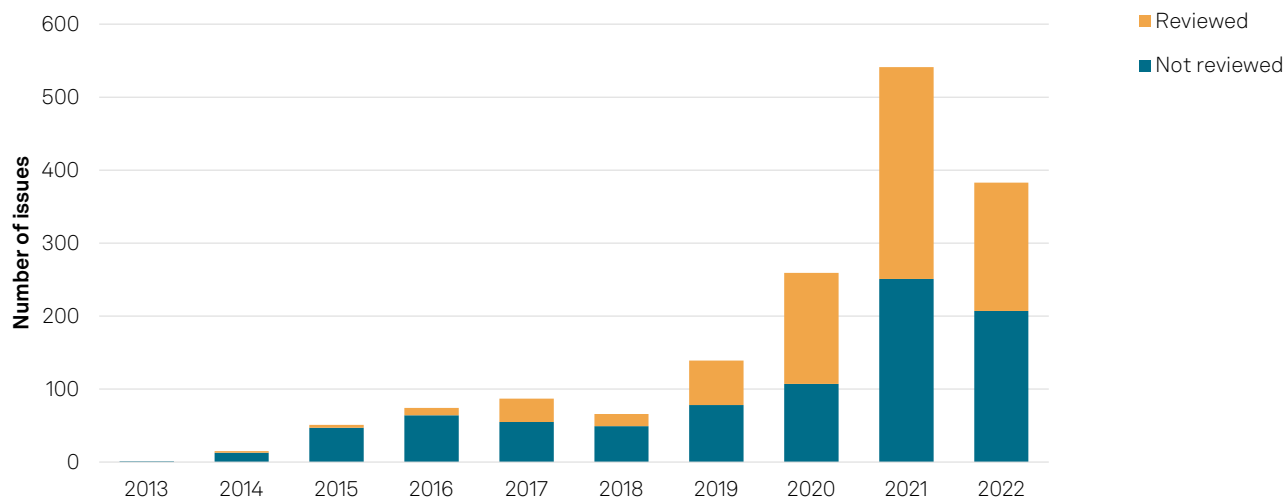
In 2022, 31% of social and sustainability-labeled affordable housing issues were externally reviewed, compared with 46% in 2021.

Our tracking of issuances with external review only includes issues that have an ICMA-certified second party opinion on a financing's use of proceeds.

Chart 3

U.S. municipal GSSSB issuance with external review

The percentage of issuances with external reviews dropped in 2022



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While we expect investors will continue seeking greater transparency on use of proceeds in the global sustainable bond market, we believe mixed results will continue in the U.S. municipal market.

The natural alignment between some municipal issuers' capital plans with environmental and social considerations may help certain investors view projects as consistent with investment priorities.

Climate adaptation is an increasingly clear component of capital programs

A growing number of issuers of GSSSBs are incorporating climate change preparedness into their capital programs.

In 2022, we identified nine transactions with clear adaptation purposes. These focused on land conservation, stormwater run-off, and improving public power utility infrastructure. Many other offering documents and issuer capital plan documents mention the changing nature of storms and other climate change impacts as elements they consider in project development. We expect to see the focus on climate change preparedness steadily increase as issuers continue to incur increasing costs from damage due to climate-related events.

Several challenges impede growth in municipal market financings where the primary purpose is adaptation. Such limitations include that the primary and secondary beneficiaries of adaptation initiatives do not reside neatly within defined physical municipal boundaries. In addition, the necessity and complexity of engaging numerous stakeholders, sometimes straddling these physical boundaries, to design, build, and maintain costly infrastructure is another complicating factor. (See "[Crunch Time: Can Adaptation Finance Protect Against the Worst Impacts From Physical Climate Risks?](#)", Jan. 13, 2023).

Challenges to GSSSB growth extend to data tracking and reporting, as transactions dedicated to adaptation remain limited.

New money may compensate for lower refunding

We expect new money will drive GSSSB issuance in 2023.

With fewer outstanding bonds available to refinance and an unfavorable interest rate environment, reduced refunding activity will likely dampen U.S. municipal GSSSB issuance in 2023.

But countering that trend is the apparent enthusiasm among municipal issuers for the social label. We think new issuance will drive growth, likely led by the social label.

Furthermore, because issuers often reuse labels when refinancing GSSSBs, more new bonds issued likely positions the market for more GSSSB refundings down the road.

S&P Global Economics forecasts additional rate hikes by the Federal Reserve in the first half of 2023, with the federal funds rate potentially increasing to about 5% for most of the year. (See [“Economic Outlook U.S. Q1 2023: Tipping Toward Recession,”](#) Nov. 28, 2022).

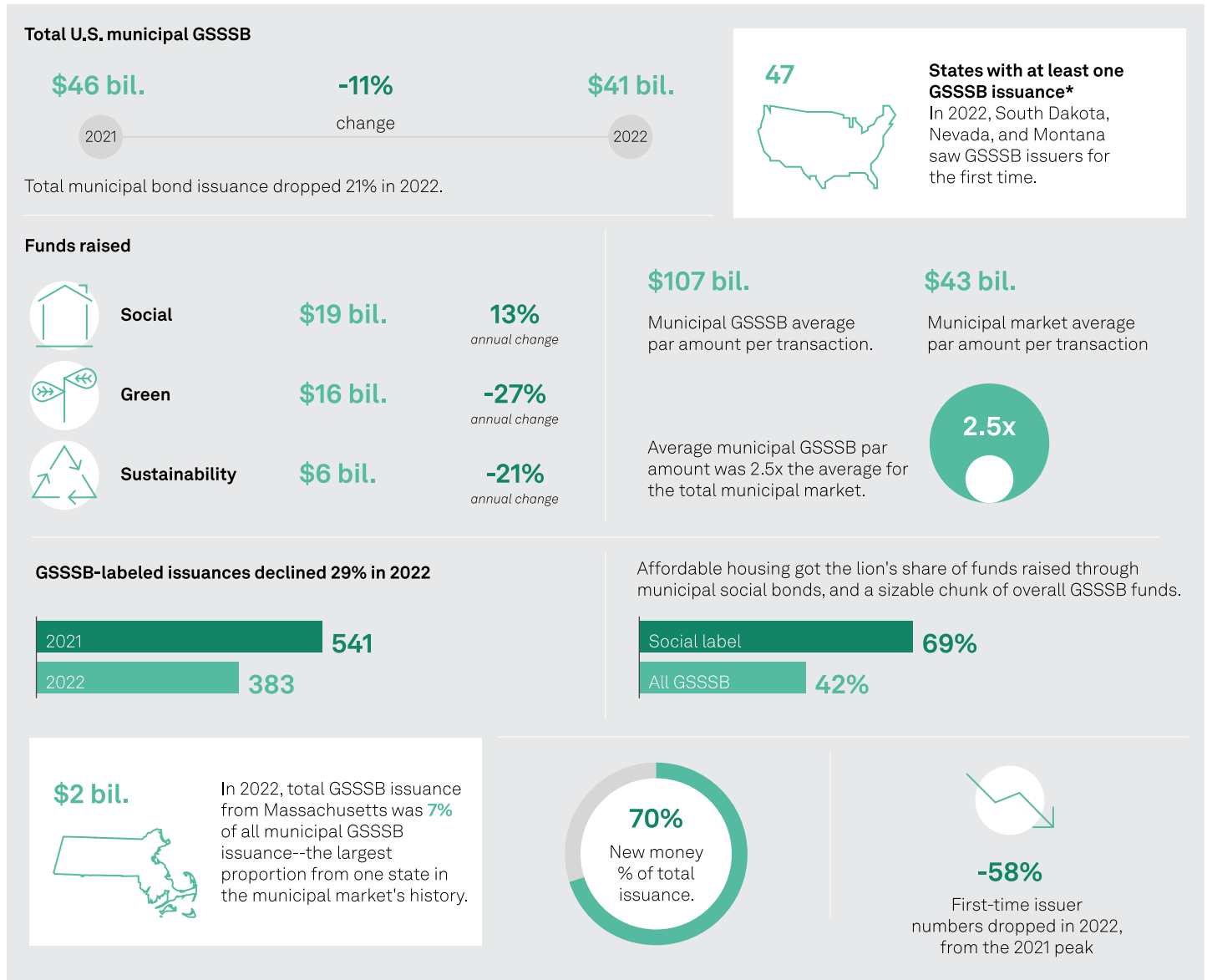
Overall global bond issuance declined in 2022. Issuers faced multiple market-altering events, including the Russia-Ukraine war, persistently high inflation, and rising interest rates. Similarly to the global market, the global and U.S. municipal GSSSB segments also faced headwinds. Higher interest rates hit refunding transactions particularly hard.

For the total municipal market, pure refundings accounted for just 12% of all bonds issued, the lowest share of the market since 2000. For U.S. municipal GSSSBs, the refunding share was just 7% in 2022, down from 24% in 2021.

Mixed use of proceeds—issues with both new money and refunding—accounted for 23% of municipal GSSSB issuance in 2022, equal to 2021, while mixed issuance was just 8% for the broader municipal market in 2022. We believe the stronger new money and mixed use of proceeds issuance for GSSSBs points, in part, to continued need and appetite for financings focused on improving environmental and social conditions.

Key Points: 2022

GSSSB's share of total U.S. municipal bond issuances continued its growth spurt



*Includes Washington, D.C. GSSSB--Green, social, sustainability, sustainability-linked bonds. Source: S&P Global Ratings. Copyright © 2023 by Standard & Poor's Financial Services LLC. All rights reserved.

In 2022, nearly a decade since the first labeled municipal bond, the municipal GSSSB market continued to increase its share of the overall municipal bond market, at 10.6% of total issuance, up from 9.5% in 2021. Total municipal GSSSB issuance fell only 11% in 2022, to \$40.9 billion from \$45.9 billion in 2021. Total municipal bond issuance fell nearly 21% in 2022.

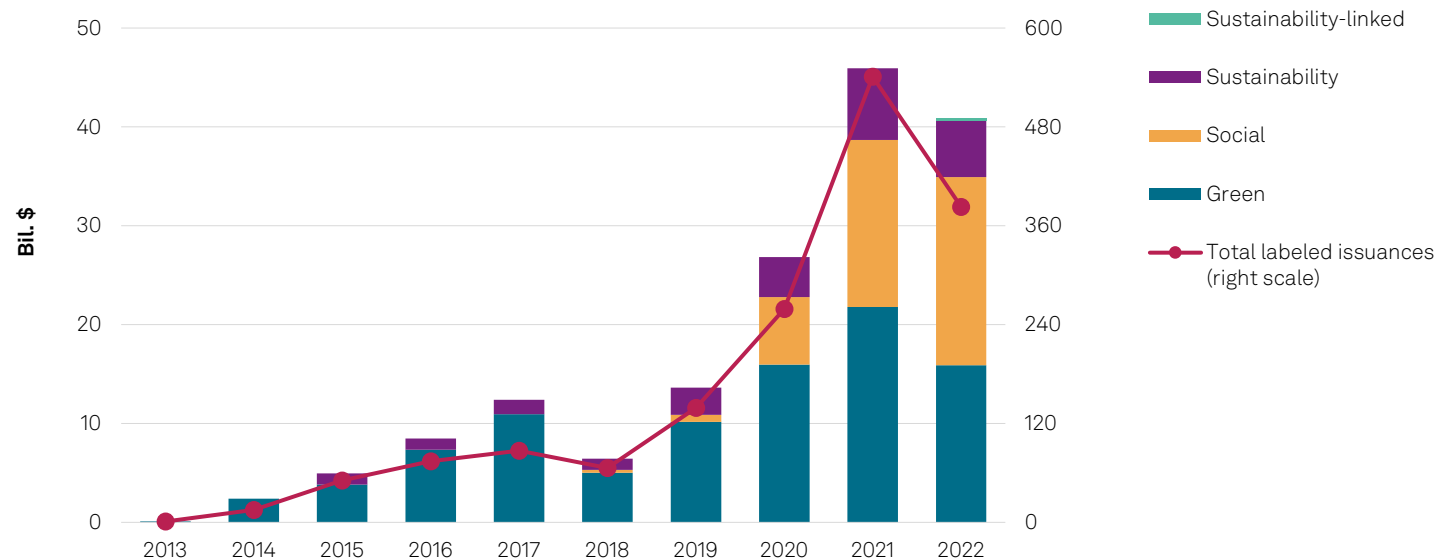
2022 saw growth in social bond issuance, while green and sustainability bond issuance declined (Chart 4).

- Green-labeled fell 27% from 2021, to \$15.9 billion.
- Social-labeled grew 13% from 2021, to \$19.0 billion.
- Sustainability-labeled fell 21% from 2021, to \$5.7 billion.

Chart 4

U.S. municipal GSSSB by label: par amount and issues

Social bucked the trend as total issuance fell in 2022



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The number of GSSSB issuances declined 29% in 2022, to 383 from 541, while the average GSSSB issuance increased 26% to \$106.7 million.

For the first year in 2022, “social” supplanted “green” as the predominant label in the U.S. municipal market, representing 47% of all GSSSBs. The rise in social-labeled issuance in 2022 is largely attributable to the affordable housing sector and the State of Massachusetts’ nearly \$2 billion series 2022A and \$684 million series 2022B Special Obligation Revenue Bonds issued to support its unemployment insurance trust fund that was depleted during the pandemic.

Beyond 2023

U.S. municipal GSSSB issuance is likely to resume growth in 2023, and we think this expansion can continue for years to come. We anticipate 2023's growth will outpace that of the overall U.S. municipal bond market, and therefore GSSSB's share will continue to expand. In our view, the GSSSB asset class remains an important tool to help drive municipal entities' investment in social and environmental improvements, and we think both issuers and investors are keen to utilize the tools. Within the U.S., some issuers and investors may elect not to offer or invest in bonds using GSSSB labels. We believe this could temper, but not fully offset, GSSSB growth. At the same time, we believe the asset class has enough momentum within the municipal segment to withstand countervailing sentiment over coming years.

Related Research

- [U.S. Municipal Sustainable Bond Issuance Outlook 2023: Momentum To Continue](#), Feb. 9, 2023
- [Sustainable Bond Issuance Will Return To Growth In 2023](#), Feb. 7, 2023
- [Key Sustainability Trends That Will Drive Decision-Making in 2023](#), Jan. 16, 2023
- [Crunch Time: Can Adaptation Finance Protect Against the Worst Impacts From Physical Climate Risks?](#), Jan. 13, 2023
- [Inflation Reduction Act Update: Between Cheap, Firm, And Clean Power –Pick Any Two](#), Sept. 8, 2022
- [U.S. Inflation Reduction Act Emphasizes Affordability; Credit Implications Across Sectors Are Mixed](#), Aug. 18, 2022

A note on our data

Our data includes financings registered as green bonds by the Climate Bonds Initiative, municipal bonds that received Second Party Opinions by S&P Global Ratings, and other self-labeled GSSSBs identified by S&P Global Ratings based on our review of offering statements. We've also included certain issues that received an external review, even when those issues have not carried a GSSSB label. Although bonds comprise most of our database, we include labeled notes and private placements we deem not to be interim financing vehicles. Because our data consists almost entirely of bonds or bond-like financings, we use the term GSSSB to describe our dataset. We exclude bonds issued by Fannie Mae and Freddie Mac because, as government-sponsored enterprises, they are not comparable to the municipal issuers in our database. Total U.S. municipal market bond issuance data is from The Bond Buyer. Finally, we aggregate certain labels to enable comparability throughout our database. For example, we classify "sustainable development bonds" under the sustainability label.

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