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Transition Intelligence

for Municipal Markets

Discussion - The Emerging Greenium

Practitioner's Perspective

- Introduce Kestrel and the roles we play in the US municipal market
- Factors related to "Greenness" that may be influencing results
- Additional value that investors receive with green bonds
- Value that Issuers receive other than greenium
- Thoughts on the future of green bonds in the muni market

The story is not so much about "greenness" as it is about Risk Mitigation

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About Kestrel

We are an ESG data intelligence and technology company

Team

Unique combination of industry experience, science + finance + technology.

Products & Services

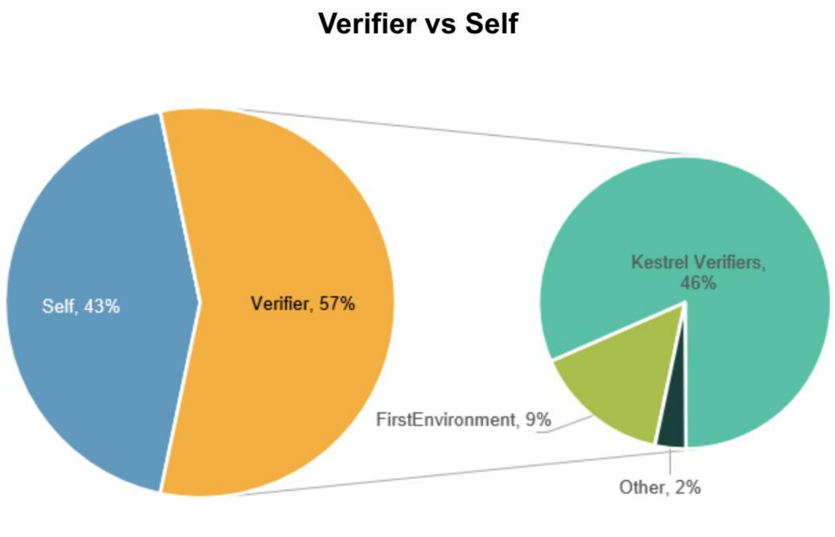
1) **Second Party Opinions and Reporting**
   Market leader in US public finance

2) **ESG Impact Data for Fixed Income**
   Available on Bloomberg, our comprehensive data product incorporates unique know-how and gives sophisticated insights on transition alignment, sustainability and risk mitigants. We also identify unlabeled but eligible green, social and sustainability bonds.

Kestrel's Second Party Opinions

46% total market share in US public finance*

- CBI Approved Verifier since 2018
- To date we have provided ~200 SPOs
- We have worked in 29 states, Europe and Canada
- Our SPOs are technical and cover a variety of sectors
  - 53% Green (including Climate)
  - 36% Social
  - 10% Sustainability
  - <1% Sustainability-Linked
- We have verified nearly 15% of all Certified Climate Bonds worldwide (1/23 – 4/23)



Source: S&P Global Market Intelligence

*Kestrel has 82% market share for deals that come to market with an external review (Source: S&P 2023 YTD statistics)

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Factors related to “Greenness” that may be influencing results

- ✓ 2022 was the first year where **G/S/S municipal bonds with external reviews outnumbered “self-verified” bonds** in 2 quarters and the year as a whole.

- ✓ Bonds with external reviews have greater transparency, disclosure of risk mitigants and a clear commitment to reporting outcomes

In 2018 and prior, little standardization or consistency in green bond issuances

- ✓ External Reviews create market efficiency

Value that **investors** receive with green bonds

- **Risk mitigation** - green assets have less risk of becoming stranded against the backdrop of climate change.

- **Greater transparency** either through the external review, increased disclosures in the OS or green bond reporting

- Green bonds with external reviews (Second Party Opinions) **satisfy internal and external compliance** mandates, so it saves them time and can help them address increasing regulation of sustainable finance

- Meet **consumer demand** for climate-aligned investment products

What value do *Issuers* realize by issuing green bonds?

- Kestrel has 5 cases of “twin” municipal bonds, where Kestrel provided the Second Party Opinion on the green series and there was a **1-5 bps greenium** compared to the non-green series.

- **New investors** to the credit, new ESG investors;
  ESG investors stayed in through repricing -“sticky”

- Municipal issuers **advance multiple objectives** through their financed activities. The process of issuing green bonds often strengthens internal communication and understanding of how financed activities are moving the Issuer toward larger goals.

- “My Board loved it..” “My stakeholders loved it…”

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How might Green Bonds Look in the Future?

More Automated and Data Driven

- Kestrel ESG Impact Data assesses **municipal bond Uses of Proceeds** against 5 Sustainable Finance Goals.

- We also **identify unlabeled but eligible green, social and sustainability bonds**. 100K CUSIPs and over 11,000 municipal bond series in our database.

- Today ~7% of all bonds we have evaluated are unlabeled but eligible green bonds. Another 17.4% are unlabeled but eligible Sustainability Bonds – which are both Green and Social. Compared to 3.78% of bonds that are labeled at issuance.

- Access to these insights creates new opportunities for investors to have **increased transparency** on the risk mitigants and impact associated with municipal bonds, and to potentially pick up the green bond benefits without the greenium.

How might Green Bonds Look in the Future? *(continued)*

Climate-Aligned Issuers

- The Climate Bonds Initiative released a new standard in 2023 for certifying Climate-Aligned Issuers
- Potential to **increase supply** of green bonds
- Issuers who receive this certification could theoretically issue all bonds as green bonds under a Framework-type approach.

Kestrel is the source of unique intelligence

Data analytics and market intelligence

- About 58% percent of bonds sold in the past year have no mention of climate change in the OS
- About 25% of the bonds include some form of renewable energy or net zero commitments
- About 28% of K-12 education bonds finance projects with green building standards: LEED Silver, CALGreen, or better
- About 13% of drinking water or wastewater bonds have SDG Target 13.1 applied “Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries” (indicates bonds finance projects or a CIP with projects intended to improve resilience).
- About 1% of transportation bonds include Envision Sustainable Infrastructure standards

Source: Kestrel ESG Impact Data – bonds scored to date

Summary

Fantastic News for Issuers

- Issuers may realize a **lower cost of capital** for incorporating resilience and sustainability into financed assets
- Investors are clearly receiving something for their premium – namely **increased risk mitigation, increased transparency, a mechanism for compliance, and a path to meet consumer demand** for climate-aligned investment products.
- Against the backdrop of climate change, investors in the US municipal bond market face **increased risk of having stranded assets**.
- The#1 barrier to growing the green bond market in US Public Finance has been the **lack of clear information about lower cost of issuance**.
- Emergence of a greenium should **encourage more Issuers to incorporate more sustainability, resilience and risk mitigation** financed through green bonds.

Thank you

About

Kestrel provides ESG Impact Data and verification services designed to bring greater transparency and insight to fixed income, helping to set the market standard for sustainable finance.

We are a team of environmental and social scientists, engineers, and finance professionals with deep, nuanced understandings of how state and local governments finance and deliver public projects. We understand the complex activities and infrastructure financed with municipal bonds and provide meaningful, material insights on their ESG characteristics with our innovative data offering.

We are also a leading provider of external reviews for green, social and sustainability bond transactions in US public finance, consistently garnering over 60% of the market share by par and by number of reviews. We are qualified to evaluate corporate and municipal bonds in all asset classes worldwide for conformance with international green and social bond standards.

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Appendix: Kestrel's Five Sustainable Finance Goals

Transition to a decarbonized economy

In every sector, there are immediate ways to decarbonize and best practices to reduce greenhouse gas emissions. Our data reveals the presence or absence of these best practices which indicate if investments are transition-aligned.

Integrate resilient and sustainable design features

Infrastructure should be designed for resilience to diverse risks, ranging from coastal inundation and flooding to severe weather events, drought, and biodiversity loss. Energy-efficient buildings are key to a low-carbon future.

Preserve, enhance, or restore natural capital

The UN has declared a biodiversity state of emergency. Depletion and lack of stewardship of water, soil, air, plants, and animals is widespread and intimately linked to the changing climate. Ecosystem services, food security, human health, and community well-being all hinge on sound and restorative management of natural resources.

Promote a more equitable society and a just transition

Inequalities are present in many forms in the US and will continue to incite hardships and division without comprehensive changes to policies and attention to equity when prioritizing activities for financing.

Disclose activities, impacts and risks

Transparency ensures accountability to constituents and investors alike. Without adequate disclosure regarding financed activities and how those activities address sustainability targets, it is impossible to collaboratively overcome society's most pressing challenges.

Appendix: Kestrel identifies key risk mitigants

Provided in the **Kestrel ESG Impact Data** Use of Proceeds description

Additional Examples:

- State of Oregon, Revenue Bonds (68607V4H5) – Financed projects include wildfire housing recovery needs by reconstructing and replacing damaged homes **with disaster-resilient housing**, particularly for low- and moderate-income persons and the under- or uninsured.

- Board of Education of Ogden City School District, Utah (676295GD4) – Finances the renovation of Polk Elementary **to address seismic risks**, including a complete structural and systems update.

- County of Palm Beach, FL (696543WZ6) – Projects include, but are not limited to, equipping County facilities with generators and hardening building envelopes **to provide resilience to storm events**. Facilities are **prioritized by outages that pose a safety risk** to occupants, have sheltering capabilities, and support government operations and public services

- NJ Housing and Mortgage Finance Agency (646108T91) – The property rehabilitation will include new ADA-compliant apartments, as well as sustainable and **flood-resilient design**, solar panels, energy-efficient appliances, **an emergency generator, a potable water storage tank, and charging stations for necessary equipment such as oxygen machines to be used in weather-related emergencies**

- Hampton Roads Transportation Accountability Commission, VA (409328AW1) – The new bridges will be eight-lane superstructures constructed seven to ten feet higher than the previous bridges **to accommodate future sea level rise, and the highways serve as coastal evacuation routes**