US municipal bond market pricing may be biased by race, unphased by climate risk

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New research suggests that the U.S. municipal bond market systemically misprices risk, as the pricing of municipal debt does not account for local physical climate risk, but does demand larger credit spreads from communities with a larger proportion of Black residents. Erika Smull of Duke University, U.S., and colleagues present these findings in the open-access journal *PLOS ONE* on August 9.

Across the U.S., local governments issue municipal bonds to help fund various expenses, such as schools and sewer systems. The risk of investing in a given area's municipal debt depends on that area's distinct characteristics, including its socioeconomic characteristics, and its exposure to climate change. For instance, it may be riskier to invest in municipal bonds in a coastal city threatened by sea level rise, and in theory, that higher risk should be priced via a larger credit spread to be paid to the investor.

However, few studies have examined how climate risks affect municipal debt pricing. In addition, while some studies have suggested links between pricing and racial demographics of issuing communities, this relationship has been unclear. Therefore, Smull and colleagues used data on more than 700,000 municipal bonds to analyze links between pricing and climate risk, as well as between pricing and race. They focused on credit spread—the difference between the interest rate to be paid to the buyer of a given bond and a benchmark "risk-free" rate; greater spread reflects greater perceived risk.

Statistical analysis showed that credit spreads tended to be larger for bonds issued by communities with a larger proportion of Black residents, adding up to an estimated $900 million cost penalty per year across all Black Americans. This association persisted even after accounting for multiple economic and demographic factors.

Meanwhile, there was no meaningful link between higher local physical climate risk and larger credit spreads for issued municipal bonds, suggesting that climate risks are not yet priced into this market.

While more research is needed, these findings suggest that the U.S. municipal bond market misprices risk, disproportionally affecting Black Americans—who already face disproportionate climate change risks.

The authors add, "We found clear evidence of a 'Black Tax' in the municipal bond market, that cannot be explained by bond structure, bond rating, or socioeconomics. We also found that climate risk is not yet priced in the market, and together these findings point to a greater burden that communities of color face in paying for climate resilience, even without a current climate risk pricing signal."

More information: Climate, race, and the cost of capital in the municipal bond market, *PLoS ONE* (2023). DOI: 10.1371/journal.pone.0288979

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