

**EXAMINING THE ROLE OF MUNICIPAL BOND  
MARKETS IN ADVANCING—AND UNDERMINING—  
ECONOMIC, RACIAL, AND SOCIAL JUSTICE**

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**VIRTUAL HEARING**  
BEFORE THE  
SUBCOMMITTEE ON OVERSIGHT  
AND INVESTIGATIONS  
OF THE  
COMMITTEE ON FINANCIAL SERVICES  
U.S. HOUSE OF REPRESENTATIVES  
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**EXAMINING THE ROLE OF MUNICIPAL  
BOND MARKETS IN ADVANCING—AND  
UNDERMINING—ECONOMIC, RACIAL,  
AND SOCIAL JUSTICE**

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**Wednesday, April 28, 2021**

U.S. HOUSE OF REPRESENTATIVES,  
SUBCOMMITTEE ON OVERSIGHT  
AND INVESTIGATIONS,  
COMMITTEE ON FINANCIAL SERVICES,  
*Washington, DC*

The subcommittee met, pursuant to notice, at 12 p.m., via Webex, Hon. Al Green [chairman of the subcommittee] presiding.

Members present: Representatives Green, Cleaver, Adams, Tlaib, Garcia of Illinois, Garcia of Texas; Barr, Mooney, and Kustoff.

Also present: Representative San Nicolas.

Chairman GREEN. The Subcommittee on Oversight and Investigations will come to order. Without objection, the Chair is authorized to declare a recess of the subcommittee at any time. Also, without objection, members of the full Financial Services Committee who are not members of this subcommittee are authorized to participate in today's hearing.

As a reminder, I ask all Members to keep themselves muted when they are not being recognized by the Chair, to minimize disturbances while Members are asking questions of our witnesses. The staff has been instructed not to mute Members, except where a Member is not being recognized by the Chair and there is inadvertent background noise.

Members are reminded that all House rules relating to order and decorum apply to this remote hearing. Members are also reminded that they may participate in only one remote hearing at a time. If you are participating today, please keep your camera on, and if you choose to attend a different remote proceeding, please turn your camera off. If Members wish to be recognized during the hearing, please identify yourself by name to facilitate recognition by the Chair.

The title of today's hearing is, "Examining the Role of Municipal Bond Markets in Advancing—and Undermining—Economic, Racial, and Social Justice."

I now recognize myself for 4 minutes to give an opening statement.

Today's hearing will assess the municipal bond markets as a driver of systemic discrimination on one hand, and of restorative justice on the other hand.

First, it will examine material disparities and costs of capital raising for Minority Serving Institutions, more specifically, Historically Black Colleges and Universities (HBCUs).

Second, this hearing will explore the fact that municipal bonds can drive positive change and promote fiscal justice, a truly exciting area of finance today thanks to the efforts of some issuers and investors and some of those represented among the witnesses.

Research authored by one of today's witnesses demonstrates conclusively that HBCUs use higher underwriting fees to issue tax-exempt bonds compared to similarly situated institutions that are not HBCUs, thereby materially increasing their costs of capital. Notably, this analysis held constant. The issue was credit quality and default risk by comparing HBCUs and non-HBCUs having AAA credit ratings.

As a result, timely payment of municipal bonds analyzed was virtually assured, and therefore, any cost differential would not be the result of differing risk exposures affecting investor behavior. Rather, as we will hear from our panel, the disparities and fees were attributable to racial animus among investor pools. This conclusion is buttressed by the findings that cost disparities were magnified in States where anti-Black racial resentment is most severe.

As the beneficiary of an HBCU education myself, these findings are, at once, both deeply personal and profoundly troubling. Specifically, the data show that HBCUs pay an average of 20 percent more to issue bonds than similarly situated non-HBCUs, with the size of this differential varying by State.

To illustrate the magnitude of the disparity, consider that HBCU bond issuers in Alabama, Louisiana, and Mississippi paid 30 basis points more in fees than non-HBCU issuers in the same States. In all other States, by contrast, HBCUs paid issuance costs that were 11 basis points more than non-HBCU issuers, which paid an average of 81 basis points.

In closing, I would like to thank my long-standing colleague, Representative Adams from North Carolina, for her support of this hearing, and quite frankly, without her, this hearing probably would not be taking place.

At this time, I would like to recognize the ranking member of the subcommittee, the gentleman from Kentucky, Mr. Barr, for 5 minutes for an opening statement.

Mr. BARR. Thank you, Mr. Chairman. I appreciate you holding today's hearing, and I thank all of our witnesses as well for appearing today. The municipal bond market (muni market) provides a reliable source of capital for municipalities to finance their long-term growth and a stable avenue for investors to put their money to work for the public good. It is made up of a diverse group of over 55,000 issuers, ranging from State and local governments to local transportation authorities. Of the more than \$3.7 trillion of municipal debt in the market, over 50 percent is held by individuals, with the remaining split between banks, mutual funds, insurance companies, and other investors. The muni market is a strong and reliable way for issuers to finance their operations.

During the pandemic, the muni market experienced significant volatility and liquidity challenges. Widespread lockdowns, stay-at-home orders, and government-mandated business closures weighed

on the economic well-being of States and localities as taxes, tourism, and other revenue sources declined. To respond to this challenge, Congress directed the Federal Reserve to establish the Municipal Liquidity Facility (MLF), and shortly after the establishment of this Facility, the market normalized. The muni taxable and tax-exempt markets are now performing well after the initial shock of the pandemic.

The quick stabilization of the muni market is evidence of the success of the Municipal Liquidity Facility. Some of my colleagues have said that the MLF should be evaluated on its take-up rate, suggesting the fact that only two issuers utilize the Facility was somehow indicative of its failure, but I believe the opposite. The mere existence of the Facility served as a backstop that allowed the private market to function properly in uncertain times.

I think we can all agree that our nation's infrastructure needs improvement. We must repair, improve, and expand existing infrastructure such as roads and bridges, and invest in infrastructure for future generations, such as rural broadband, to ensure an equitable path toward the future of work and education. The question then becomes, how do we achieve our shared goals of strong, comprehensive, and resilient infrastructure?

Municipal bonds are a key funding source for State and local governments to finance long-term infrastructure improvement plans. As Congress and the Administration begin a dialogue on how best to improve our roads, bridges, and connectivity, we should assess all of the available options to pay for it. Significant tax increases would reverse the economic prosperity and growth realized over the last few years since the passage of the Tax Cuts and Jobs Act. It would certainly reduce wages, and it would compromise American economic competitiveness.

Instead, we should look for ways to incentivize and mobilize private capital. The muni bond market provides a mutually beneficial avenue to match investors seeking stable long-term returns with issuers seeking to improve their roads, bridges, and schools.

I hope to use this hearing to investigate ways that Congress can improve the municipal bond market both for issuers and investors. There are bipartisan proposals such as reinstating advanced refunding for municipal bonds that could expand access to needed capital for issuers and improve investors' access to municipal paper. I also look forward to learning more about the ratings process for municipal bonds. Bond ratings are an important factor that determines the interest costs of a security and informs investors' appetite for risk.

Last Congress, I worked, on a bipartisan basis, with my colleague from Pennsylvania, Ms. Dean, to ensure equitable access to the Fed's emergency facilities for issuers, to ensure that issuers were not excluded from the Facility solely based on the SEC-regulated rating agency they chose to work with. This effort was intended to help small businesses find liquidity and provide options for smaller municipalities.

I would also emphasize the importance for investors that credit ratings be based solely on the creditworthiness of the issuer and not compromised by non-material information. Credit ratings based on subjective criteria derived from social or other political goals

would pose challenges for issuers selling their bonds and may not properly inform the market of the issuer's ability to repay its debt.

This hearing will also review a study which showed that Historically Black Colleges and Universities (HBCUs) paid more to sell their debt compared to their non-HBCU peers. Discrimination in the municipal bond market is illegal and it should not occur. To the extent that such discrimination exists, Congress, regulators, and market participants should work to ensure that it does not persist.

I share my friend and colleague, Mr. Green's, personal interest in this. I didn't graduate from an HBCU, but I do have the privilege of representing Kentucky State University, and this is an important topic.

I look forward to hearing from our witnesses about the important role the municipal bond market plays in our investment ecosystem. And again, I thank the chairman, and I yield back.

Chairman GREEN. The gentleman yields back, and the Chair thanks the gentleman for his recognition of this most important issue.

At this time, the Chair recognizes for one minute the gentleman from North Carolina, Representative Adams, who has been an autonomous advocate for HBCUs throughout her career. Representative Adams, you are now recognized for one minute.

Ms. ADAMS. Thank you, Mr. Chairman, for granting me a minute of your time. It is a privilege to serve on the Oversight Subcommittee under your leadership, and I am grateful to you for holding this hearing. It is critical that we better understand the role that the municipal bond market plays in advancing, or in some cases, limiting economic, racial, and social justice. As a two-time graduate of an HBCU, and a 40-year professor at an HBCU, I am particularly concerned that Historically Black Colleges and Universities and other Minority Serving Institutions are getting a raw deal when it comes to accessing equal and affordable financing through the bond market.

A 2019 study published in the Journal of Financial Economics found that HBCUs pay higher underwriting fees to issue tax-exempt bonds compared with similar institutions that are not HBCUs, thus raising the cost of capital for HBCUs. And this discrepancy is unrelated to the issuer's credit risk or quality. It is approximately 3 times greater in geographic areas of the United States where racial discrimination is most severe.

I want to thank you for the opportunity to speak. I yield back, and I look forward to hearing from our witnesses. Thank you, Mr. Chairman.

Chairman GREEN. The gentlelady's time has expired.

At this time, the Chair would welcome our outstanding witnesses, and I am pleased to introduce our panel: Chris Parsons, who is a professor of finance at the University of Southern California; William Fisher, who is the chief executive officer of the Rice Capital Access Program; Chelsea McDaniel, who is a senior fellow at Activest; Gary Hall, who is a partner and head of investment banking at Siebert Williams Shank & Co.; and Jim Nadler, who is president and CEO of Kroll Bond Ratings.

Witnesses are reminded that your oral testimony will be limited to 5 minutes. You should be able to see a timer on your screen that

will indicate how much time you have left, and a chime will go off at the end of your time. I would ask that you please be mindful of the timer, and quickly wrap up your testimony if you hear the chime, so that we can be respectful of both the witnesses' and the committee members' time. And without objection, your written statements will be made a part of the record.

Once the witnesses finish their testimony, each member will have 5 minutes to ask questions.

Mr. Parsons, you are now recognized for 5 minutes to give an oral presentation of your testimony.

**STATEMENT OF CHRISTOPHER PARSONS, PROFESSOR OF  
FINANCE, UNIVERSITY OF SOUTHERN CALIFORNIA**

Mr. PARSONS. Thank you, Chairman Green, and members of the subcommittee. Thank you for the opportunity to share the highlights of research I have conducted on the pricing and issuance costs faced by Historically Black Colleges and Universities (HBCUs). My testimony today is based on the research manuscript, "What's in a (school) name? Racial discrimination in higher education bond markets," which was published in the *Journal of Financial Economics* in December 2019, and which I have submitted separately to the committee. My co-authors on the study are Casey Dougal of Florida State, Pengjie Gao of Notre Dame, and William Mayew of Duke University, who asked me to pass along their regards.

Economists have been interested in discrimination for many decades, and indeed, have documented race and/or gender disparities in wages, job placement and retention, home ownership, mortgage rates, access to capital, and dozens of other outcomes. A key empirical challenge, however, is that simply documenting differences in average outcomes between groups formed by gender, race, age, or other characteristics may not always paint a complete and accurate picture.

The reason is because these or other characteristics may be correlated with other determinants of the outcome of interest. Consequently, it is rare to find examples where we can be almost certain that we have accounted for such competing factors, other than discrimination itself. Although no real-world study can be 100 percent perfect in this regard, studying municipal bonds issued by colleges and universities provides a close approximation to this ideal.

There are three reasons why. First, when you buy a bond, all that should matter is the financial return, that is, whether you are paid back according to the contractual terms. Compared to labor markets or other settings, this simplifies the analysis, since the notion of the issuer's quality or productivity is well-defined and relatively objective.

Second, there is a well-accepted way of measuring an issuer's ability to pay called, "credit," or "bond ratings." By comparing two issuers with the same credit rating, we, as researchers, can account for credit quality in the same manner that investors do.

Finally, in about half of the cases we will study, universities with low credit ratings purchase credit insurance, which allows them to adopt the credit rating of the parent insurance company. In these instances, we can compare two universities not only with the same

credit rating, but with the same insurance company, an extremely precise control for creditworthiness.

With these advantages as a backdrop, we collected data on 4,145 college-issued municipal bond offerings between 1988 and 2010, of which 102 were conducted by HBCUs. Our analysis asked two questions: first, do HBCUs pay more in issuance fees versus non-HBCUs; and second, once HBCU bonds have been placed in the market, do they trade at lower prices or otherwise show evidence of discrimination by investors?

The answer to the first question is, yes. HBCUs pay about 20 percent more in fees to underwriters, which are the brokers that sell, or place, the bonds with investors. This increases to 30 percent if we focus on States with historically high levels of racial animus, specifically in the U.S.'s Deep South. These analyses account for the fact that HBCUs may be smaller than non-HBCUs, may have different credit ratings, or may differ in other important ways.

The answer to the second question is, maybe. On average, HBCU-issued bonds appear to trade at somewhat lower prices than otherwise similar non-HBCU bonds, but the differences are small, and in most specifications are not statistically significant. However, we do find that when HBCU bonds are traded, it takes about 23 percent longer to find a willing buyer.

What explains these results? Due to tax reasons, municipal bonds offer the largest advantage to investors residing in the same State as the issuer. What this means is that HBCUs, by virtue of being located mostly in the American South and Southeast, may face collective reluctance from what should be their most receptive investor base. If wealthy investors in their home States, due to racial animus, disproportionately shun HBCU-issued bonds, we would expect to find results similar to what we document in our analysis. Because underwriters have a harder time finding willing buyers, they will charge a higher commission.

Critically however, the effects of discrimination may or may not manifest directly in bond prices, because the higher selling efforts of underwriters should be, and appear to be, sufficient to secure prices that are close to fair market value. Of course, ultimately, this means that HBCUs do pay higher costs for accessing debt markets in either case, whether the bonds trade for lower prices, or whether they simply pay higher issuance costs.

One possible policy tool to help remediate these challenges documented by our study would be affording investors of HBCU-issued bonds tax exemption from State and local taxes. The effect of this policy would be to remove the tax disadvantages an investor living in, for example, New York or California, currently faces when potentially investing in an HBCU-issued bond from another State.

Thank you for your attention, and I look forward to any questions you may have.

[The prepared statement of Mr. Parsons can be found on page 42 of the appendix.]

Chairman GREEN. The gentleman's time has expired. Thank you, sir.

Mr. Fisher, you are now recognized for 5 minutes to give an oral presentation of your testimony.



**STATEMENT OF WILLIAM FISHER, CHIEF EXECUTIVE  
OFFICER, RICE CAPITAL ACCESS PROGRAM**

Mr. FISHER. Good afternoon, Chairman Green, and distinguished members of this subcommittee. My name is William Fisher. I have over 30 years of experience in the municipal finance sector as a financial advisor, as an underwriter, and as an issuer of tax exempt and taxable securities for State and local governments. As a graduate of Howard University, I am also the proud parent of both a Tuskegee University graduate, and a third-year Morehouse School of Medicine student in Atlanta.

I also have the privilege of serving on the board of trustees for Jarvis Christian College in Hawkins, Texas. I currently serve as the chief executive officer of the Rice Capital Access Program, the designated bonding authority for the Historically Black College and University Capital Financing Program for the United States Department of Education.

HBCUs play a vital role in higher education that is not easily recognized or appreciated by the capital markets. The mission these institutions serve cannot be fully understood by mere examination of standardized test scores, selectivity metrics, and financial ratios. This lack of understanding subjects these institutions to higher interest rates when borrowing as well as restrictive covenants that impair financial flexibility. As a result, investments in physical facilities, student support initiatives, and academic programs suffer.

These increased borrowing costs also increase the cost of attendance at these institutions on several levels. For example, increased costs associated with the financing of a dormitory are borne by the student through higher student housing fees. These increased student housing fees increase the need for students and their families to borrow additional funds to finance their education. This increased debt burden impacts not only the students and their families, but also the institution.

As the committee is aware, institutions with a high cohort default rate are in jeopardy of losing access to Title IV funds and possibly its accreditation. The impact of expensive debt is not limited to the institution and its students. The local economy in the local communities is also negatively impacted. Several advocacy groups have completed economic impact studies on the value that HBCUs bring to the local economy. In short, the presence of an HBCU fosters a vibrant community by providing employment opportunities, and the purchase of goods and services. Expensive debt limits the institution's ability to fully engage with the local economy.

When Congress created the HBCU Capital Financing Program, not only did it provide access to low-cost borrowing, but it created a path to financial stability. To further secure HBCU's place in America and higher education, the feasibility of the recommendations offered by the HBCU Capital Financing Advisory Board include: (1) an increase in the borrowing capacity of the program; and (2) expanding the use of the program to include operating lines of credit merit consideration.

Thank you for the opportunity to appear before you.

[The prepared statement of Mr. Fisher can be found on page 28 of the appendix.]

Chairman GREEN. Thank you, Mr. Fisher.

Ms. McDaniel, you are now recognized for 5 minutes to give an oral presentation of your testimony.

**STATEMENT OF CHELSEA MCDANIEL, SENIOR FELLOW,  
ACTIVEST**

Ms. MCDANIEL. Thank you. Good afternoon, Chairman Green, Ranking Member Barr, and members of the subcommittee.

Thank you for the opportunity to appear before you today and discuss the role of municipal bond markets in advancing, and undermining, economic, racial, and social justice. My name is Chelsea McDaniel, (she/her/hers as pronouns), and I am a senior fellow at Activest. Activest is an investment research firm that quantifies fiscal justice risk within the municipal bond market. We define fiscal justice as the analysis of public budgets at the intersection of fiscal health and racial justice. Our thesis is simple: Communities and public entities that treat their residents and clients more justly realize stronger fiscal outcomes over the intermediate and long term.

We are not only critics of the market, but also market participants through efforts like the Fiscal Justice Municipal Investment Strategy we developed alongside Adasina Social Capital, or the Fiscal Justice Credit Rating Agency we are launching this year. Our work blends economic modeling, financial analysis, and social policy research, and we exist to protect savers and everyday municipal investors from taking hidden and uncompensated risks of the more egregiously unjust corners of the municipal market.

Today, I would like to present a high-level sectoral view of the post-secondary education institutions within the context of the larger municipal finance market. Broadly, we have seen that social and environmental risks have emerged within public entities like local governments and schools as a result of long-standing policies borne out of segregation-era views of development and progress that have yet to be updated.

Whether it is the \$70 billion in municipal revenue that schools lose annually to corporate tax incentives, the \$11 billion lost to exclusionary school discipline policies, the \$2 billion for municipal sediments, or the \$7 billion of excessive fines and fees disproportionately extracted from BICOP communities, inequitable budget, public budgets serve as the supply lines fueling State-sanctioned, taxpayer-funded exclusion and oppression.

U.S. local government finance is built on a long history of sordid financial practices, and the current public finance system does a poor job of integrating the true social and fiscal costs of racial equity into the evaluation of cities and bond issuances. The fiscal and budgetary cost of ignoring the fiscal justice risk is growing as the reported incidence and pricing severity of fiscal justice events are growing within government entities, including post-secondary institutions. In the world of post-secondary finance, Activest's research has focused on ways in which Predominantly White Institutions (PWIs) have been extractive as opposed to collaborative, let alone peacefully existing with Minority Serving Institutions (MSIs). Although PWI's fiscal justice risks have to this point been unpriced,

their materiality is growing in real time and the long-tail risk of their behavior is likewise expanding.

Recent examples of this include the recent \$577 million settlement for HBCUs in Maryland, numerous institutions granting funds or some form of relationship to descendants of enslaved Africans who were sold into finance schools under endowments, and finally, post-secondary schools that race to become federally recognized Hispanic Serving Institutions (HSIs) to capitalize on the growing Latinx population where scholar Gina Garcia discusses what it means to move from simply enrolling Latinx students to actually serving them.

From a credit perspective, we see MSIs as strong municipal investments as opposed to PWIs, which are evidencing a growing body of unpriced fiscal justice risks. Accordingly, we have developed a series of recommendations to counter the aforementioned fiscal justice risks in the post-secondary market. The first of these is accounting for equity research. We see the need for a study to track and quantify all of the Federal and State funding withheld from MSIs from their inception, and the estimated financial impact on States and the Federal Government when these payments come due. This research has been partially completed for Tribal Colleges and Universities (TCUs) through efforts like the Land Grab Universities Project, but more research remains for HBCUs, PWIs, and HSIs.

I am just going to say that we anticipate at least two components of this. The first would focus on long-term liabilities, which would be historical accounting of the financial support that was denied or stolen from MSIs since their creation, and second, the elimination of current liabilities. Thank you so much for your time, and I look forward to any questions.

[The prepared statement of Ms. McDaniel can be found on page 35 of the appendix.]

Chairman GREEN. Thank you, Ms. McDaniel.

Mr. Hall, you are now recognized for 5 minutes to give an oral presentation of your testimony.

**STATEMENT OF GARY HALL, PARTNER AND HEAD OF INVESTMENT BANKING [INFRASTRUCTURE AND PUBLIC FINANCE], SIEBERT WILLIAMS SHANK & CO., LLC, ON BEHALF OF THE SECURITIES INDUSTRY AND FINANCIAL MARKETS ASSOCIATION (SIFMA)**

Mr. HALL. SIFMA commends members of this subcommittee for your collective focus on these important issues. I currently sit on the board of directors of SIFMA, which is the leading trade association for broker-dealers, investment banks, and asset managers operating in the U.S. and in global capital markets. I am also a partner and the national head of infrastructure in public finance investment banking at Seibert Williams Shank, the nation's largest minority-owned investment bank and a SIFMA member firm.

As I describe in my written testimony, I am extremely proud of my firm's, my family's, and my strong connections to HBCUs. Hence, I would like to join SIFMA by expressing appreciation on behalf of my firm, my family, and myself to the subcommittee for

bringing attention to HBCUs having fair access to the public municipal bonds market.

My career in the municipal bond market includes serving as an issuer, a lawyer, and a banker. I am the immediate past chairman of the Municipal Securities Rulemaking Board, the self-regulatory organization that safeguards the \$4 trillion municipal securities industry, therefore, I know firsthand how municipal bonds are a critical funding source for infrastructure in America.

As it pertains to the subject of this hearing, I would like to first emphasize that SIFMA and its members are committed to fair pricing. While I am always appreciative of being able to learn from scholarly research and academic analysis, I do believe there are certain contextual considerations that weren't highlighted with respect to the study that spurred this hearing. I detailed these considerations in my written testimony, however, I can tell you that the municipal market has undergone seismic changes with respect to pricing transparency, regulatory framework, and technological transformation that would mitigate many of the conclusions reached in the study.

Again, my written testimony outlines these considerations in more detail, and I am happy to answer any questions from members of this distinguished panel, including my classmate, Mr. Fisher. Despite my and SIFMA's concerns as it pertains to the study, we fervently believe more can be done to assist HBCUs with accessing the capital markets more cost-effectively. Specifically, SIFMA supports authorizing triple exemption for HBCU-sponsored debt. Ironically, the study suggests that providing HPCUs with the ability to attract a larger pool of investors would contribute to favorable pricing in the capital markets. I believe this idea is spot on and perfect for the current market environment given the strong appetite for social impact bonds, a subset of ESG bonds.

Social impact investors with highly coveted HVCU-issued debt, whether such was tax-exempt or even taxable. Hence, ways to expand the taxable investor base for HBCUs include having the Federal Government authorize a high subsidy direct pay bond similar to disaster recovery bonds. Moreover, authorizing a Federal guarantee on taxable, direct-pay bonds for HBCU-sponsored debt would be a valuable credit enhancement to attracting new class and investors for these bonds.

With respect to the overall bond market, please know that SIFMA supports, as Ranking Member Barr mentioned, reinstating tax exemption on advanced refundings of municipal bonds, expanding private activity bonds, and reinstating a direct pay program similar to the Build America Bond Program, especially in light of the infrastructure legislation that is currently under consideration. Adding these tools will be vital to helping State and local governments both address critical infrastructure needs and obtain savings that tilt down to taxpayers.

Again, I commend the work of this subcommittee on this important topic, and I encourage lawmakers to faithfully consider the policy proposals that SIFMA supports. Thank you for having me, and I look forward to answering your questions.

[The prepared statement of Mr. Hall can be found on page 29 of the appendix.]

Chairman GREEN. Thank you, Mr. Hall.

Mr. Nadler, you are now recognized for 5 minutes to give an oral presentation of your testimony.

**STATEMENT OF JIM NADLER, PRESIDENT AND CHIEF  
EXECUTIVE OFFICER, KROLL BOND RATING AGENCY (KBRA)**

Mr. NADLER. Thank you. Good afternoon, Chairman Green, Ranking Member Barr, and members of the subcommittee. Thank you for the opportunity to testify today. My name is Jim Nadler and I am the president and CEO of Kroll Bond Rating Agency (KBRA). Since KBRA's founding in 2010, we have been a vocal proponent of the importance of open competition in the credit rating space to protect investors and increase market liquidity for underserved sectors, and we greatly appreciate the work of this committee in advancing that goal, including by unanimously passing legislation through the House last year.

Today, KBRA, an SEC-registered credit rating agency with more than 400 employees in offices in the United States and Europe, has issued more than 42,000 ratings, representing \$2.2 trillion in rated issuances. KBRA is currently one of the five largest rating agencies globally, and the largest established after the great financial crisis. We rate over \$364 billion of the municipal debt, nearly 10 percent of the total outstanding debt in the market. Our ratings add important insight for investors across a wide variety of municipal issuers including: States such as Texas; the Commonwealth of Kentucky; cities, including Dallas, Chicago, and Los Angeles; transit systems such as New York's MTA; airports like DFW, and Chicago O'Hare; and large municipal utilities such as the Los Angeles Department of Water and Power.

In observing the bond market in 2020, the municipal market was significantly impacted by the outbreak of COVID-19. The effect of the pandemic was uneven; it varied city to city and State to State. Initially, the cost of issuing debt increased considerably, especially for issuers with lower rated debt. Municipal issuers did benefit from the historic Federal Government intervention both in terms of direct infusion of funds and monetary policy, and the municipal market today is more stable than many municipal observers expected.

As we look to the future, we believe that some States and municipalities will come out of the crisis stronger, but this may not be true for those municipalities that had pre-existing structural deficits in their budgets. Some States and municipalities may find that their particular economy may be fundamentally altered for some time, including those dependent on long commutes to downtown office districts, as well as leisure and business travel destinations.

Moving to the topic of racial and social issues, I would like to address their impact on municipal bonds. Municipalities, by their very nature, have material attributes of positive social impact that deserve amplification. Some do not and those that do not will suffer by not having that type of analysis to show on their behalf. Many of these attributes are not included in the separate ESG scores that are proliferating in the market, particularly in the areas of health, safety, housing, and education. In our view, investor preferences

will continue to drive pricing and liquidity in favor of municipalities that have exhibited a commitment to economic, racial, and social justice.

Mr. Chairman, knowing the subcommittee's interest in the ratings of Historically Black College and Universities, I would also like to provide our perspective on that topic. While KBRA is not significantly involved in rating institutions of higher education today, our general observation is that competition among ratings and research has dramatically increased the quality of research and underpinnings of those credit analysis. As has certainly been our experience in the community bank space, we believe that sunlight is the best disinfectant, and that HBCUs would benefit from better, more thorough analysis and research to ensure that their ratings are based on consistently applied and fair assessment of credit quality.

Mr. Chairman, I thank you and the subcommittee for the opportunity to testify today, and I look forward to any questions you may have.

[The prepared statement of Mr. Nadler can be found on page 38 of the appendix.]

Chairman GREEN. Thank you, sir.

At this time, the Chair will recognize the gentleman from Missouri, Mr. Cleaver, who is also the Chair of our Housing, Community Development, and Insurance Subcommittee, for 5 minutes for questions.

Mr. CLEAVER. Mr. Chairman, thank you very much. And I am particularly thrilled that you called this hearing.

I am not sure if all of you, like Mr. Green—well, Mr. Green is not a native Texan. I am a native Texan. I grew up in in Texas and became quite familiar with a lot of the communities around Texas.

I discovered early on when I moved to Missouri after HBCU Prairie View at Indiana University that Missouri had, I think, seven sundown towns. And one of the sundown towns has become famous. It is called Ferguson, Missouri. Now, if you are not familiar with what a sundown town is—I am sure that Mr. Hall and others are—it means that if you were African American, by the time the sun set, you had to be out of that town, or you could face just about anything from beating to death. And these towns were all over the country; they were not just in Missouri. In Texas, we had a town with a banner up across the street that said, "The blackest land, the whitest people."

And we had to deal with sundown towns in Missouri, of course. It may be a surprise for you to know that Ferguson is a town of about 21,000 people, and yet Ferguson police issued, based on the Patterns and Practice Study of the Department of Justice, 32,000 traffic tickets a year. That is, again, with a population 21,000, the police issued an average of 32,000 tickets a year, traffic tickets. We call that policing for profit. And they collected millions and millions of dollars in fines to finance the government of Ferguson, Missouri, through traffic tickets.

This is not based on an annual, "Cleaver analysis." It is not based on what I think. These are facts that were that were brought

out when the Patterns and Practice Report was issued on Ferguson, Missouri. So, how does that fit in?

If you had a town where you had revenue-focused policing and a declining tax base, it means that you are going to have a difficult time getting anything done as a municipality. And so, I would like the witnesses to accept the fact that—you can challenge me if you want, but I will win. But you can challenge what I have said. How many of you believe that socioeconomic factors like poverty, income inequality, the availability of affordable housing, unemployment or diversity of employment all factor in on a risk of a municipality and their ability to get significant bonding?

With all of the things I just mentioned, which is a fact, it is a fact, what do you think Ferguson's ability to get bonding would be, and how many people would say, well, what he says has nothing to do with this, the city is just poorly? But race has been the major factor in that City's inability to get funding. So who would like to clear this up for me? And then, give me some ways in which we can prevent this from continuing to happen.

Mr. HALL. Representative, yes, this is Gary Hall. The only thing that I would significantly challenge in your supposition is you mentioned these towns having, sort of, restrictions. I grew up in Chicago, and I would also say that neighborhoods there had the same sort of restrictions that you mentioned, so it is not [inaudible] to towns.

I don't know if the chairman wants to grant me additional time to try to answer the question?

Chairman GREEN. The Chair will grant an additional 30 seconds.

Mr. HALL. The bottom line is that while I can't speak to the specific credit nature of Ferguson, I can tell you that a lot of considerations are taken into effect when we are going into the municipal bond market. The socioeconomic background is not as important as the economic power and the tax base, and that is something that we evaluate a lot, working with our issuers for access to the bond. As evidence of the fact that during the pandemic, we did a transaction, my firm, for a convention center in St. Louis, and as you might know, the convention centers during the pandemic were not readily visited. So, that is a statement to the ability to navigate tumultuous, sort of, market conditions to even access the capital markets during tough times.

Mr. CLEAVER. Thank you.

Thank you, Mr. Chairman.

Chairman GREEN. The gentleman's time has expired.

The Chair now recognizes the ranking member of the subcommittee, Mr. Barr for 5 minutes for questions.

Mr. BARR. Thank you, Mr. Chairman.

Let me ask Mr. Nadler first about market performance during the pandemic and the Municipal Liquidity Facility. I was somewhat surprised that there wasn't as much uptake. There has been so much conversation about the plight of State and local governments during the pandemic and the decline in revenues. And, of course, we did find out that large municipalities' revenues actually went up during the pandemic. But we were somewhat surprised after supporting the MLF, that there wasn't as much uptake, and throughout the pandemic, really, the municipal bond market

proved to be very resilient. The market certainly benefited from support from the Federal Reserve through the MLF, but maybe that was more psychological than actually through utilization. But it did perform well, and we avoided the worst-case scenario that some feared.

Mr. Nadler, where do you see the municipal bond market moving in the future, post-pandemic? How has the market changed? And can you speak to whether or not we actually needed the bailouts of the State and local governments, if we had just encouraged municipalities to utilize the MLF, maybe they would have just been as well off?

Mr. NADLER. Thank you, Representative Barr. I think that you mentioned a couple of things that are true. I do think that we were surprised as well by the low number of people who took advantage of the of the Facility. I do think that the mere fact that the Facility, along with very aggressive monetary policy, did have a very large impact on the psyche of both municipal issuers and municipal investors. And so, I think that had much to do with how quickly we saw the municipal market move back to some semblance of normalcy.

The second thing I will say is that the impacts going forward are going to be uneven. There were structural issues before the pandemic, and we are going to see those exacerbated after the pandemic. And they are going to be in towns that were primarily vacation destinations. It is going to take a while for those to come back. I mentioned towns that have a lot of commuters coming into the city. It is going to be a while before commuters feel comfortable getting on mass transit again in large numbers. And so, I think the recovery, while it has been real and it has been great, and has been, I think, faster than most participants thought, we will see an unevenness to it, going forward.

Mr. BARR. Let me ask you about materiality. A bond rating is a significant factor that affects the interest cost of a security and helps inform investors' demand for bonds. What is the process, Mr. Nadler, for evaluating a municipal bond for the purposes of issuing a rating? What criteria go into assigning a rating for a municipal bond? In other words, what factors does Kroll consider to be material to a bond rating, and why is materiality so important?

Mr. NADLER. Materiality is huge, and I think that is one of the most important factors. So when you are thinking about a bond rating and an actual credit rating, whether it is a municipality or a company, you really need to make sure that what you are analyzing really does have an impact on the fiscal health of that entity, whether it is a city or a State. Importantly, I think that we found that disclosure along these lines is probably one of the most important aspects.

The second thing I will say is that there are aspects of municipal bonds that impact the liquidity of that bond going forward, and they may not necessarily impact the creditworthiness today, they may not have a material impact on it, but they would be interesting to investors, and investors are asking for that type of information. And so, we are advocates of more disclosure, particularly the type of disclosure that may align with investor preferences over



time and may also give investors insight into the liquidity issues around some aspects of bonds

Mr. BARR. In my remaining time, let me just turn to Mr. Hall, very quickly. I am the co-sponsor of bipartisan legislation, the Investing in Our Communities Act, which would reinstate advanced refunding for municipal bonds. Mr. Hall, could you detail how reinstatement of advanced refunding, especially with low interest rates, would help municipalities and issuers?

Mr. HALL. Absolutely. We are in an unprecedented time of a low-interest rate environment and budgetary stress on State and local governments. The ability to refund existing debt with lower tax-exempt debt is invaluable, too, and really needs to be reinstated.

Mr. BARR. Thank you.

I yield back.

Chairman GREEN. The gentleman's time has expired.

The Chair now recognizes the gentlelady from North Carolina, Ms. Adams, for 5 minutes.

Ms. ADAMS. I thank the Chair. Again, thank you for hosting this hearing today.

And I want to thank all of the witnesses. Professor Parsons, first, I want to thank you and your colleagues for your research which shows that HBCUs pay higher underwriting fees to issue tax-exempt bonds compared with non-HBCUs. Without this data, we would not be able to have this conversation today, so I do thank you.

Your study found that, unrelated to user credit risk or quality, underwriting fees are 3 times larger in certain areas of the United States, and you also found that HBCUs pay an average of 20 percent more to issue bonds that are similarly suited to non-HBCUs. Very succinctly, can you share to what you attribute this significant differential, and have you attempted to quantify the collective costs to HBCU bond issuers of this premium? And how would you begin to quantify that cost over the decades?

Mr. PARSONS. That it is a complicated question. The total costs, if you just want to look at the dollar amounts that are specifically implied by the differences in underwriting costs, 20 to 30 basis points on a \$50 million bond issue is in the hundreds of thousands of dollars. So, it is not several million dollars, it is in the hundreds of thousands of dollars. Now, hundreds of thousands of dollars, you can quantify that lots of ways. That is a couple of professors; maybe it is 10 scholarships. But again, these are going to depend on the size of the issue for any one bond.

One of the things that I wish our study could do that we simply cannot do is look at the decisions to issue bonds that were not taken because of higher underwriting costs. You can compare the wages of two people in the job market. What you cannot compare is the wages between someone who is in the job market and someone who is not in the job market because they don't have a wage. And so everything in our study, and indeed every empirical study of this kind, is going to be conditioned on bonds that successfully went to the market. That is going to naturally lead you to an estimate that is a lower bound on the all-in costs, because we don't observe what happens to HBCUs that are not able to go to the market.

My intuition—and this is outside the realm of the study at this point; this is a supposition—is that the cost is probably significantly larger to the firms for the HBCUs that did not go to market.

Ms. ADAMS. Okay, great. Thank you.

Ms. McDaniel, Mr. Hall, what are some other solutions that you might propose to help address these disparities?

Mr. HALL. I will take the first crack at it, if you don't mind. First of all, Congresswoman Adams, I just want to applaud you for your advocacy for HBCUs and your work in ensuring that over a billion dollars of financing was forgiven in the Capital Financing Program. That was a huge benefit to HBCUs, so thank you for your outstanding work.

The proposal, the study actually mentions this whole notion of expanding the tax base for HBCUs, which SIFMA supports by incenting by having a triple tax exemption for HBCUs, thereby States' debt issued in North Carolina would be attractive to investors in New York and California, where the State income tax is high and the incentive will be higher as well.

Additionally, having a direct pay program similar to build America bonds where the HBCUs can tax the taxable market, a wider investment base over \$9 trillion versus \$4 trillion, will be another way to allow HBCUs to increase the demand for their bonds and close their overall cost to borrow.

Ms. ADAMS. Okay. Ms. McDaniel, do you have a comment?

Ms. MCDANIEL. Yes, thank you. I think from our perspective, and when we look at the municipal bond and bond market in general, we look at the things that aren't being accounted for first. We here know that HBCUs are amazing and they outperform in terms of producing, whether it is doctors, and graduates, Black graduates at a higher success rate. And so, I think it is looking at some of those different factors that aren't typically folded into the creditworthiness assessment of municipal bonds, including those and how we view HBCUs. Similarly, how we are viewing PWIs that seem to get a positive boost in their ratings, but don't have similar performance for African-American students.

Ms. ADAMS. Thank you very much.

Mr. Chairman, I yield back. Thank you.

Chairman GREEN. The gentlelady yields back.

The Chair now recognizes the gentleman from Tennessee, Mr. Kustoff, for 5 minutes.

Mr. KUSTOFF. Thank you, Mr. Chairman. Thank you for convening today's hearing.

Thank you also to the witnesses who are here.

Mr. Hall, when you look at evaluating a municipal bond deal, can you talk about what are the most important factors that impact the structuring of any issuance, fee structure, the eventual cost of capital for the issue or the bonds?

Mr. HALL. Sure. Thank you for the question. First and foremost, we have to evaluate the credit underpinnings of the specific issuer, making sure that investors have confidence that they will be repaid, and what are the sort of revenue triggers that allow for a debt service to be repaid.

Second, and one of the things that I thought the study did not highlight enough, is the actual size of the issuance and whether or

not it would actually be very liquid in the market. Smaller bond issuances are less liquid than larger issuers. Issuers who are infrequently in the marketplace are less liquid than those who are frequently in the marketplace. And so, the liquidity of the issuance would be a very important factor in the actual residence of the bond in the market.

All of those things are taken into consideration when you are evaluating the risks associated with the issuance, when you are evaluating the likelihood of success in the bond market, whether or not you would incur any sort of inventory risk in having those bonds in your inventory, and how long it would take to get the bonds out of your inventory and very important to the overall receptivity of the bond in the capital markets.

Mr. KUSTOFF. Thank you, Mr. Hall. Can I also ask you, if you would, to expand on working with higher education issues? You all have talked about that somewhat in your testimony. Specifically, can you talk about what the market is like for those types of issuances for higher education and how does that compare to other types of available debt within the market?

Mr. HALL. One of the key components of the credit structure of higher education is the size of the endowment, the student mix, and the different sort of sources of revenue that the higher education entity has; this is critically important. I would tell you, as I mentioned in my written testimony, that there is peak demand for social impact bonds in the current market.

Just to give you an example, we had over \$150 billion of social impact bonds placed in 2020. The year before, it was less than \$20 billion. And so, higher education even K-12 education, given the investment objectives of certain ESG investors, is extremely attractive and and most incur a pretty lost cost to bar and doing the competition for those bonds in the current marketplace.

Mr. KUSTOFF. Thank you, Mr. Hall. Can I shift gears with you for just a moment, and talk about the importance of municipal bonds as a tool for individuals who use it for financial planning and certainly for saving for retirement? Can you speak about the individuals and the households who incorporate municipal bonds into their financial planning, and obviously the specific benefits of including municipal bonds in an investment portfolio?

Mr. HALL. Absolutely, sir. We are pretty fortunate in this country to have the ability for citizens to actually invest in their own communities by owning municipal bonds, whether it be the Erie Canal or the Golden Gate Bridge, all were funded by municipal bonds, and the ability of actual citizens to take a piece of those worthy investments.

For a long-term investment vehicle on a risk-weighted basis where municipal bonds offer a pretty significant return relative to a risk weight on a corporate side, if you think of the active tax benefit. And the benefit of these bonds is sort of evidenced by the fact that over 50 percent of our market is held by mom-and-pop investors in their households. It is changing. It is evolving as to how that access is granted these days, but it is still an important feature of the investment objectives of our everyday American citizens.

Mr. KUSTOFF. Thank you, Mr. Hall.

And I have about 30 seconds left, Mr. Chairman, so I will yield back. I do thank the witnesses. And thank you for calling today's hearing.

Chairman GREEN. The gentleman yields back his time, and the Chair thanks the gentleman.

The Chair now recognizes the gentlelady from Michigan, Ms. Tlaib, for 5 minutes.

Ms. TLAIB. Thank you so much, Mr. Chairman.

I know that whenever we experience an economic crisis, it is the budgets of States and cities that are hit the hardest. And I have seen that firsthand, the devastating impact of the bankruptcy of the City of Detroit, and the impact it had on its residents and also the retirees. Last year, despite more than 1.5 million public sector layoffs across the country, the Fed's Municipal Lending Facility only purchased two municipal bonds, amounting to less than one percent of the Facility's capacity.

And I know the Brookings Institution did find that the Municipal Lending Facility's initial eligibility excluded countless communities like mine, including not only Detroit, but Atlanta, Baltimore, Boston, and Pittsburgh metro statistics areas. Meanwhile, the Fed Secondary Market Corporate Credit Facility purchased hundreds of millions in corporate bonds in the energy sector, including from dirty polluters like ExxonMobil, Chevron, BP, and Marathon Oil, right here in my district.

So, Professor Parsons, at this point the Fed has been unwilling and unable to facilitate meaningful emergency assistance for State and local governments. How do you think our role as Congress should step in to fill this gap in fostering long-term investments in our communities?

Mr. PARSONS. I would like to speak rather specifically to the results of the findings specifically with HBCUs. And one of the ways that I think about the triple tax exemption, is it is almost a free market solution to a problem. One could characterize it that way. If the problem is that the market is too small in the sense that if you are an HBCU attempting to place your bonds in the hands of less-than-willing investors and that investor base is too small, triple tax exemption essentially opens up the market to other States where you give other investors a crack at it. So that is something I am quite optimistic about, and I would support that very much if that was on the table.

Ms. TLAIB. As COVID and the pandemic has threatened our City and State Governments with fiscal crises, they are in survivor mode right now. Unlike any other time or experience I have seen, I know that public banks could offer a much more accessible option for dealing with these debts than investing traditional underserved communities. I know in 1919, the State of North Dakota established a public bank, which conducts business on behalf of the State, bringing down borrowing costs on the State needs and offering limited banking services to State residents. For example, I don't know if the chairman knows this, but according to the Bank of North Dakota's 2020 report, the bank financed \$36 million in school construction at a lower cost.

So, Ms. McDaniel, do you believe that a public bank would be more likely to consider other factors beyond mere profits in issuing

bonds compared to private bond underwriters? Compared to a private bond underwriter?

Ms. MCDANIEL. Yes. Thank you for that question, Representative. Based on the research by the Action Center on Race and the Economy (ACRE), municipal banks definitely allow cities to recapture local tax revenues and local funds currently invested in market instruments, retain those tax revenues currently siphoned off by payments of the principal and interest municipal bond owners. So, that is a definite advantage there. And they enable the municipality to channel that back into affordable housing infrastructure, and economic development.

I would definitely agree with what you said about public banks and the advantages there, and being able to consider different factors with that, and also providing potentially more for the cities in terms of services that I previously mentioned.

Ms. TLAIB. Thank you, Ms. McDaniel. What you said is basically that the money stays within the community. And again, it must be able to reinvest and again help, I think, improve the quality of life of the many of the residents.

Professor Parsons, you heard what Ms. McDaniel said, and I would love to hear from you about how public banking could ensure that traditionally underserved cities like mine gain access to resources and are better equipped to weather budget crises that were created by COVID, another really critical time in our country especially the last great recession in my City?

Mr. PARSONS. My main observation about public banks is they serve a role when the private markets are, for whatever reason, failing or struggling, when there are frictions in that market. During COVID, the Fed was buying up basically everything. They were buying up municipal bonds and other fixed-income instruments, and one could imagine a similar situation here.

Ms. TLAIB. Thank you.

I yield back, Mr. Chairman.

Chairman GREEN. The gentlelady yields back. Thank you.

And the Chair now recognizes the gentleman from Illinois, Mr. Garcia, for 5 minutes.

Mr. GARCIA OF ILLINOIS. Thank you, Mr. Chairman, and I thank you and Ranking Member Barr for holding this hearing.

And, of course, thank you to all the very informative witnesses for joining us. This hearing is especially important to me, because we have to think a lot about the bond market where I come from; I represent parts of Chicago and suburban Cook County. Because our municipal bonds have attracted low ratings, our borrowing costs are high. That usually cuts wages and benefits for working-class people like the constituents I represent, and results in bigger checks for bondholders. Many of my constituents are from Puerto Rico, so they know this dynamic very well. We even have some of the same Activest bond holders like Aurelius Capital calling for cuts in spending. It often means that the less money you have, whether you are Chicago, Puerto Rico, or a small university trying to keep the doors open, the more money you have to pay.

Mr. Nadler, it seems to me that a lot of what goes into credit ratings is outside of issuers' control. For instance, if Puerto Rico is devastated by a hurricane or Detroit loses thousands of good jobs

because of changes in national economic policy, that would have a major impact on bond ratings. We know that communities of color and working-class neighborhoods are hit especially hard by these kinds of shocks.

Do rating firms consider whether their criteria have a disparate impact on communities like mine, in your opinion?

Mr. NADLER. I think that they don't do a good job of that, and I will give you an example in your own City of Chicago, of the Chicago Public Schools. There was a point with the two main rating agencies—the two largest rating agencies had Chicago public schools and non-investment grade. We did a much larger study and looked at the housing market, basically the wherewithal of the City of Chicago and found that they could sustain higher taxes if they needed it, and that there was no reason that school district should be non-investment grade. Now, they have sort of come back to the investment grade.

So I think that competition is important, because I think that when you are looking at, whether it is Puerto Rico or whether it is the State of California, making sure that you have competing ideas and that you have enough research out there for investors so that they can use their preferences to choose where they want to invest their money is important. So, I believe competition is important.

And I will also just say one other thing, that a lot of times these incumbent rating agencies get into a rut, and they just look at the same things every year, every month, instead of re-imagining and re-looking at cities and States as they grow and evolve. And I think it is important to take a new, fresh look at all of the different entities that you pointed to.

Mr. GARCIA OF ILLINOIS. Thank you, Mr. Nadler.

Ms. McDaniel, it sounds like some bond issuers face financial troubles that can't be fixed with more debt, whether it is a university with a declining student body or a city with a declining tax base. Is the bond market itself capable of protecting these institutions from arrangements that just extract wealth from local communities? And do you think that a public bank or a national investment authority could provide better results?

Ms. McDANIEL. Thank you, Representative, for that question. I think we have seen that in the case of certain cities—in our recent past, as you mentioned, Puerto Rico. We can add Detroit to that list and others. There has been unfortunate exploitation, I believe, of these cities and their tax populations, whether because there is a declining tax base or other reasons and I think there is definitely a need for different institutions that can hold both the impact to the communities and the financial considerations at the same time.

So to your point, I think, yes, that may be something that a community bank or a public bank could better serve in that role, taking those things into consideration. Thank you.

Mr. GARCIA OF ILLINOIS. Thank you very much.

Mr. Chairman, I yield back.

Chairman GREEN. Thank you. The gentleman yields back.

The Chair now recognizes the gentlelady from Texas, Ms. Garcia, for 5 minutes.

Ms. GARCIA OF TEXAS. Thank you, Mr. Chairman.

And thank you to all of the witnesses who are appearing today.

And, Mr. Chairman, as you know, this is also, for me, something that is close and personal. In my first elected position as the City Comptroller in Houston, I worked with Rice Financial, and I worked with Muriel Siebert before the start of the firm of Siebert Brandford Shank & Co.. So, these issues are really important and it is regrettable that people don't realize how important they are, as my colleague Representative Garcia mentioned, how it is all connected to what happens in the community with regard to the jobs and the wages and the impact to the everyday workers. So, thank you for holding this critical hearing.

And I do want to start with you, Mr. Hall. I want to piggyback on some of the questions that my colleague, Ms. Tlaib, was asking about the Municipal Liquidity Facility. It just didn't work. A lot of it was the high penalty fees, and a lot of it was that they initially excluded most of the Black cities in America. My question to you is, is it needed? And if we were to bring it back, what changes do we have to make?

Mr. HALL. Let me say two things at the outset. I happen to know, personally and professionally, the people at the Fed tapped to run that program, and I have the utmost respect for them in both their professional and personal characters and abilities. So, I think that is important.

But I also think it is important to know the time that program was enacted. First of all, \$500 billion was the size of that program. That is larger than the entire municipal bond market. We have never issued \$500 billion. I think the intent of the program is to be sort of shock and awe to make sure that investors knew that the Fed and Treasury were behind a municipal bond market. And I think that worked. We had \$20 billions of outflows in early March of 2020, and we were really suffering from a liquidity crisis.

After the MLF program came in, we started seeing access to the municipal bond markets so much so that by the end in October, we had the largest issuance of any month that we have had in the history of our market. I attribute a lot of that to the early efforts of Congress and the MLF in providing stability. I know only it was only four issuances, and only two issuers benefited from that, and they afforded a tremendous amount of flexibility not just in the cost of borrowing, but actually the terms that were really important for those particular issues. But the overall benefit to the marketplace and providing stability was a huge objective of the MLF, and from that score, I think it really achieved its objectives.

Ms. GARCIA OF TEXAS. But do we need to do it, and then, what changes, was the question.

Mr. HALL. Right now, the municipal bond market is extremely resilient. And so, from that standpoint, I think access to the municipal bond market in the public way is in due course and is not necessary at this particular point. Having that as an emergency back-stop should there be shocks to our market in the future is always important.

It is also important to note the difference between what was used for the corporate market versus what was used for the municipal market. The corporate market was a secondary sort of platform, which helped those investors who already had actual corporate

bonds. The municipal liquidity was a direct loan to issuers. Different ways of stabilizing the marketplace really serve this purpose, and I think having that lever going forward is important, but thank God we have a municipal bond market that is extremely resilient.

Ms. GARCIA OF TEXAS. Thank you.

Mr. Parsons, my question to you, sir, is, I looked at your study and your results, and I just wondered if you are familiar or have seen a similar study that perhaps has been done on the impact of the bond work and the costs as to Hispanic Serving Institutions?

Mr. PARSONS. No, I am not aware of that.

Ms. GARCIA OF TEXAS. Not at all?

Ms. McDaniel, are you aware of any study or work that has been done in the area of the impact of borrowing costs and higher fees as is related to Hispanic Serving Institutions?

Ms. MCDANIEL. Thank you for that question. I think the best point to focus on there is I believe Excelencia does some great work on that, but that it is segmented because you have institutions that were predominantly White institutions becoming HSIs and often have higher capacity with getting bonds. And so there are some variants there with different HSIs, but their research speaks to that. Thank you.

Ms. GARCIA OF TEXAS. I agree with your comment that it is not just about including them in the population but actually serving them. I thank you for that comment, and I think that is true of any institution, that they need to serve all of their population regardless of where they come from or what color. So, thank you very much.

And, Mr. Chairman, I yield back.

Chairman GREEN. The gentlelady's time has expired.

The Chair now recognizes the gentleman from Guam, Mr. San Nicholas, who is also the Vice Chair of the Full Committee. You are recognized for 5 minutes for questions, Mr. San Nicholas.

Mr. SAN NICHOLAS. Thank you so much, Mr. Chairman.

And thank you to all of our witnesses here today. As a Representative from a Territory, I can absolutely attest to the fact that triple tax exemption for municipal debt does greatly improve the market environment for the issuance of municipal securities. Guam, as a Territory, does enjoy triple tax exempt status for the bonds that we issue, whether they are revenue bonds, or they are GEO bonds, or whether they are limited-obligation bonds. And so, I would fully endorse, Mr. Chairman, as an option, triple tax exempt status for HBCUs and for Minority Serving Institutions as a solution for us to bring down the cost of debt for these institutions.

Another option, Mr. Chairman, would be perhaps to also consider having land grant institutions classified as agencies of the U.S. Government similar to Fannie Mae and Freddie Mac. That way, they also have their debt implied on the full backing of the full faith and credit of the United States Government. That would also greatly help in driving down the interest costs for the debt at issue. I know that we are discussing the cost of issuing debt particularly on the underwriter side, but I wanted to highlight, Mr. Chairman, that the biggest cost of debt, of course, is the interest rate paid on the debt. And the triple tax exempt status would absolutely help



to lower interest rates for these institutions. In fact, Guam is so successful that we oftentimes have our debt oversubscribed.

And so, Mr. Hall, I wanted to tap into your expertise here on oversubscriptions, which basically drive down interest rates even below the coupon rate. What is a typical oversubscription that would be healthy?

Mr. HALL. That is a very, very, very important point, and you are absolutely right that creating peak competition for bonds drives yields downward. The good news is that our market has had an infusion of regulatory changes in recent years, and one of the important features now is the expanded inclusion of municipal advisors in the process that have a very defined fiduciary role. Why they are important in the underwriting process is, when you get oversubscription in an offering based on investor interest, typically municipal advisors, acting on behalf of the issuers, ask that the underwriters actually lower yields to reduce that subscription.

And so, that actually improves the pricing performance during the course of a transaction of an issuer and that is one of the sort of helpful support systems that the regulatory framework now allows for to ensure that oversubscription inures to the benefit of the issuer.

Mr. SAN NICHOLAS. What would healthy oversubscription typically be like? Four times oversubscribed?

Mr. HALL. I am reticent to say, because it is always contingent on the deal, size, and type of credit of that particular day in those particular market environments. But I would say a healthy subscription that would require maybe revisiting the bonds offering price would be over 2 to 3 times.

Mr. SAN NICHOLAS. Thank you so much for putting that on the record.

And, Mr. Chairman, I wanted to get this on the record, because even if we do get triple tax exempt status for HBCUs, there is still a danger that we are not going to get best interest rate pricing due to oversubscriptions. And Guam, Mr. Chairman, has a horrendous oversubscription problem, and I think that kind of circles back to underwriters not pricing the debt properly.

We had one example of a debt that was issued in the month of June, and then another debt that was issued in the month of August, both by the same agency, both are revenue bonds, both for over \$100 million. The coupon rate on the first debt was 5 percent. The coupon rate on the second debt was 3.61 percent. The 5 percent was oversubscribed by 21 times, and the second debt was oversubscribed by 1.2 times.

And so, as we seek out ways to reduce costs to our institutions, we need to be very mindful of the fact that the underwriting fees upfront are one thing, but we need to also protect institutions from mispriced offerings that are going to result in interest expenses. One hundred million dollars at an 89 basis point differential over 30 years of debt is a \$26.7 million interest expense.

Thank you, Mr. Chairman.

Chairman GREEN. The gentleman's time has expired.

The Chair will now recognize himself for 5 minutes. And my first question will go to Ms. McDaniel.

Ms. McDaniel, as it relates to this subcommittee, I think you may have made history today by announcing your pronouns, and I think I am going to join you in making history, and announce my pronouns as he/him/his. So, maybe you are changing the world today, Ms. McDaniel.

Language is very important, which is one of the reasons why I appreciate this President, President Biden. He uses the language of the suffering. If you want to change the status quo, you have to change the language. You cannot use the language of the status quo and change the status quo. And I appreciate President Biden.

Which takes me to you, Mr. Parsons. Sir, you have indicated that you found that HBCUs pay an average of 20 percent more to issue bonds than similarly situated non-HBCUs. My question to you, Mr. Parsons, is, is this a question or a case of this being institutionalized, since it applies to HBCUs? And if you will give me a brief yes or no, I will then follow up.

Mr. PARSONS. Can you please clarify your question, what you mean by "institutionalized?"

Chairman GREEN. Is it such that the institutions that are promoting, producing, promulgating, and perpetuating this circumstance, are they doing it not because they want to discriminate necessarily, but because this is institutionalized in their habits and their norms?

Mr. PARSONS. The results of our functions are consistent with investors.

Chairman GREEN. Investors are owned by institutions, are they not?

Mr. PARSONS. About half of municipal bonds are owned by just mom-and-pop retail investors, and about another half are owned by institutions.

Chairman GREEN. Okay. Those that are representing institutions, let's just talk about that, something that is institutionalized.

Mr. PARSONS. Our paper does not address that.

Chairman GREEN. I am just asking you for your opinion. No penalties today.

Mr. PARSONS. No, no opinion offered.

Chairman GREEN. Okay. Let's go to Ms. McDaniel.

Ms. McDaniel, do you see these circumstances as being institutionalized, this 20 excess charge?

Ms. MCDANIEL. It would certainly appear that way. Sorry, you asked for a yes or a no. I think it would be a yes, but it seems that way.

Chairman GREEN. I tend to take people to the edge, so please forgive me. But it is just something that a person who is a liberated Democrat does. I am not a part-time freedom fighter, so sometimes you bring your full-time fighting to the arena where it can be most beneficial.

So if this is institutionalized, is it institutionalized discrimination? Ms. McDaniel, is it institutionalized discrimination?

Ms. MCDANIEL. It would certainly seem that way. Judging by the outcomes, I would say, yes.

Chairman GREEN. Let's go to Mr. Fisher. Mr. Fisher, is this institutionalized discrimination?

Mr. FISHER. I believe so, when we are discussing institutional investors.

Chairman GREEN. Thank you. As it relates to institutional investors, is a good preamble for my commentary, and I appreciate you calling it to my attention as I move next to Mr. Hall.

Mr. Hall, is this institutionalized discrimination?

Mr. HALL. Chairman Green, I have not studied that. I can tell you that what I saw in the study that pointed to taste-based discrimination is not something consistent with my experience in the marketplace. And I don't think the study done at the time that it was done really benefited from the transformation that has taken place in our market. They would make a study like that today a little bit more inductive. So I can't conclude that I see that there has been institutional racism, sir.

Chairman GREEN. Okay. The Chair appreciates all of the answers. I have 22 seconds left, and I try to be a good example for the rest of the committee, so I will just close with this comment before I do my official closing. We know, and probably can take judicial notice of the fact—I say, judicially as we do it in court—that these institutions have been discriminated against in the past. And I think that we probably have to do more to acknowledge and work to acknowledge what the current circumstance is. I will leave it at that and yield back the balance of my time.

Seeing no additional Members to ask questions, the Chair will now thank the witnesses for their testimony and for devoting the time and resources to share their expertise with this subcommittee. Your testimony today will help to advance the important work of this subcommittee and of the U.S. Congress in addressing lending discrimination and systemic racial inequality.

The Chair notes that some Members may have additional questions for this panel, which they may wish to submit in writing. Without objection, the hearing record will remain open for 5 legislative days for Members to submit written questions to these witnesses and to place their responses in the record. Also, without objection, Members will have 5 legislative days to submit extraneous materials to the Chair for inclusion in the record.

This hearing is now adjourned.

[Whereupon, at 1:32 p.m., the hearing was adjourned.]



# **A P P E N D I X**

April 28, 2021

Good afternoon, Chairwoman Waters and distinguished members of the Committee.

My name is William Fisher. I have over 30 years of experience in the municipal finance sector, as a financial advisor, as an underwriter, and as an issuer of tax-exempt and taxable securities for state and local governments. As a graduate of Howard University in Washington, DC, I am proud to be the parent of both a Tuskegee University graduate in Tuskegee, Alabama, and a third-year Morehouse School of Medicine student in Atlanta, Georgia. I also have the privilege of serving as a member of the Board of Trustees at Jarvis Christian College in Hawkins, Texas.

I currently serve as the Chief Executive Officer of Rice Capital Access Program, the Designated Bonding Authority for the Historically Black College and University Capital Financing Program for the United States Department of Education.

HBCUs play a vital role in higher education that is not easily recognized or appreciated by the capital markets. The mission these institutions serve cannot be fully understood by a mere examination of standardized test scores, selectivity metrics, and financial ratios. This lack of understanding subjects these institutions to higher interest rates when borrowing, as well as restrictive covenants that impair financial flexibility. As a result, investment in physical facilities, student support initiatives, and academic programs suffers.

These increased borrowing costs also increase the cost of attendance at these institutions on several levels. For example, the increased costs associated with the financing of a dormitory are borne by the student through higher housing fees. These increased student housing fees increase the need for students and their families to borrow additional funds to finance their education. This increased debt burden impacts not only the student and their family, but also the institution. As the Committee is aware, institutions with a high cohort default rate are in jeopardy of losing access to Title IV funds and its accreditation.

And the impact of expensive debt is not limited to the institution and its students. The local communities are also negatively impacted. Several advocacy groups have completed economic impact studies on the value HBCUs bring to the local economy. In short, the presence of an HBCU fosters a vibrant economy by providing employment opportunities and the purchase of goods and services. Expensive debt limits the institution's ability to fully engage with the local community.

When Congress created the HBCU Capital Financing Program, not only did it provide access to low cost borrowing, but it created a path to financial stability. To further secure the HBCU's place in America and higher education, the feasibility of the recommendations offered by the HBCU Capital Financing Advisory Board, which include a) increasing the borrowing capacity of the Program and b) expanding the use of the program to include operating lines of credit, merit consideration.

Thank you.



**Written Testimony of Gary Hall**  
**On behalf of the Securities Industry and Financial Markets Association**  
**Before the U.S. House of Representatives**  
**Committee on Financial Services**  
**Subcommittee on Oversight and Investigations**  
**Hearing entitled “Examining the Role of Municipal Bond Markets in Advancing – and**  
**Undermining – Economic, Racial and Social Justice”**  
**April 28, 2021**

Chairman Green, Ranking Member Barr, Chairwoman Waters, Ranking Member McHenry, and distinguished members of the Subcommittee, thank you for the opportunity to testify on behalf of the Securities Industry and Financial Markets Association (“SIFMA”)<sup>1</sup>, and to share our members’ commitment to a fair, strong, and well-functioning municipal securities market. SIFMA commends the members of this Subcommittee for your collective focus on these important issues.

I currently sit on the board of SIFMA, the leading trade association for broker-dealers, investment banks, and asset managers operating in the U.S. and global capital markets. The combined businesses of SIFMA’s members underwrite over 90% of the new issue volume of municipal securities, represent 75% of the U.S. broker-dealer sector by revenue, and 50% of the asset management sector by assets under management.

I am a Partner and the National Head of Infrastructure and Public Finance Investment Banking at Siebert Williams Shank & Co. (“SWS”), the nation’s largest minority-owned investment bank. SWS has alums from Historical Black College and Universities (“HBCUs”) within both our employee and partnership ranks. Hence, my firm is a huge beneficiary of talent and human capital from those educated at HBCUs and in return, has been a generous benefactor to HBCUs on an individual employee basis and as a firm. On a personal note, please know that my connection to HBCUs runs deep. Before graduating from Howard University, I attended Alcorn State University, an HBCU located in Lorman, MS. Additionally, my son is a sophomore at Howard, where he chose to follow not only my footsteps but also his mother’s paternal and maternal lineage, which have produced five and three generations of HBCU graduates, respectively. Therefore, I would like to join SIFMA by expressing appreciation on behalf of my firm, my family, and myself to the Subcommittee for bringing attention to HBCUs having fair access to the public municipal bonds markets.

My career in the municipal bonds markets includes serving as an issuer, a lawyer, and a banker. I am the immediate past Chairman of the Municipal Securities Rulemaking Board (“MSRB”), the self-regulatory organization that safeguards the \$4 trillion municipal securities industry. Therefore, I know first-hand how municipal bonds are a critical funding source for infrastructure in America. These bonds finance the bridges, roads, schools, health care facilities, higher education facilities, water and sewer facilities, airports, and seaports our communities rely on. I believe that members of this Subcommittee understand and agree that investing in municipal bonds means investing in the success of American people. Such impact has become evident during these challenging times for our communities, where state and local governments are accessing the bond market to address the nation’s critical infrastructure need and refinancing existing debt to free up funds for additional projects. Congress was decisive in passing the CARES Act and authorizing the Federal Reserve’s Municipal Liquidity Facility, a program that provided key and timely support during last year’s loss of market liquidity due to the pandemic. We are thankful for this swift action that stabilized the tax-exempt market and we hope that Congress continues to

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<sup>1</sup> SIFMA is the leading trade association for broker-dealers, investment banks and asset managers operating in the U.S. and global capital markets. On behalf of our industry’s nearly 1 million employees, we advocate for legislation, regulation and business policy, affecting retail and institutional investors, equity and fixed income markets and related products and services. We serve as an industry coordinating body to promote fair and orderly markets, informed regulatory compliance, and efficient market operations and resiliency. We also provide a forum for industry policy and professional development. SIFMA, with offices in New York and Washington, D.C., is the U.S. regional member of the Global Financial Markets Association (GFMA). For more information, visit <http://www.sifma.org>.



recognize the importance of a healthy municipal bonds market to a robust economic recovery for the nation.

That being said, our national infrastructure challenges, amongst others, are both large in scale and extremely complex. SIFMA believes that the financing solutions offered by America's capital markets to state and local governments in the form of bonds will help spur infrastructure investment as well as the myriad of related benefits such as economic growth and job creation. Still, it must be acknowledged that minority communities have, and continue to, face significant challenges due to historical underinvestment. I can say that SIFMA and its members, are committed to not only fostering a culture of diversity and inclusion within our firms and industry, but also investing in diverse communities nationwide and increasing the availability of financing for critical local infrastructure projects. SIFMA and its members understand that America's capital markets can play an important role in enabling and financing programs to combat generational hardships such as poverty, racism, climate change, and other critical infrastructure needs. It is especially worth noting that municipal bonds can also be leveraged in terms of sustainable finance. State and local governments are increasingly turning to municipal bonds to finance projects that align with certain environmental, social, and governance goals. We view it as a business imperative and our responsibility to serve all of our clients equally and to help improve the communities in which we operate by offering financial solutions to locally identified capital projects.

As it pertains to the subject of this hearing, I would first like to emphasize that SIFMA and its members are committed to fair pricing, pursuant to MSRB Rule G-17. The banks and broker dealers that underwrite municipal bonds act as intermediaries between the borrower and the investor, but we would not have repeat clients if we didn't obtain the lowest cost of financing possible based on fundamentals of credit and risk. Further, I am always appreciative of being able to learn from scholarly research and academic analysis. However, I believe there are certain contextual considerations that are important to highlight that pertain to the analysis and conclusions reached in the 2018 study that has been cited today as evidence of possible HBCU-related pricing discrimination in the municipal bonds market.

First, the data underpinnings of the study (1988-2010) does not take into account significant market advances over the last decade. For example, transparency enhancements to secondary municipal bond trading activity, a data subset that the study relies heavily upon, have substantially increased with the MSRB's launch of its Real-time Transaction Reporting System ("RTRS") in 2010. In fact, today, MSRB Rule G-14 requires municipal bonds dealers to submit transaction data to RTRS within 15 minutes of the time of the trade. Transaction prices are electronically disseminated on the MSRB's Electronic Municipal Market Access ("EMMA") website immediately after transactions are received by the MSRB. The study readily admits that the availability of bond pricing data is important to investors and that bonds that traded relatively infrequently, such as HBCU-issued bonds, were more prone to delayed reporting which may have contributed to a "differential information environment" relative to other bonds during a significant period of the study. Given the RTRS reporting requirements, no such "differential information environment" exists today.

Another important observation regarding the period of the study (1988-2010) versus the current market environment, is the overwhelming use of municipal bond insurance prior to the financial crisis the country

incurred in 2008. During the period of 1988 to 2010, 43.7%<sup>3</sup> of all municipal bonds were covered by bond insurance. In 2020, only 8.9%<sup>4</sup> of muni bond volume was insured. The study attempts to compare HBCU bonds that were categorized as “AAA” by the bond rating agencies due to bond insurance with certain non-HBCU receiving a “AAA” rating based on underlying credit characteristics. I can tell you as a muni practitioner for several decades, equating pricing demand and creditworthiness of higher education institutions with a natural or underlying “AAA”-ratings with those that achieve such rating only due to buying bond insurance is not an apples to apples comparison. During the period of the study, investors frequently incurred capacity constraints to avoid being overly saturated with bonds insured by certain bond insurance firms. Institutional investors such as bond funds typically are bound by risk restrictions limiting their exposure or holdings to any obligor, which on an insured bond would be the bond insurance company and not the underlying borrower. Hence, insured higher education bond issuances competed against insured state and local government issuances, with the latter enjoying many more revenue drivers (i.e. property taxes, income taxes, user fees, etc.) to enhance its underlying credit profile. Bonds rated “AAA” naturally (e.g. without bond insurance) were in higher demand and received a commensurate favorable pricing differential.

Next, I would like to draw attention to the underlying methodology behind this study, specifically, the list of HBCU (treatment) schools vs. (control) schools. Howard University is a very different institution than Georgetown University. Clark Atlanta University is a very different institution than Emory University. While certainly these institutions are in close geographic proximity, that is where the similarities end. Simply put, there are significant structural differences between the treatment and control schools that renders the comparison invalid. Specifically, the risk profiles of these institutions are not comparable due to the differences in critical factors, which were not included in the study, including but not limited to endowment size, tuition payment mix, debt liquidity, and the total amount of outstanding debt. It is also important to note that issuers that infrequently tap the public debt market and come to market with smaller par sizes, typically attract lower demand in the primary market and are less liquid in the secondary market. Institutional investors typically look for frequent issuers and large block sizes, as these bonds are easier to manage and cheaper to trade. I suspect the relatively limited sample size of the HBCU issuances (102 or 2.5% of the total sample size of 4,145 bonds issues over 23 years), comprised of infrequent issuers and bond offering of smaller par sizes, may be more dispositive of the pricing differential than other factors cited in the study.

In 2010, Congress pass the Dodd-Frank Act which President Obama signed into law on July 21, 2010. As part of the Dodd-Frank Act, Congress amended Section 15B of the Securities Exchange Act of 1934, which brought municipal securities advisors under federal regulation and imposed a federal fiduciary duty upon these market participants. Most transactions today include a municipal advisor, who is hired by the issuer or non-profit borrower as its fiduciary, to protect its interests, including ensuring that the borrower obtains the lowest cost of financing. The percentage of transactions that included a municipal advisor have increased dramatically over the last three decades. In fact, in 1988 only 47.7%<sup>5</sup> of municipal bond

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<sup>3</sup> Refinitiv.

<sup>4</sup> Id.

<sup>5</sup> Id.

transactions included a municipal advisor, whereas in 2020 a full 85.7%<sup>6</sup> of new issues in the \$451.4<sup>7</sup> billion municipal bond market had that benefit. The numbers are comparable when looking specifically at municipal bonds issued for the purpose of funding institutions of higher education. Issuers in the higher education market benefitted from municipal advisors on 41.3%<sup>8</sup> of municipal bond transactions in 1988 increasing to 84.6%<sup>9</sup> of the \$42.2 billion municipal bonds issued for this purpose in 2020. While the study specifically mentions that the inclusion of a municipal advisor as net positive to the selection process of underwriters, my experience has been that municipal advisors acting as the issuer's fiduciary have a greater impact on enhancing price transparency and fairness in the muni underwriting process. HBCU issuers are frequently adding municipal advisors to their financing teams and are benefiting from the added expertise and fiduciary support to achieve a low cost of borrowing in today's bonds market.

Despite the above-raised issues pertaining to the analysis in the study, we fervently believe more can be done to assist HBCUs with accessing the capital markets more cost-effectively going forward. Specifically, SIFMA supports authorizing triple tax exemption for HBCU-sponsored debt. Ironically, the study specifically stated that "perhaps states could allow interest from out-of-states issuers to be tax exempt; eliminating state level exemptions altogether" as a potential remedy to its research conclusion. As the study suggests, providing HBCUs with the ability to attract a larger pool of potential investors (i.e. from states with higher state income taxes--such as California and New York versus their domicile state), would increase demand and contribute to favorable pricing.

In our view, the current market environment represents a unique opportunity to ignite investor demand for HBCU-issued municipal bonds. The appetite for social impact bonds, a subset of ESG bonds, has never been greater. This market saw a volume spike to \$154 billion in 2020 versus \$17.9 billion issued in all of 2019. Social impact investors would highly covet HBCU-issued debt, as such funding will comply the investment objectives of these buyers to fund projects that are designed to produce social benefits that address socioeconomic advancement and empowerment of students from underserved communities. As such, granting HBCUs the opportunity to tap a wider social impact investor base due to expanded tax exemption would greatly impact pricing performance. Other ways to expand the buyer base for HBCUs bond issuances to increase demand and lower borrowing cost could include having the federal government authorize a high-subsidy direct pay bond (similar to disaster recovery bonds) for HBCUs or authorize a federal guaranty on taxable direct pay bonds for HBCUs (as there can be no federal guaranty on tax-exempt debt).

Please note that we continue to support the Department of Education's HBCU Capital Financing Program and applaud the action earlier this month to discharge \$1.6 billion of HBCU debt.

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In addition to the ideas above, SIFMA views a partnership among federal, state, and local governments and private investors as necessary to ease the burden on the cash-strapped federal government by

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<sup>6</sup> Id.

<sup>7</sup> Id.

<sup>8</sup> Id.

<sup>9</sup> Id.

leveraging our capital markets to create expanded financing options. We believe that this partnership is especially important during this difficult fiscal environment as states and local governments, as well as non-profit borrowers, seek to lower their costs and also finance much-needed infrastructure such as schools, roads, and hospitals. We believe it is critical to close the infrastructure financing gap by restoring and creating additional vehicles to assist in resolving these needs.

After decades of underinvestment, the entire U.S. faces an extraordinary infrastructure deficit. In their most recent report card, The American Society of Civil Engineers (ASCE) estimates a \$2.59 trillion investment gap over 10 years between what we are currently projected to spend on infrastructure and what must be spent to fully address the deficiencies in our aging infrastructure. They also estimate that by 2039, a continued underinvestment in our nation's infrastructure at current rates will cost \$10 trillion in GDP, more than 3 million in American jobs, and \$2.4 trillion in exports over the next 30 years. With existing federal infrastructure programs failing to meet current demand, the U.S. is continuing the troubling trend of underinvestment in this area and risks substantially adding to the financial burdens of state and local governments. This will only lead to additional delays of investment in and maintenance of critical public projects, including highways, bridges, hospitals, airports, schools, water, and sewer systems. Further as many of you understand, the burden of crumbling infrastructure will fall disproportionately on low-income and minority communities.

Specifically, SIFMA strongly supports providing incentives to rebuild our nation's infrastructure including: 1) preserving the tax exemption for interest earned by investors on state and local bonds; 2) reinstating the tax exemption on the advance refunding of municipal bonds; 3) expanding private activity bonds (PABs); 4) reinstating a direct pay bond program; and 5) expanding the small issuer exception so that states and municipalities have a variety of additional tools to finance their local projects. It is important to note that all of these priorities were included in some form in H.R. 2, the Moving Forward Act, which SIFMA publicly supports. While some of these tools are just that and available to all communities for a variety of uses, others such as the small issuer exception and expanding private activity low-income housing bonds offer targeted provisions to directly aid communities in need.

Addressing historical and systemic discrimination and ensuring that we serve all of our clients and communities equally is a business imperative for our industry and an unwavering commitment of SIFMA. In order to enhance outreach to a more diverse group of college students, provide better connectivity to financial services sector and the potential career opportunities it has to offer, SIFMA has been working with HBCUs on the SIFMA Invest! Program, which had its inaugural launch at Texas Southern university earlier this month.<sup>10</sup> The SIFMA Invest! program and virtual platform offers students a myriad of educational, industry research and career development opportunities for those interested in pursuing a career in financial services. SIFMA and its members are committed to the financial wellbeing of our clients in states and local communities across this United States. I again commend the work of this Subcommittee and encourage lawmakers to use this opportunity to consider the proposals suggested in this testimony that will help expand the ability of all states and localities to finance their infrastructure needs, including expanding opportunities for HBCUs to access the capital markets.

<sup>10</sup> See: <https://www.sifma.org/resources/news/sifma-partners-with-texas-southern-university-on-diverse-talent-pipeline-resource-sifma-invest/>.

**Financial Services Committee, Subcommittee on Oversight and Investigations Hearing  
4/28/21 | Written Testimony of Chelsea McDaniel**

Good afternoon Chairwoman Waters, Ranking Member McHenry and members of the Subcommittee. Thank you for the opportunity to appear before you today to discuss the Role of Municipal Bond Markets in Advancing – and Undermining – Economic, Racial and Social Justice.

I am Chelsea McDaniel (*she/her/hers*) and I am a Senior Fellow at Activest. Activest is an investment research firm that quantifies fiscal justice risk within the municipal bond market. We define Fiscal Justice as the analysis of public budgets at the intersection of fiscal health and racial justice. Our thesis is simple: communities and public entities that treat their residents and clients more justly realize stronger fiscal outcomes over the intermediate and long term. We are not only critics of the market but also market participants, through efforts like the Fiscal Justice Municipal Investment Strategies we develop alongside groups like Asasina Social Capital, or the Fiscal Justice Credit Rating Agency we're launching this year. Our work blends economic modeling, financial analysis, and social policy research, and we exist to protect savers and everyday municipal investors from taking on hidden and uncompensated risks of the more egregiously unjust corners of the municipal market.

Today I'd like to present a high level sectoral view of postsecondary education institutions, in the context of the larger municipal finance market.

Broadly, we've seen that social and environmental risks have emerged within public entities, like local governments and schools, as a result of longstanding policies born out of segregation era views of development and progress that have yet to be updated.

Whether it's the \$70 billion in municipal revenue that schools lose annually to corporate tax incentives, the \$11 billion lost to exclusionary school discipline policies, the \$2 billion for municipal settlements, or the \$7 billion of excessive fines and fees disproportionately extracted from BIPOC communities, inequitable public budget serve as the supply lines to fueling state-sanctioned, taxpayer-funded exclusion and oppression. U.S. local government finance is built on a long history of sordid financial practices, and the current public finance system does a poor job of integrating the social and fiscal cost of racial equity into the evaluation of cities and bond issuances.

This sordid history stretch back to 1827, when Louisiana used its "full faith and credit" to back a series of bank bonds whose proceeds were used to purchase slaves, and extends through today, when cities like Kenosha, WI give away 20% of its budget in tax incentives but argue that there's not enough money to purchase the body cameras that may have held Jacob Blake's shooter accountable.

The fiscal and budgetary cost of ignoring the fiscal justice risks is growing as the reported incidence and pricing severity of fiscal justice events are growing within government

entities, including postsecondary institutions. In the world of postsecondary finance, Activest's research has focused on the ways in which PWIs, Predominantly White Institutions, have been extractive as opposed to collaborative, let alone peacefully coexisting, with MSIs (Minority Serving Institutions). Although PWIs' fiscal justice risks have been unpriced in the past, their materiality is growing in realtime, and the long-tail risk of their prior behavior is likewise expanding.

Three examples of this growing materiality include predatory inclusion in higher education loans, which scholar Louise Seamster defines as the process where student loan companies offer needed services to students of color on exploitative terms that limit or eliminate their long-term benefits; the outsized pricing among HBCU bonds, evidenced by Chris Parson's study on Racial discrimination in higher education bond markets; and third, postsecondary schools racing to become federally recognized HSIs to capitalize off of the growing Latinx student population, where scholar Gina Garcia discusses what it means to move from simply *enrolling* Latinx students to actually *serving* them.

From a credit perspective, we see MSIs as strong municipal investments, as opposed to PWIs, which are evidencing a growing body of unpriced fiscal justice risks. Accordingly, we've developed a series of recommendations to counter the aforementioned fiscal justice risks in the postsecondary market.

#### **1. Accounting for Equity Research**

First, we see a need for a study to track and quantify all of the federal and state funding withheld from MSIs since their inception, and the estimated financial impact on states and the federal government when these payments come due. This research has been partially completed for TCUs through efforts like the Land Grab Universities project, but more research remains for HBCUs, PBIs, and HSIs. We anticipate at least two components. The first component focuses on long-term liabilities, which would be a historical account of the financial support that was denied and stolen from MSIs since their creation. The second component would be an examination of current liabilities, which is an investigation of the current cases for fair funding and a new equation for evaluating the overall investment in MSIs.

#### **2. Social Justice Bonds**

A bond offering that seeks to correct for past wrongs for all eligible HBCUs and TCUs. For HBCUs, it mirrors the size of each schools' initial land grant. The reparations bond would be of an unprecedented size to meet an unprecedented need.

- The structure of the bond would be a \$4 billion zero coupon, zero-interest bond open to individual investors in small denominations of \$500 or more.
- The use of proceeds includes capital improvements typical of bond offerings, as well as bond refinancing.
- Ten percent of the principal would be forgiven and funded by philanthropic dollars.
- The amount of the bond reflects the total size of the HBCU capital finance program (\$1.8 billion outstanding as of 2017) plus an additional 2 to 3 billion for the 50 HBCUs that

don't currently participate in the program. The bonds would be repaid with future tuition proceeds that would result from schools' expanded student capacity.

### **3. Investment in Physical Assets**

"We're called 'Historic' because that was the last time there was a significant investment made into our physical infrastructure." - HBCU President

Property is often the only endowment of many MSIs. Through prominent inclusion in the infrastructure package and publicly supported bonds to help finance this effort, there is an opportunity to support MSIs in strengthening their financial health through the acquisition and development of their physical assets. MSIs are often anchor institutions in their communities and are regularly some of the largest land and property owners. There are several benefits to these institutions owning and professionally managing their land and property:

- Substantial economic spillover driven through asset expansion and community development.
- Underutilized assets (informal endowments) that can generate institutional revenue at relatively low carrying and borrowing costs.
- Maintenance of culturally and historically-relevant assets with approx 11% of HBCU buildings being historic, high-maintenance, but also, tax-credit eligible institutions.

Again, we thank you for your time and the opportunity to present our investment research and thesis to the subcommittee.

**Testimony of Jim Nader**  
**President and CEO**  
**Kroll Bond Rating Agency**  
**Virtual Hearing – Examining the Role of Municipal Bond Markets in Advancing – and**  
**Undermining – Economic, Racial and Social Justice**  
**Subcommittee on Oversight and Investigations**  
**House Committee on Financial Services**  
**April 28, 2021**

Chairman Green, Ranking Member Barr and members of the subcommittee, thank you for the opportunity to testify today. I am testifying on behalf of Kroll Bond Rating Agency, LLC (KBRA).

KBRA is a global, full-service rating agency registered with the Securities and Exchange Commission (SEC) as a Nationally Recognized Statistical Rating Organization (NRSRO). Since our establishment in 2010, KBRA's mission has been to provide transparent ratings and thorough research. Our widely available research challenges entrenched and conventional thinking, and this approach has resonated powerfully with investors. Today KBRA has more than 400 employees in offices in the United States and Europe and has issued more than 42,500 ratings representing \$2.2 trillion in rated issuances. KBRA is currently one of the five largest rating agencies globally and the largest established after the Global Financial Crisis.

**KBRA's Presence in the Municipal Bond Market**

As of March 31, 2021, KBRA rates over \$364 billion of municipal debt - nearly 10% of the market's total outstanding debt.

Today, our ratings add important insight for investors across a wide variety of municipal issuers including:

- States such as Texas, New Jersey, Connecticut and the Commonwealth of Kentucky
- Cities including Dallas, Chicago and Los Angeles
- Transit systems such as New York's MTA, North Texas' DART, Washington's WMATA;
- Airports like DFW, Miami International and Chicago O'Hare
- Large municipal utilities like Los Angeles Dept of Water and Power.

Ten years ago, some said the last thing the world needed is another rating agency serving the muni market. But last summer, we proudly achieved another milestone when the Federal Reserve deemed KBRA to be one of only four "major" rating agencies whose ratings could be used by issuers accessing the central bank's emergency municipal liquidity facility window. Obtaining designation was a challenge, as the Federal Reserve was initially unwilling to include KBRA on the list of rating agencies and included the three major incumbent agencies. Investors and other market participants were unhappy with the Federal Reserve's initial position and Congress, including members of this subcommittee, intervened. As a result, the Federal Reserve changed its position and the House unanimously passed legislation requiring the Federal Reserve and the Treasury to accept securities rated by *any* credit rating agency registered with the SEC. Your support was integral to allowing all credit rating agencies to participate in government bond programs, in line with the specific goals of the Dodd-Frank Act, and we thank you for that.

**Municipal Bond Market Overview and Recent Performance**

The nearly \$4 trillion municipal bond market allows state and local governments to raise capital from investors in a cost-effective way for important public purposes such as schools, roads, bridges, airports, hospitals, water and sewer facilities, power plants, and public buildings, among many others. As many of these projects are costly but long-lived, borrowing enables governments to prudently spread costs across multiple generations.



In 2020, the municipal market was significantly impacted by the outbreak of COVID-19. The effect of the pandemic was uneven, and varied city to city and state to state. There were and continue to be disparities in the municipal market, and those disparities were exacerbated by COVID-19. Initially, credit spreads (costs of issuing debt) widened (increased) considerably particularly for lower rated credits. This happened as many investors sought to de-risk their portfolios by selling securities to raise cash. Moreover, investors feared that some municipal bond sectors (transportation, sales tax-dependent credits, and communities highly dependent on local retail, leisure, conventions, and business travel) might be disproportionately impacted by lost revenues experienced during the pandemic lockdown.

Reacting quickly, the federal government implemented extraordinary fiscal relief and monetary intervention, restoring order to the market and paving the way for the largest issuance volume in its history, as state and local governments took advantage of what ultimately became historically low borrowing rates. Meanwhile, targeted aid to transportation systems, including transit systems, and surprisingly buoyant retail sales, aided by a substantial stimulus boost to personal income and an effective workaround in the form of online shopping, stabilized some of the vulnerable sectors of the market. With respect to certain transit systems, we observed that federal aid, coupled with responsible municipal management and a large tax base, led to stable ratings. Transit systems are particularly important because they are vital to those who rely most heavily on them, and a collapse of a transit system would have a disparate impact on those communities.

The COVID-19 relief bills injected resources into states and other municipalities and their enterprises at an unprecedented scale. Independent from federal relief bills, many states and their municipalities brought to bear state and local resources to devise targeted responses to ease the effects of COVID-19 and performed well throughout the pandemic. For these reasons, many states and their municipalities will come out of this crisis stronger. However, this may not be true for those municipalities that had pre-existing structural deficits in their budgets, and possibly those whose particular economies may be fundamentally altered for some time - including those dependent on long commutes to downtown office districts, and leisure and business travel destinations.

#### **KBRA's Views on Economic, Racial, and Social Justice and the Municipal Bond Market**

Bond investors, both institutional and individual, are increasingly interested in the social impact of their investments. Accordingly, in the municipal bond market, investors will need to understand how state and local government issuers plan to address economic, racial, and social justice within their communities. We support efforts to improve the quality of meaningful disclosure on these topics from all levels of municipal government.

Many municipal governments require inclusion of minority- and women-owned business enterprises in many aspects of government, including development projects and vendor sourcing guidelines. Municipalities by their very nature have attributes of positive social impact that deserve amplification. Many of these attributes are not included in Environmental, Social, and Governance scores that are proliferating in the market, particularly in the areas of health, safety, housing, and education. More and more, investors are driving what needs to change in these areas, and credit rating agencies should analyze the implications of those changes on the overall credit health of a given municipality.

KBRA believes that as investors increase their focus on social justice, it will be in a municipality's best interest to improve diversity and inclusion in municipal roles and recalibrate municipal responses to economic, racial and social justice issues. Over time, KBRA believes that social factors will have a greater direct effect on bond pricing and liquidity, as evolving investor preferences direct funds increasingly towards investments in municipalities that have exhibited a commitment to economic, racial, and social justice. This in turn will directly affect a municipality's financial position and liquidity, two of the key drivers of municipal credit ratings. We believe that those municipalities that make strong progress on economic, racial and social justice issues will be rewarded with active investor participation in their bond issuances, and those that do not will be penalized for their inaction.

KBRA believes that improved disclosure can level the playing field for municipalities and is beneficial for the public overall, and we support smart regulation designed to further this goal. Because investor preferences move quickly, we believe that regulation in this area should be just as nimble, so it does not become outdated quickly. Three years ago, most investors talked about board composition as the biggest social issue. Today, we know investors have broadened their focus to include diversity and inclusion across workforces, and we expect increased emphasis on economic, racial and social issues.

While we cannot predict with certainty what will come next, we believe that thoughtful regulation done right – with a focus on improved disclosure, the flexibility to apply across all ESG factors and not solely focused on a particular ESG issue – is the right approach. This kind of regulation can provide investors and other market participants with the ongoing protection of high quality, transparent disclosure that allows investors to focus on additional ESG factors as they increase in importance.

#### **KBRA's View on Incorporating Climate Risks into Credit Ratings**

Investors have told KBRA that they want to see thorough, consistent disclosure about climate issues. We believe that most disclosure may not have an immediate effect on a municipality's credit but could over time as investors choose their investments based on the strength of a municipality's climate strategy and position.

Our approach to ESG factors is informed by bottoms-up fundamental credit analysis, and our approach to climate issues has been further informed by discussions with hundreds of investors on this topic in the past few years. We believe our approach, combined with tailored disclosures on material risks, will provide information that investors and other stakeholders demand and deserve. This will also help reduce the burden on municipal governments who are increasingly being pressured by some to supply superfluous data that do not correlate to credit risk.

KBRA incorporates climate risk (and all material risks) in all ratings where it is relevant, including in municipal ratings. Our new ESG Methodology is posted for public comment, and our approach is also described in a recent research report entitled "Credit Ratings Deserve ESG Risk Analysis not ESG Scores."

In our discussions with municipal management teams on ESG topics, KBRA's analysts seek to understand a management team's awareness of the factors that are material – including the analytical approach they use to reach their conclusions. Management's analytical approach to these issues provides insight into their strength as managers of dynamic organizations. KBRA also hopes to understand a management team's planning, its plans to address particular issues, ability to execute on those plans and whether the municipal management team's plan is achievable and affordable for that particular municipality. In all cases, KBRA recognizes that stronger management teams are more likely to be able to identify, analyze, and plan for multiple climate related risk scenarios.

KBRA took this same approach when it began rating community banks in 2013. Other rating agencies demonstrated a size bias and only rated banks with a certain minimum revenue. These other credit rating agencies failed to account for other factors such as strength of management. KBRA conducted a study of bank defaults after the Global Financial Crisis and found that community banks performed better than their much larger counterparts. Based on this study, KBRA devised a bank methodology that recognized the strength of management and allowed for smaller banks to be rated. As a result, KBRA has rated over 200 community banks. On the heels of our thorough published research and entry into this market, the incumbent rating agencies followed suit and began rating community banks as well. KBRA's ratings have opened markets to community banks that had previously and unfairly struggled to access important sources of capital. The strength of our ratings is demonstrated by the fact that these markets are as liquid as those for the larger banks.

Similarly, when we assess a municipality's climate risk, KBRA's analysts focus on the quality of management. Our analysts also assess the direct impact of climate risk, including understanding the physical or financial assets directly exposed to climate change (e.g., subway and car tunnels) and related

physical or regulatory risks, and exposure to transition risks which need to incorporate the possibility of new state or federal laws or regulations and an understanding of stakeholder preference risks.

I will end on this note: municipalities by their very nature have attributes of positive social impact that deserve amplification. Education, health, safety, housing are vital municipal services, some of which have struggled to serve all constituents equally. Municipal stakeholders will drive decisions on what needs to change in those areas. Analyzing how municipal managers respond to those stakeholder preferences, and the implications of those preferences on credit is the role of a credit rating agency.

**Conclusion**

I thank the subcommittee for the opportunity to testify today. I look forward to your questions and am happy to provide additional information that may be useful as you contemplate these important issues.

April 28, 2021

Written testimony offered by:

Christopher Parsons, PhD  
Professor of Finance at the University of Southern California  
Los Angeles, CA

Committee members:

Thank you for the opportunity to share the highlights of research I have conducted on the pricing and issuance costs faced by historically black colleges and universities (HBCUs). My testimony today is based on the research manuscript, "What's in a (school) name? Racial discrimination in higher education bond markets," which was published in the *Journal of Financial Economics* in December 2019, which I have submitted separately to the committee. My co-authors on the study are Casey Dougal of Florida State, Pengjie Gao of Notre Dame, and William Mayew of Duke University.

Economists have been interested in discrimination for many decades, and indeed, have documented race and/or gender disparities in wages, job placement and retention, home ownership, mortgage rates, access to capital and dozens of other outcomes. A key empirical challenge, however, is that simply comparing differences in average outcomes between groups formed by gender, race, age, or other characteristic may not always paint a complete and accurate picture.

The reason is because these or other characteristics may be correlated with other determinants of the outcome of interest. Consequently, it is rare to find examples where we can be almost certain that we have accounted for such competing factors, other than discrimination. Although no real-world study can be 100% perfect in this regard, studying municipal bonds issued by colleges and universities provides a close approximation to this ideal.

There are three reasons why.

First, when you buy a bond, all that should matter is the financial return – that is, whether you're paid back according to the contractual terms. Compared to labor markets or other settings, this simplifies the analysis since the notion of the issuer's quality or productivity is well defined, and relatively objective. Second, there is a well-accepted way of measuring an issuer's ability to pay called *credit or bond ratings*. By comparing two issuers with the same credit rating, we (as researchers) can account for credit quality in the same manner that investors do. Finally, in about half the cases we will study, universities with low credit ratings purchase credit insurance, which allows them to adopt the credit rating of the parent insurance company. In these instances, we can compare two universities not only with the same credit rating, but with the same insurance company, an extremely precise control for creditworthiness.

With these advantages as a backdrop, we collect data on 4,145 college-issued municipal bond offerings between 1988 and 2010, of which 102 were conducted by HBCUs. Our analysis asks two questions. First, do HBCUs pay more in issuance fees, versus similar non-HBCUs? Second, once HBCU bonds have been placed in the market, do they trade at lower prices, or otherwise show evidence of discrimination by investors?

The answer to the first question is yes. HBCUs pay about 20% more in fees to underwriters, which are the brokers that sell, or place, the bonds with investors. This increases to 30% if we focus on states with historically high levels of racial animus, specifically in the Deep South. These analyses account for the fact that HBCUs may be smaller than non-HBCUs, may have different credit ratings, or may differ in other important ways.

The answer to the second question is maybe. On average, HBCU-issued bonds appear to trade at somewhat lower prices than otherwise similar non-HBCU bonds, but the differences are small, and in most specifications, not statistically significant. However, we do find that when HBCU-issued bonds are traded, it takes about 23% longer to find a willing buyer.

What factors explain these results? Due to tax reasons, municipal bonds offer the largest advantages to investors residing in the same state as the issuer. What this means is that HBCUs, by virtue of being located mostly in the American South and Southeast, may face collective reluctance from what should be their most receptive investor base. If wealthy investors in their home states, due to racial animus, disproportionately shun HBCU-issued bonds, we would expect to find results similar to what we document in our analysis. Because underwriters have a harder time finding willing buyers, they will charge a higher commission. Critically however, the effects of discrimination may or may not manifest in bond prices, because the higher selling effort by underwriters should be, and appears to be, sufficient to secure prices that are close to fair market value. Of course, ultimately HBCUs do pay higher costs for accessing debt markets in either case, whether their bonds trade for lower prices, or whether they pay higher issuance costs.

One possible policy tool available to help remediate the challenges documented by our study would be affording investors of HBCU-issued bonds *tax exemption* from state and local taxes. The effect of this policy would be to remove the tax disadvantages an investor living in, for example, New York or California currently faces when potentially investing in an HBCU-issued bond from another state.

Thank you for your attention, and I look forward to any questions you may have.

**Examining the Role of Municipal Bond Markets in Advancing – and Undermining –  
Economic, Racial and Social Justice**

Committee on Financial Services  
U.S. House of Representatives

April 28, 2021

*Testimony Submitted by the Action Center on Race and the Economy (ACRE)*

Time and time again, state and local governments enter into predatory, expensive deals with banks or find themselves having to file lawsuits after communities — more often than not communities of color — have been victimized by Wall Street. As big banks continue to ransack taxpayer dollars and extract wealth from our communities, they remain a key player in our public finance system.

And Wall Street's predatory behavior is not without consequence. The more money cities pay toward debt service on municipal bonds via fees and interest, the fewer they are able to spend to rebuild critical public services in communities of color that have suffered severe and targeted disinvestment over many decades. Toxic municipal finance deals like interest rate swaps and capital appreciation bonds have led to school closures, mass water shutoffs, home foreclosures and more.

**The Puerto Rico and Detroit Playbook**

The two biggest debt crises in the history of the United States have occurred in the last decade, in Detroit and Puerto Rico. What has emerged is a pattern in which bankers, hedge fund managers, and other Wall Street investors intentionally prey on communities with predatory debt deals to increase their profits, and when those deals sour, financial and often elected stakeholders use that opening to undermine local democracy and enact painful austerity measures that protect creditors while throwing communities under the bus. Wall Street actors created a playbook in Puerto Rico via the The Puerto Rico Oversight, Management, and Economic Stability Act (PROMESA), based on the model developed at the municipal level in Detroit.<sup>1</sup>

Puerto Rico did not come to take on record levels of debt on its own. With every bond it issued, there was a set of banks that was willing to underwrite each bond and a set of investors willing to buy each bond, knowing full well Puerto Rico's financial situation. The banks that underwrote Puerto Rico's bonds did not merely enable its borrowing spree; in many cases they targeted the Commonwealth with unsustainable levels of debt that they knew it would not be able to pay back, in order to pad their profits.

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<sup>1</sup> <https://acrecampaigns.org/wp-content/uploads/2020/04/BrokenPromises-August2017.pdf>

The Puerto Rican debt crisis follows closely in the footsteps of the Detroit bankruptcy, and the precedents from both Detroit and Puerto Rico will likely become the blueprint for how public officials and Wall Street can use debt crises to undermine local democracy, push forth harsh and unpopular austerity measures, and ultimately displace people of color from the communities they have lived in for generations. Detroit and Puerto Rico are the latest test cases for what this model can look like in the United States.<sup>2</sup>

### **Credit Rating Agencies Unfairly Rate Majority POC Cities**

Racial disparities within the municipal bond market are persistent, with nearly all of the cities at the bottom of the ratings scale being majority-minority.<sup>3</sup> Based on ACRE and Refund America's 2017 analysis of rating agencies and local governments<sup>4</sup>, credit rating agencies cost these cities millions annually and increase profits for banks and other private sector actors.

The three main ratings agencies--Moody's, S&P, and Fitch--exercise an enormous amount of influence over the global economy. Their ratings determine the creditworthiness of major corporations, banks, nearly all bond issuances, cities, states, and even sovereign governments. Their authority is enhanced in countless federal and state regulations. Those regulations mandate that banks and insurance companies hold only highly-rated bonds. As a result, a poor rating from any of the ratings agencies can cost any issuer a great deal. Cities like Chicago, IL and Newark, NJ have paid the price of downgraded ratings.

In 2017, Chicago Public Schools threatened to close schools three weeks early because they were tight on cash. This was coupled with years of school closures and job vacancies in schools. Moody's downgraded \$5.8 billion worth of Chicago Public Schools debt to B3, fifteen notches below Aaa, and six notches into the junk category. The downgraded debt cost the city \$290 million annually, relative to Aaa debt. This led to a \$31 million cut to local schools--money that would help go to provide for additional programming for children, like arts, music, physical education, and field trips. Many of these cuts were couched as cuts to offset decreased state assistance, but the downgraded debt cost the city six times more than what they lost in state aid.<sup>5</sup>

Downgraded ratings in Newark also cost the city millions of dollars annually. After Newark's contentious 2014 election, Moody's announced a downgrade to the city's general obligation debt in 2015. The debt was downgraded from Aaa debt to Baa3, costing the city \$10MM annually in additional debt service. That exceeded the total amount the city spent on health care for the indigent, environmental health, and economic and housing development by more than \$3 million annually.<sup>6</sup> In other instances, the city's credit was downgraded and the ratings agency openly admitted that the city's high poverty levels factored into its rating.

<sup>2</sup> <https://acrecampaigns.org/wp-content/uploads/2020/04/BrokenPromises-August2017.pdf>

<sup>3</sup> <https://acrecampaigns.org/wp-content/uploads/2020/04/OutlookNegative-May2017.pdf>

<sup>4</sup> Ibid, 3

<sup>5</sup> Ibid, 3

<sup>6</sup> Ibid, 3

Inconsistent rating factors and punitive downgrades create an inescapable cycle for struggling local governments: credit rating agencies impose a poor tax on local governments and the city has access to fewer dollars to fund critical public services. Disinvestment continues and the private sector's profits increase. This skews the municipal bond market in favor of financiers and against poor communities and communities of color.

### **Police Brutality Bonds**

Across the country, city and county budgets reflect an investment in criminalization and a divestment in the services that actually contribute to public safety. Especially egregious is that as the cost of police misconduct increases, the communities that police brutalize are going into debt to pay for it. Often this debt is in the form of bond borrowing, meaning that when cities or counties issue bonds to pay these costs, banks and other firms collect fees for the services they provide and investors collect interest.<sup>7</sup>

These bonds, which we call police brutality bonds, are used to cover police-related settlement and judgment costs. These bonds quite literally allow banks and wealthy investors to profit from police violence. This is a transfer of wealth from communities—especially over-policed communities of color—to Wall Street and wealthy investors. The companies profiting from police brutality bonds include well known institutions like Wells Fargo, Goldman Sachs, and Bank of America, as well as smaller regional banks and other firms.<sup>8</sup>

While municipalities across the country spend up to 50% of their general funds on policing, the use of police brutality bonds to pay out settlements and judgments only increases the cost burden on taxpayers - all while turning a profit for banks and investors. The use of these bonds can nearly double the costs of the original settlement.<sup>9</sup>

As we work to address the system of policing and hold governments accountable for the financial, physical and emotional costs to our communities, we must also work to hold banks and investors accountable for their role in perpetuating and profiting from our existing system. Police violence should never be a source of profit for banks or investors, or a reason we do not have the resources we need to invest in the infrastructure and services that make our communities safer and more livable. We need to dismantle this system of policing and build a truly just system that prioritizes the needs and well-being of all people. Governmental bodies at the local, state, and federal levels must account for and provide full transparency about the total costs of policing.

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<sup>7</sup> [https://acrecampaigns.org/wp-content/uploads/2020/06/ACRE\\_PBB\\_2020\\_2.pdf](https://acrecampaigns.org/wp-content/uploads/2020/06/ACRE_PBB_2020_2.pdf)

<sup>8</sup> Ibid, 7

<sup>9</sup> Ibid, 7





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**Statement for the record of the**  
**Bond Dealers of America**  
**Hearing on “Examining the Role of Municipal Bond Markets in Advancing – and Undermining –**  
**Economic, Racial and Social Justice”**  
**Before the**  
**Subcommittee on Oversight and Investigations**  
**Committee on Financial Services**  
**U.S. House of Representatives**  
**April 28, 2021**

The Bond Dealers of America (BDA) is pleased to submit this statement for the record in the context of the Oversight and Investigations Subcommittee’s hearing on “Examining the Role of Municipal Bond Markets in Advancing – and Undermining – Economic, Racial and Social Justice”. BDA is the only DC-based group exclusively representing the interests of securities dealers and banks focused on the US fixed income markets. We believe the capital markets can help provide solutions to some of the nation’s most pressing issues, including economic, racial, and social justice, and we are happy to contribute our thoughts to the discussion.

We focus our comments today on capital financing for historically black colleges and universities (HBCUs). HBCUs play a vital role in our higher education system, and it is important that HBCUs have efficient and ready access to capital to finance investments in classroom buildings, dormitories, administration buildings, laboratories, common space and everything necessary for state-of-the-art university education and research. HBCUs traditionally have faced hurdles accessing public and private market financing as efficiently as some other peer institutions. Our statement today discusses those issues and offers policy suggestions to address them.

The US municipal bond market is the nation’s single most important source of financing for infrastructure. Seventy-five percent of the nation’s roads, schools, bridges, airports, and other vital infrastructure are owned and maintained by state and local governments, and 75 percent of that stock of infrastructure was financed with municipal bonds. Colleges and universities, both state-sponsored and private nonprofit, have access to tax-exempt bond financing through the public and private municipal securities markets. This tool allows qualified issuers—generally state and local governments and non-profit institutions like universities and hospitals—to access debt capital at lower interest rates than anywhere else in the capital markets to finance educational infrastructure. The tax-exemption for most municipal bonds means a savings of as much as two percentage points versus taxable financing in interest expense depending on the issuer and market conditions. By taking reasonable steps to expand access to tax-exempt financing for HBCUs, Congress can help address constraints some HBCUs face when accessing the markets.

## Background

HBCUs have unmet capital investment needs. A 2018 study by the Government Accountability Office<sup>1</sup> examined HBCU financing trends. One aspect of the study surveyed HBCUs on their capital financing needs. The 79 HBCUs that responded to a GAO survey reported that they face on average \$46 million of deferred maintenance costs with a majority reporting their deferred maintenance backlogs are on the rise. Academic buildings and residence halls are where the need is greatest. Thirty-nine percent of HBCU buildings on average are in need of repair.

According to the GAO, HBCU financing comes from a variety of sources including federal government grants and loans, which represent a plurality of HBCU financing, state appropriations—especially for public HBCUs—bonds, private and foundation giving, and other sources. Only seven of the 79 HBCUs that responded to the GAO study reported that endowments were a source of capital financing. The GAO stated in its report that “Based on a review of master plans—which assess the condition of HBCU facilities—and visits to nine HBCUs, GAO identified significant capital project needs in the areas of

### HBCU credit ratings

We looked at the credit ratings of the top 25 HBCUs by enrollment. Ten have no rating at all, which is a significant impediment to public debt issuance, and one is rated below investment grade. Three are rated in the “triple-B” category by at least one rating agency. Five are rated in the “single-A” category. Four are rated “double-A,” and only two carry “triple triple-A” ratings, or triple-A ratings from all three major rating agencies. Also, this sample comes from the biggest, most well known and best capitalized HBCUs. A lack of credit rating is much more common among smaller HBCUs. And even the relatively high ratings for some schools may be misleading, since some universities are rated based on a statewide system rather than individual schools.

deferred maintenance, facilities modernization, and preservation of historic buildings.”

States play a significant role in HBCU funding. We are pleased by reports that states like Maryland, for example, are doubling down on their financial commitment to HBCUs.<sup>2</sup> We are equally troubled by a report that one state-sponsored HBCU has been overdue for state funding for decades.<sup>3</sup> Together, a partnership among the colleges and universities themselves, federal and state governments, and capital markets participants can help ensure reliable market access for HBCUs.

The Higher Education Act of 1965 (P.L. 89-329) and subsequent amendments established the Historically Black College and University Capital Financing Program operated by the Department of Education. This program provides low-cost loans to HBCUs for capital improvements. The program has been an important source of HBCU financing. The Education Department is authorized to provide up to \$1.1 billion of loans outstanding at a time to qualifying HBCUs, and that ceiling can be “recycled” as schools repay their loans.

<sup>1</sup> US Government Accountability Office, “Historically Black Colleges and Universities — Action Needed to Improve Participation in Education’s HBCU Capital Financing Program,” June 2018.

<sup>2</sup> Danielle Douglas-Gabriel and Ovetta Wiggins, “Hogan signs off on \$577 million for Maryland’s historically Black colleges and universities,” *The Washington Post*, March 24, 2021, [www.washingtonpost.com/education/2021/03/24/maryland-hbcus-lawsuit-settlement/](https://www.washingtonpost.com/education/2021/03/24/maryland-hbcus-lawsuit-settlement/).

<sup>3</sup> Sara Weissman, “A Debt Long Overdue,” *Inside Higher Ed*, April 26, 2021, [www.insidehighered.com/news/2021/04/26/tennessee-state-fights-chronic-underfunding](https://www.insidehighered.com/news/2021/04/26/tennessee-state-fights-chronic-underfunding).

Participating institutions have received more than \$2.2 billion in financing over the life of the program. The December pandemic stimulus law (P.L. 116-260) provided forgiveness to HBCUs for all outstanding loan balances under the program, which, in addition to relieving indebted HBCUs of their debt service burden, means Education is now free to extend more loans to HBCUs.

HBCUs have received other pandemic-related assistance as well. The American Rescue Plan (P.L. 117-2) provides \$3 billion in dedicated funding for HBCUs. The 2020 CARES Act (P.L. 116-136) provided \$1 billion for HBCUs. This kind of assistance represents *funding* for HBCUs, cash available to support both operations and investments and which does not need to be repaid.

All this assistance is “credit positive” for HBCUs and will enhance the reception of investors to their bonds. This funding will help HBCUs weather the risk and revenue loss associated with the pandemic and will make a dent in accumulated deferred maintenance and investment. It is not enough, however. BDA believes it would be appropriate for Congress to provide additional assistance to HBCUs to assist them in better accessing the capital markets for financing.

#### **Impediments and solutions**

A key factor in determining the ability of a borrower like a HBCU to access the capital markets efficiently and cheaply is credit quality. Investors appropriately want to know that the HBCU borrower has the financial resources to meet all obligations, including debt service. Obtaining a credit rating from a rating agency is how most municipal issuers demonstrate their credit quality. The previously cited GAO report identifies several factors that put some HBCUs at a disadvantage when seeking a rating, including:

- HBCUs on average receive more of their revenue from government sources than their comparable non-HBCU peers. Too much reliance on any source of financing, especially one subject to appropriation risk, can be seen as a negative by rating agencies.
- HBCUs on average receive relatively less revenue from tuition and fees compared to their peers, which also can be perceived negatively by rating agencies.
- HBCUs have much smaller endowments than their non-HBCU counterparts. On a per student basis, HBCU endowment funds are 96 percent smaller than comparable non-HBCU peers.

These impediments have limited the ability of some HBCUs to access the capital markets directly. BDA believes the capital markets can provide an efficient source of debt capital for HBCUs. There would be tangible benefits associated with weaning HBCUs off the federal loan program and creating pathways to capital market access. Eventually, pandemic-related assistance will be exhausted, and the Education Department’s loan program will be fully subscribed again. HBCUs who are strong and prepared and who need capital financing will be able to access the market at will. There are several reasonable steps Congress can take to improve market access for HBCUs. These initiatives would provide *financing* for HBCUs, money available for capital investment that for the most part must be repaid using future revenues.

*The LIFT Act.* On April 16, 2021 Representative Terri Sewell (D-AL) introduced the “Local Infrastructure Financing Tools (LIFT) Act” (HR 2634, 117th Congress). The bill includes several important provisions of benefit to HBCUs.

The LIFT Act would provide a new source of federally supported tax-preferred financing, to be known as American Infrastructure Bonds (AIBs). Patterned after the highly successful 2009 Build America Bonds

program, the LIFT Act would provide deep subsidies for public and nonprofit issuers of bonds for infrastructure. Under the proposed program, HBCUs and other qualified issuers would at their election issue taxable bonds instead of tax-exempt. Although taxable bonds carry a higher interest rate for the issuer, AIBs would be eligible for a partial federal reimbursement of interest costs, as high as 42 percent in the early years of the program. AIBs also benefit issuers by attracting non-traditional sources of capital, like pension funds and foreign investors who do not need income exempt from taxes in the US, to the municipal market. Although AIBs would not be exclusive to HBCUs, they would help HBCUs achieve more efficient market access.

In addition to AIBs, the LIFT Act would also spur demand for bonds by commercial banks. Banks currently are discouraged by the Internal Revenue Code from investing in tax-exempt bonds. Banks who earn tax-exempt interest generally lose a portion of their interest expense deduction. However, Congress, in recognition that small issuers have a more difficult time accessing the capital markets, included an exception in the law for bonds sold by issuers who issue \$10 million or less per year, known as “bank qualified (BQ) bonds.” Banks seek out BQ bonds because they provide safe, attractive after-tax rates of return. However, the \$10 million limit has not been increased since it was enacted in 1986 and has now lost more than half its value due to inflation. Also, private, nonprofit colleges and universities, while they qualify for tax-exempt financing, must issue their bonds through state authorities. The \$10 million test is applied at the level of the issuer, not the borrower, so a HBCU whose bonds would otherwise be bank qualified loses that benefit even if they borrow less than the \$10 million limit because the state authority, borrowing on behalf of many colleges and universities, exceeds it.

The LIFT Act would address these issues with three provisions. First, the bill would raise the \$10 million limit to \$30 million to account for the value lost to inflation since 1986. Second, it would index the limit annually for inflation going forward. Third, perhaps most important for HBCUs, the bill would apply the new \$30 million test at the level of the borrower, not the issuer, so a qualifying HBCU would remain qualified no matter how many bonds were issued by the state authority. While this provision is not targeted at HBCUs specifically, it would provide meaningful assistance to all small- and mid-size colleges and universities, including HBCUs.

In addition to the BQ provision, the LIFT Act would restore the ability of state and local governments and non-profits to undertake “advance refunding” transactions. Economically similar to a homeowner refinancing a mortgage, refunding transactions allow municipal bond issuers to realize debt service savings when interest rates fall. The 2017 Tax Cut and Jobs Act severely restricted the ability of tax-exempt borrowers to refund their bonds, and the LIFT Act would restore the authority the TCJA eliminated. Again, neither the advance refunding provision nor the bank qualified provision is targeted explicitly at HBCUs. But both provisions would improve market access for HBCUs significantly. BDA fully supports the LIFT Act, which is now awaiting action before the Ways and Means Committee. We urge Subcommittee members to cosponsor the bill and support its enactment.

*Triple tax-exemption.* The interest on most municipal bonds is generally exempt from federal income taxation. If an investor buys a municipal bond issued in the state where they live, the interest is typically also exempt from state income taxation. However, most states impose a tax on interest earned by residents from bonds issued in other states. An exception is for bonds sold by Puerto Rico issuers. Since 1917, municipal bonds issued by Puerto Rico are exempt from federal income tax as well as the income taxes of all states regardless of where the bondholder lives. This makes Puerto Rico bonds particularly

popular among investors. Applying a similar treatment to HBCU bonds would greatly expand the market for those bonds and reduce financing costs for HBCUs.

*Federal credit enhancement.* Perhaps the biggest impediment to efficient capital markets access for some HBCUs is credit. As pointed out, some HBCUs do not have credit ratings, a prerequisite to attracting investor interest in a university's bonds. And historic financial weakness at some HBCUs means some would not be able to achieve an investment-grade rating, without which market financing becomes prohibitively expensive. One solution to this issue would be to provide a federal guarantee for HBCU capital markets financing. Although the Internal Revenue Code generally prohibits federal guarantees of tax-exempt bonds (26 U.S.C. § 149), there are exceptions for bonds backed by federally insured mortgages and student loans, for example. A federal guarantee for HBCU bonds would have the effect of enhancing investor appetite for their debt, reducing financing costs, and establishing HBCUs who have never issued or who issue infrequently as market "names." Because the default rate would be extremely low, the guarantee likely would be of minimal cost to the federal government. Moreover, a federal guarantee for HBCU bonds would compliment the American Infrastructure Bond provision in the LIFT Act. Taxable—with interest subsidies for the borrower—federally guaranteed HBCU bonds would generate broad investor appeal.

*Environmental, social, and governance designation.* The fastest growing segment of the asset-management industry is for investment products designated as having environmental, social or governance (ESG) benefits. This designation fits HBCU bonds perfectly because the mission of HBCUs, to advance opportunities for African-American and other students, meets the criteria for social impact investing. Market practices around ESG bonds are still evolving. Private "rating agencies" have emerged to take on the role of measuring the ESG effects of a financing. Investors have already demonstrated a willingness to "pay up"—accept lower rates of return, which translates into lower interest rates for borrowers—for bonds with ESG designations. As market practices around ESG develop, we see significant benefits for HBCU borrowers.

### Conclusion

HBCUs fill a vital role in the US higher education system. Some HBCUs traditionally have had a more difficult time accessing the capital markets than their peers. The federal loan program for HBCUs helps address that shortcoming, but the program is limited in the amount of financing it can provide. Any meaningful assistance for HBCUs should include means to improve access to capital markets financing. Steps Congress should consider include:

- Passing the LIFT Act, which would make most HBCU bonds bank qualified, would restore the ability to engage in advance refundings, and would provide a new category of tax-preferred financing for infrastructure;
- Providing triple tax exemption for HBCU bonds, which would greatly expand the pools of interested investors;
- Providing a federal guarantee for HBCU bonds, which would address long-standing issues related to credit quality; and
- Promoting the development of ESG standards that would allow HBCUs to take full advantage of the social benefits they provide.

We are pleased to provide our thoughts to the Subcommittee on these important issues, and we look forward to working with you going forward.

## Responses from William Fisher

### **Congressman Al Green's Question for the Record to all witnesses following April 28 Virtual Hearing entitled "Examining the Role of Municipal Bond Markets in Advancing – and Undermining – Economic, Racial and Social Justice."**

1. Do you believe that Historically Black Colleges and Universities (HBCUs) and other Minority Serving Institutions (MSIs) face institutional bias when seeking to issue bonds thereby creating inequitable access to capital markets?

It is without question that HBCUs and MSIs face institutional bias when seeking to access the bond market. The many documented bias-related factors that affect the financial flexibility of these institutions are further described below. Together, they conspire to reduce HBCUs' ability to increase student support services and aid, reduce deferred maintenance and implement new programs. This means they have to pay much more in interest and have more restrictive covenants than non-HBCU institutions to sell bonds. Typically, prohibitively so.

Below we describe several of the bias-related factors that affect HBCUs' ability to efficiently utilize the bond market to raise capital.

**Many HBCUs experience underfunding at the state level that is not experienced by non-HBCU institutions, and evidence suggests it is a product of bias and racism.** A bipartisan legislative committee determined in April 2021 that the State of Tennessee failed to adequately fund Tennessee State University in matched land grants going all the way back to the 1950s, costing the public university between \$150 million and \$544 million. Maryland, meanwhile, recently finalized a \$577 million settlement to resolve a lawsuit alleging the state had underfunded its four HBCUs.

In an NPR interview last month<sup>1</sup>, Andre Perry, a senior fellow at the Brookings Institution, blamed institutional racism for what he sees as a pervasive lack of funding at HBCUs. "We should assume that it's race, because many of the other institutions - predominantly white institutions - are receiving their full funding," he told NPR. According to Perry, since the federal government ordered states to desegregate their schools in the 1950s, "there has just been a reticence to desegregate higher ed based on funding, and so many of these states created funding formulas that regularly just shortchanged HBCUs." Perry describes this history of shortchanging HBCUs as "theft at a scale that is unprecedented," and said funding should be scrutinized at every HBCU.

Perry also refuted the myth that HBCU alumni do not adequately give back. "When people say this is a problem of people giving ... what they're really saying is we're going to blame Black people for the lack of funding in Black institutions, abdicating the state's responsibility to do so," he said.

Perry's perspective that racism is key to HBCUs' struggle to overcome financial burdens is also supported by a research report produced by Duke University's Fuqua School of Business<sup>2</sup>. Duke Professor Bill Mayew found HBCUs pay more to float bonds in the market than other schools. He also found evidence race was a factor in the higher costs.

**Federal requirements and related state laws prohibit many HBCUs from participating in the HBCU Capital Financing Program.** In a report issued by United States Government Accountability Office titled *Action Needed to Improve Participation in Education's HBCU Capital Financing Program*<sup>3</sup>, approximately one-third of public HBCUs report being prohibited from participating in the HBCU Capital Financing Program by state law or policy because of certain program features. These features involve required

### Responses from William Fisher

pooled escrow funds, collateral and direct lending to HBCUs. While the Department of Education has taken steps to address public HBCUs' concerns with the escrow requirement, the other state-level provisions that create challenges have not been adequately addressed.

**HBCUs' revenue sources lack diversity, a key metric when determining a college's credit rating, which directly affects their ability to sell bonds cost efficiently.** In the GOA's research, officials from one credit rating agency said that because public HBCUs rely more on state funding than their public non-HBCU counterparts, they are potentially more vulnerable than other colleges. And we know, as previously discussed, that for reasons grounded in historical bias, state funding is largely unreliable and insufficient. According to the GOA's research, public HBCUs generally rely on state funding—such as annual appropriations for repairs or one-time grants for new construction—to address their capital project needs, although those funds fall far short. Meanwhile, more than half of the private HBCUs interviewed by the GOA reported using alumni and private giving or revenue from tuition and fees to address their capital needs, although alumni and private giving only accounted for 10 percent of their overall capital project funding. Many of these officials reported that because they are so tuition-dependent, drops in enrollment make it difficult to maintain their facilities or repay capital debt.

As stated in the GOA report, a college's wealth, such as the size of its endowment, can also affect a college's credit rating, according to officials from two credit rating agencies. Many HBCUs have small endowments and as a result may face challenges accessing financing. The GOA's analysis showed that HBCUs' median endowments are about half the size of similar non-HBCUs

**Conclusion.** In sum, a decades-long pattern of established bias has put many HBCUs in a bleak position that prevents them from accessing the bond markets in a cost-effective way because they are unable to attain the credit ratings they need to do so. It is a vicious circle. According to Perry in his interview with NPR, "To run an engineering school, it costs a lot of money. And so if you're coming up short, guess what? You're not going to have an engineering program, or it's going to be theoretical in nature and you won't have the equipment, you won't have the facilities to have people get the best out of that degree. In addition, you're not able to innovate. But what you're seeing in HBCUs, it's not just that they're not able to innovate or add certain degree programs. Their facilities are deteriorating. They're not able to keep up with the competition. And so, this just leads to a lowering of standards, and eventually students won't want to go. So that's why this is just horrible, these findings. And we should go deeper. We should do an investigation at every state, for every HBCU, and we should assume that they are being robbed."

1) *'Theft At A Scale That Is Unprecedented': Behind the Underfunding of HBCUs*, May 13, 2021, NPR's All Things Considered

2) *Bond Market Research Spurs Congressional Action*, July 14, 2016, Duke University Fuqua School of Business

3) *Action Needed to Improve Participation in Education's HBCU Capital Financing Program*, June 2018, United States Government Accountability Office



**Congressman Al Green’s Question for the Record to all witnesses following April 28 Virtual Hearing entitled “Examining the Role of Municipal Bond Markets in Advancing – and Undermining – Economic, Racial and Social Justice.”**

1. Do you believe that Historically Black Colleges and Universities (HBCUs) and other Minority Serving Institutions (MSIs) face institutional bias when seeking to issue bonds thereby creating inequitable access to capital markets?

As I stated in my oral and written testimonies, I have not studied this issue to identify empirical evidence to conclusively state that the pricing difference that HBCUs and MSIs incur in the municipal bonds market is due to institutional bias. Nonetheless, I fervently believe more can be done to assist HBCUs, MSIs and Tribally Controlled Colleges and Universities (TCCUs) with accessing the capital markets more cost-effectively going forward. Specifically, I have been outspoken on my support for the authorization of triple tax exemption for HBCU/TCCU/MSI-sponsored debt (refer to this Op-ed in The Hill <https://thehill.com/opinion/finance/553309-historically-black-colleges-and-universities-need-equal-access-to-the-bond>). For example, providing the 10 HBCUs in the state of North Carolina with the ability to attract investors from states with higher state income tax (i.e., New York, Massachusetts or California), would increase demand and contribute to favorable pricing.

Moreover, the current market environment represents a unique opportunity to ignite investor demand for HBCU-issued municipal bonds. The appetite for social impact bonds, a subset of ESG bonds, has never been greater. This market saw a volume spike to \$154 billion in 2020 versus \$17.9 billion issued in all of 2019. Social impact investors would highly covet HBCU-issued debt, as such funding will comply the investment objectives of these buyers to fund projects that are designed to produce social benefits that address socioeconomic advancement and empowerment of students from underserved communities. As such, granting HBCUs (and other MSIs) the opportunity to tap a wider social impact investor base due to expanded tax exemption would greatly impact pricing performance.

Other ways to expand the buyer base for HBCUs bond issuances to increase demand and lower borrowing cost could include having the federal government authorize a high-subsidy direct pay bond (e.g. similar to disaster recovery bonds or Build America Bonds) for HBCUs or authorize a federal guaranty on taxable direct pay bonds for HBCUs (as there can be no federal guaranty on tax-exempt debt).

**Responses from Chris Parsons**

I take the phrase “institutional racism” to mean racism that is perpetuated by a proper institution, such as a bank, university, branch of government, and so on. So, for example, racist admissions policies for universities would be correctly termed institutional, or institutionalized, racism.

In our study, we do not find sufficient empirical evidence to identify institutional racism, thus defined. Rather, the evidence is more consistent with racism among investors, which in the case of municipal bonds, tend to be disproportionately retail individuals, which are disperse and not colluding or cooperating with one another. If this group of investors is reluctant to purchase HBCU-issued bonds, the higher costs will (mostly) be passed back to the schools. This does not, of course, rule out racism at other links in the issuance process. But, the evidence in the paper does not allow us to conclude that financial institutions such as banks, insurers, underwriters, or credit rating agencies express preferences along racial, or ethnic, dimensions.



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## What's in a (school) name? Racial discrimination in higher education bond markets<sup>☆</sup>

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### ABSTRACT

Historically black colleges and universities (HBCUs) pay higher underwriting fees to issue tax-exempt bonds, compared with similar non-HBCUs, apparently reflecting higher costs of finding willing buyers. The effect is three times larger in the Deep South, where racial animus remains the most severe. Credit quality plays little role. For example, identical differences are observed between HBCU and non-HBCUs with AAA ratings or when insured by the same company, even before the 2007–2009 financial crisis. HBCU-issued bonds are also more expensive to trade in secondary markets and, when they do, sit in dealer inventory longer.

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### 1. Introduction

Over 50 years ago, American economist Milton Friedman stated in *Capitalism and Freedom* that economic development deters the expression of discrimination, racial or otherwise. The crux of his argument was that free mar-

kets “separate efficiency from irrelevant characteristics,” the benefits of which he credited the ability of Jews to survive the Middle Ages, despite intense persecution. To further illustrate the intuition, he wrote:

The purchaser of bread does not know whether it was made from wheat grown by a white man or a Negro, by a Christian or a Jew. In consequence, the producer of wheat is in a position to use resources as effectively as he can, regardless of what attitudes of the community may be toward the color, the religion, or the other characteristics of the people he hires (Friedman, 1962, p. 109).

One reason this example resonates is that bread consumers and wheat growers do not directly interact. Moreover, because bread is a commodity (as opposed to, for example, watching a baseball game or listening to recorded music), the product itself reflects virtually nothing about the producer. Together, these factors anonymize buyers and

<sup>☆</sup> We thank Daniel Bergstresser (discussant), John Chalmers, Harry DeAngelo, Marybeth Gasman, Cam Harvey, Christian Leuz, David Robinson, Michael Weber (discussant), Eddie Watts, Luigi Zingales, and seminar participants at Columbia University, Drexel University, Duke University, Indiana University, Miami Behavioral Conference, National Bureau of Economic Research (NBER) Corporate Finance Meeting, New York University, University of Chicago, University of Illinois, University of Notre Dame, University of Oregon, University of Southern California, Vanderbilt University, 2016 Frontiers in Finance Conference, and Stanford Summer Camp. We are also grateful to the municipal bond traders who gave their time for numerous helpful discussions. We take responsibility for all errors.

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sellers and, consequently, limit the extent to which prices can reflect consumers' preferences over personal attributes.

This paper explores a setting that, if Friedman's argument is correct, would seem equally unlikely to exhibit racial discrimination: the municipal bond market. As in the wheat example, the transaction between the consumer (a bond investor) and producer (a municipality) is intermediated and impersonal, and the product (an interest payment) is, if it arrives, indistinguishable between payers. These factors, coupled with competition, should force prices to reflect fundamentals and little else.<sup>1</sup>

We collect a 23-year (1988–2010) sample of 4145 tax-exempt municipal bond issues by 965 four-year college and universities, totaling approximately \$150 billion. Of these, 102 were issued by historically black colleges and universities (HBCUs), many of which originated in ex-slave states during the Reconstruction Era (1880s), with the mission of educating newly emancipated blacks. We explore whether HBCUs pay more to access capital markets than otherwise similar peers and, if so, why. As with most discrimination studies, the key empirical challenge is attributing any differences to taste-based versus statistical discrimination (Phelps, 1972; Arrow, 1973), which, in our context, would involve investors finding HBCU bonds less attractive for reasons other than their explicit affiliation with racial minorities.

Our analysis begins when bonds are issued. Like most initial public stock offerings for corporations, financial intermediaries play a prominent role in the issuance of municipal bonds. Typically, an underwriter purchases bonds from a university and then resells them to public investors over the next few days. This price difference, known as the gross spread or underwriter spread, compensates underwriters for the cost of placing the issue with investors.

On average, HBCUs pay higher underwriting spreads than non-HBCUs. For the typical non-HBCU, 81 cents out of every \$100 raised flows to underwriters. The average for HBCUs is 11 basis points higher, at 92 cents per \$100 dollars raised. We propose a race-based search cost explanation; that is, investors face tax incentives to own local bonds. Because HBCUs are located in states with high levels of anti-black racial animus, underwriters face steep frictions when trying to find willing buyers.

Other potential reasons exist that HBCU bonds could be harder to sell. Fortunately, as researchers, we observe nearly all, and likely more, of the variables that would be available to underwriters and investors. Our estimations control for bond features such as the amount raised, maturity, and call provisions; measures of underwriter quality and experience; school metrics such as student size, alumni giving rates, and ranking; and potentially dynamic regional characteristics through state  $\times$  year fixed effects. Despite the combination of these controls explaining about two-thirds of the total variation in underwriter spreads,

the estimated premium paid by HBCUs is similar to, if not slightly larger (16 basis points) than, the unconditional difference.

We pay special attention to the possibility that HBCUs have, or are perceived to have, higher credit risk.<sup>2</sup> Our first test limits the sample to deals with AAA credit ratings. Given that timely payment for municipal bonds with this credit class is virtually assured, focusing on this subset should remove nearly all heterogeneity in default risk. Yet, even among this 40% of the data, the HBCU effect remains virtually unchanged (16 basis points). In our second test, we consider only insured deals and compare HBCU and non-HBCU bonds insured by the same entity. Among this sample, HBCUs pay a premium of 18 basis points excluding the financial crisis and afterward gives a nearly identical estimate (17 basis points).

Perhaps the strongest evidence for taste-based discrimination involves a comparison within the set of HBCUs. If racial animus is the primary reason that HBCU-issued bonds are harder to place, then these frictions should be magnified in states where anti-black racial resentment is most severe. We measure racial animus using survey responses (e.g., to questions about affirmative action), racially charged Google searches (Stephens-Davidowitz, 2014), white vote share for Barack Obama in the 2008 election, and geocoded racist tweets following the reelection of Obama in 2012 (Zook, 2012). Alabama, Louisiana, and Mississippi earned the dubious distinction as having the highest levels of anti-black racial animus in the US, with a sharp break between these and the fourth (Georgia).<sup>3</sup>

When we reestimate our fully specified models and compare the underwriter spreads for HBCUs located in Alabama, Louisiana, and Mississippi with those in other states, the results are remarkable. Outside these three states, HBCUs pay 11 basis points more in gross spreads compared with non-HBCUs. Within Alabama, Mississippi, and Louisiana, representing 26% of HBCU issuances, the premium triples (30 basis points). Importantly, this difference is limited to HBCUs: among non-HBCUs, the same cross-state comparison shows virtually no difference (2 basis points).

A second test is motivated by recent work by Babina et al. (2017), which estimates the extent to which investors are afforded a tax privilege for owning municipal bonds issued within their state(s) of residence. Without such tax incentives, the market for HBCU-issued bonds would be national instead of local, which, given the geographical patterns of racial animus, should largely immunize HBCUs from any in-state investor bias. Consistent with these authors' conclusions, we find that even outside the Deep South, where the HBCU effect is markedly weaker, tax

<sup>1</sup> Becker (1957) theorizes that competition should reduce the expression of racial discrimination. Ashenfelter and Hannan (1986) find that competition in the banking sector decreases gender discrimination, and Heywood and Peoples (1994) and Peoples and Talley (2001) find that the deregulation of the trucking industry increased the relative wage rates of black workers. See also Black and Strahan (2001) and Levine et al. (2014).

<sup>2</sup> Empirical evidence regarding the importance of default risk for municipal market spreads is mixed. Bergstresser and Cohen (2011) and Ang et al. (2014) argue that credit risk plays a minor role. Recent work by Schwert (2017) concludes the opposite.

<sup>3</sup> When ranked on these measures of racial animus, from 1st (most animus) to 51st (least), Louisiana's sum of the ranks is 11, with Mississippi at 15, and Alabama at 17.5. The next state is Georgia (38), followed by Arkansas (44) and Tennessee (46.5).

privilege exacerbates the effect.<sup>4</sup> Among the half of states with the highest incentives for investors to own same-state bonds, HBCUs face close to 20 basis points in additional underwriting fees; among the lower half, there is virtually no effect.

For robustness, we also ask whether HBCU-issued bonds face higher transactions costs in secondary market trading, typically occurring years after the initial issuance. This not only provides external validity using a different sample, but also represents the strongest case against efficiency differences or exploitation by primary market underwriters driving our benchmark findings. On average, HBCU-issued bonds are about 20% more expensive to trade in secondary markets, with larger orders (\$50,000 or above) facing the steepest costs (60% premium). HBCU-issued bonds also tend to sit in dealer inventory about 25% longer (with larger orders taking the most time to trade), perhaps the most direct evidence of intermediaries facing elevated search costs.

The paper concludes by exploring the potential impact of higher search frictions on selling prices. As a benchmark, suppose that racial bias creates a downward-sloping demand curve for HBCU-issued bonds such that, by incurring higher search costs, underwriters can obtain higher selling prices. Consider two polar cases. At one extreme, search costs (and fees) are sufficient to completely eliminate any but for price discrepancy between HBCUs and non-HBCUs. In this case, even if the average potential investor discriminates against HBCUs, the marginal one, the eventual purchaser who determines the observed selling price, perhaps does not.<sup>5</sup> At the other extreme, underwriters expend no additional selling costs for HBCU bonds, but, as a result, large price discounts obtain.

Across a variety of specifications, we consistently estimate price discounts for HBCU bonds, but below conventional significance levels. The estimated yield difference is about 5 basis points ( $t = 0.5$ ) for small trades and twice that for large trades ( $t = 0.9$ ), suggesting that small (large) HBCU bond trades sell for average discounts in the neighborhood of 1% (3%). Combining our prior findings on higher selling costs and time in inventory, we interpret the weak or small price discounts as evidence against either polar case, with the equilibrium outcome perhaps corresponding closer to the first extreme than the second.

Our paper directly contributes to the literature on racial discrimination in financial markets. Relevant work includes studies of racial disparities in approval rates and pricing of residential mortgages.<sup>6</sup> Other financial markets with evidence of racial discrimination include the peer-to-peer lending market (Pope and Sydnor, 2011) and a small but

growing literature examining discrimination in small business lending.<sup>7</sup> In addition, although their primary interest is not discrimination, Bergstresser et al. (2013) find that municipal bonds issued by regions fractionalized (i.e., heterogeneous) in terms of either race or religion trade at discounts, which they attribute to market inefficiencies. Our study complements these works by providing evidence of discrimination in an important sector of the municipal bond market.

The remainder of the paper is organized as follows. Immediately following is a brief discussion of HBCUs, followed by a stylized model intended to motivate our empirical tests. Section 4 characterizes the increase in transactions costs (underwriter spreads) faced by HBCUs when issuing bonds to the public. This section also contains a regional comparison, asking whether HBCUs located in the Deep South pay a particularly high price to access municipal bonds. Section 5 considers robustness and other issues. In Section 6, we discuss potential remedies and conclude.

## 2. Historically black colleges and universities

Prior to the Civil War (1861–1865), higher education for blacks in the United States was almost nonexistent. The majority of American blacks were enslaved, and, while a few free blacks were able to attend white colleges in the North, educational opportunities for blacks in the southern slave states were extremely rare and generally illegal. To combat this inequality, a small number of institutions were organized during the Antebellum period to offer elementary and high school level instruction specifically to black students. These institutions later developed into full-fledged post-secondary institutions and are generally considered the first HBCUs.<sup>8</sup>

The number of HBCUs grew rapidly shortly after the end of the Civil War, often by way of northern religious missionary organizations establishing new institutions in the former slave states. Another surge in HBCU founding came following the passage of the second Morrill Act in 1890, which forced each state to either desegregate its land-grant colleges established by the first Morrill Act in 1862 or establish a separate land-grant college for students of color. Almost all southern and southern-border states opted for the latter option, which led to the creation of 16 exclusively black land-grant institutions.

The Higher Education Act of 1965, which defined and mandated direct federal aid to HBCUs, provided the formal definition of an HBCU as “any historically Black college or university that was established prior to 1964, whose prin-

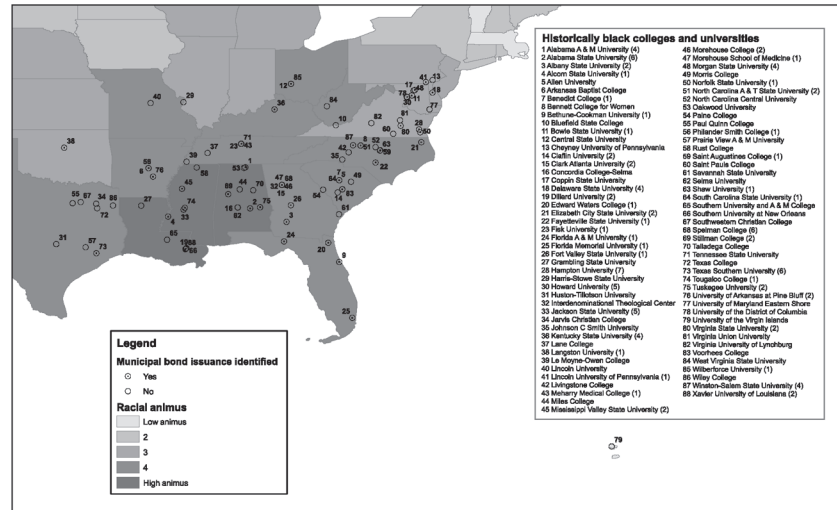
<sup>4</sup> Virtually no variation in tax privilege exists in Deep South states, preventing a similar analysis among them. See Section 4.4.2.

<sup>5</sup> This is analogous to the Becker (1957) original analysis of discrimination in labor markets, with recent empirical support provided by Charles and Guryan (2008).

<sup>6</sup> Surveys on racial disparities include Yinger (1996), Ladd (1998), LaCour-Little (1999), and Dymski (2006). Haughwout et al. (2009) finds limited evidence of pricing discrimination in subprime loans originated in the years leading up to the financial crisis. Using data on mortgage lending, Bayer et al. (2016) find that, conditional on a rich set of observables, blacks, and Hispanics are charged higher interest rates.

<sup>7</sup> Bates (1991) finds that relative to similar white-owned firms, black-owned firms are less capitalized and receive smaller loan amounts, which subsequently translates into higher failure rates. Cavalluzzo and Cavalluzzo (1998) find large differentials in loan denial rates for female- and minority-owned small businesses. Blanchflower et al. (2003) find that black entrepreneurs are roughly twice as likely to be denied credit and are charged higher interest rates for approved loans.

<sup>8</sup> The first HBCU was organized in 1837 by a group of Philadelphia Quakers. Called the Institute for Colored Youth, the school has since been renamed Cheyney University and is in operation today. Two decades later, others were formed: Lincoln University (Pennsylvania) in 1854 and Wilberforce University (Ohio) in 1856.



**Fig. 1.** Four-year historically black colleges and universities, (HBCUs), 1988–2010, per delta cost project database. This figure plots the locations of all four-year HBCUs in the Delta Cost Project Database over the 1988–2010 time period. Schools for which we can identify at least one municipal bond issuance in the Securities Data Company (SDC) database over this same time period are marked with a circle with a dot in the middle, and those with no identifiable bond issuances are marked with a circle. School names are identified by number with the total number of issuances for each school indicated in parentheses. Levels of statewide racial animus (see OAS) are indicated as specified in the legend.

cial mission was, and is, the education of Black Americans, and that is accredited by a nationally recognized accrediting agency or association determined by the Secretary [of education] to be a reliable authority as to the quality of training offered or is, according to such an agency or association, making reasonable progress toward accreditation.” Financial support for HBCUs under the Higher Education Act of 1965 was explicitly acknowledged as partial remedy for past discriminatory action by states and the federal government against HBCUs. In 1980, President Jimmy Carter signed Executive Order 12232, “to overcome the effects of discriminatory treatment and to strengthen and expand the capacity of Historically Black Colleges and Universities to provide quality education.” Subsequent administrations have also signed executive orders supporting HBCUs in various ways.

Despite governmental support of HBCUs, financial backing still remains a top concern for HBCUs to sustain their educational mission (Arnett, 2014; Gasman, 2010). Fig. 1 identifies the 88 four-year HBCUs we study during our sample period. According to the National Center for Education Statistics, in 2010, four-year HBCUs served approximately 251,000 students, 233,000 (93%) of whom were black. This statistic displays the mission of HBCUs to educate blacks, as non-HBCU four-year institutions served 10.751 million students, of which only 1.357 million (or 12.6%) were black. Some notable HBCU alumni include the

Rev. Dr. Martin Luther King, Jr. (Morehouse College), reverend and activist Jesse Jackson (North Carolina A&T), filmmaker Spike Lee (Morehouse College), and media executive and philanthropist Oprah Winfrey (Tennessee State University).<sup>9</sup>

### 3. A simple model of municipal bond trading

To fix ideas for the empirical tests that follow, we begin with a stylized model of municipal bond trading. There are three dates,  $t = 0, 1$ , and  $2$ . Each bond has a face value \$1 and realizes risky payoffs at  $t = 2$ . With risk-neutral probability  $q$ , the  $t = 2$  payoff is zero. With a risk-free rate of zero, and no search costs or other frictions, the price of the bond would be  $1 - q$  at all dates. Trade takes place at both  $t = 0$  and  $t = 1$  and is intermediated. A broker/dealer at  $t = 0$  purchases a bond from the issuer and at  $t = 1$  sells it to a retail investor. The model characterizes how search frictions influence the prices at which bonds are transacted at  $t = 0$  and  $t = 1$ .<sup>10</sup>

<sup>9</sup> See Fryer and Greenstone (2010) for a general, contemporary examination of HBCUs.

<sup>10</sup> Harris and Piwowar (2006), Ang and Green (2011), and Schultz (2012) show that bond transactions costs, i.e., the price differential between the  $t = 0$  and  $t = 1$  price, are among the highest of all financial assets, with round-trip trading costs on the order of 150–300 basis points.



We model search frictions as follows. For effort level  $e > 0$  expended by a broker-dealer, it can place each bond at discount  $D(e) = \frac{\gamma^2}{e}$  relative to fundamental value  $1 - q$ , where  $\gamma \geq 0$ . Higher effort levels by broker-dealers translate to higher selling prices, and vice versa.<sup>11</sup> The cost of supplying effort is  $k + e$ , reflecting both a fixed and variable cost. Moreover, the returns to effort increase with  $\gamma$ , intended to capture search costs related to selling a bond. For example, high values of  $\gamma$  could correspond to bonds issued in poor states with few potential investors or to bonds with high default risk. Contractual features that make them unattractive to investors also can increase search costs.

Consider the effort choice by the broker-dealer underwriting the bond issue at  $t = 1$ . Having purchased  $Q$  units of the bond at price  $P_{buy}$  at  $t = 0$ , its profits are  $\Pi(e) = Q[1 - q - \frac{\gamma^2}{e} - P_{buy}] - (k + eQ)$  which, when optimized with respect to  $e$ , gives equilibrium effort level  $e^* = \gamma$ . Bonds with a thick pool of potential investors require little discount and, thus, minimal effort by broker-dealers. Bonds with a thinner potential clientele require larger discounts, which broker-dealers partly mitigate through a higher effort choice. This gives a selling price at  $t = 1$  of  $P_{sell}^* = 1 - q - \gamma$ .

Backing up to  $t = 0$ , and assuming perfect competition between underwriters, we can derive the maximum price a broker-dealer would be willing to pay by setting  $\Pi(e^*)$  equal to zero, which gives  $P_{buy}^* = 1 - q - 2\gamma - \frac{k}{Q}$  and round-trip transaction cost of

$$P_{sell}^* - P_{buy}^* = \gamma + \frac{k}{Q}. \quad (1)$$

Our central hypothesis is that because of racial animus, selling costs ( $\gamma$ ) are higher for HBCU-issued bonds which, as Eq. (1) indicates, increases transactions costs and, ultimately, HBCUs' cost of obtaining finance. This contention is based on three observations. First, municipal bonds are typically marketed and sold to wealthy individuals (Bergstresser and Cohen, 2015), as the tax benefits are most advantageous to those in the highest brackets.<sup>12</sup> Second, the tails of the wealth (Strand, 2010) and income (Altonji and Blank, 1999) distributions are heavily concentrated among white individuals, making it likely that members from this group constitute the typical investor of an HBCU-issued bond.

Third, and perhaps most significantly, municipal bond investors disproportionately reside in the same state as the issuer. As noted by Schultz (2012), such home bias has both behavioral roots (e.g., familiarity for local issuers) and tax advantages.<sup>13</sup> Because HBCUs are mostly located in ex-

slave states, it is not simply that broker-dealers must find (mostly) white investors for their bonds. They also must operate in regions where racial animus and conflict between blacks and whites has historically been the highest.

The key empirical challenge, as Eq. (1) highlights, is distinguishing this effect from other reasons that HBCU-issued bonds could be more difficult to sell (i.e., differences in  $\gamma$  for nonracial factors), trade size ( $Q$ ), and underwriting efficiency ( $k$ ).

#### 4. Do HBCUs pay higher fees to issue bonds?

##### 4.1. Data

Our sample consists of municipal bonds issued by four-year and higher, not-for-profit, US colleges and universities. To identify the potential set of such issuers, we begin with the National Center for Education Statistics' Delta Cost Project Database (DCPD). The DCPD is a longitudinal database that provides the name, location, and other school-specific data all postsecondary institutions in the US spanning academic years 1988 through 2010.<sup>14</sup> The DCPD also identifies schools considered HBCUs.

We then obtain bond issuance data via the Securities Data Company (SDC) Global Public Finance database, following Butler (2008). SDC does not explicitly identify issuances from four-year and higher, not-for-profit, US colleges and universities but does provide basic information about the issuance including the general type of issuer, main use of proceeds, amount, term, gross spread, state of issuance, name of issuer, and name of the backer of the bond.<sup>15</sup> We therefore combine information from SDC and DCPD to identify bond issuances of interest.

Between 1988 and 2010, there were 7249 individual bond issuances from tax exempt issuers classified as universities, for which the main use of proceeds is higher education and gross spreads are not missing. We remove 1196 observations corresponding to two-year and junior colleges, as indicated by either the issuer or backer name containing variants of the terms "community college," "junior college," and "technical college." We eliminate these schools because they often are very small and, in turn, raise capital jointly with other educational entities in the municipality to reap economies of scale. Our analysis requires issuances backed solely by a single school, which eliminates an additional 11 issuances in which the backer is denoted "various." Applying these criteria leaves 6042 issuances.

<sup>14</sup> Our sample ends in 2010, as this was the most recent school data available in DCPD when we assembled our datasets. Our analysis therefore avoids the detrimental effects of the 2011 enactment of the Parental Loans for Undergraduate Students (PLUS) program, which severely impacted HBCU enrollments (US News and World Report, 2014; Johnson et al., 2015).

<sup>15</sup> This information is obtained from a deal's official statement. We include an example of an official statement from our sample in Online Appendix Fig. OA1. Circled in red are some highlights of the deal: the credit rating (AAA), insurer (Ambac), nominal deal amount (\$44,060,000), sample of an individual bond within a package Committee on Uniform Security Identification Procedures (CUSIP) code 704646AA6, and underwriter spread.

<sup>11</sup> Modeling the search problem with discounts is simply a normalization. If investors derive consumption value from holding municipals (e.g., from a school's alumni), one could imagine premia relative to fundamental value, which also increase with broker-dealer's effort costs.

<sup>12</sup> As noted by Ang and Green (2011), individual investors make up the largest set of municipal bond investors. See also O'Hara (2012), (Table 1.7) for more discussion of municipal bond investor demographics.

<sup>13</sup> Almost all states allow interest from municipal bonds to be exempt from state tax (in addition to federal tax), provided that the investor resides in the same state as the issuer.

**Table 1**

Bond issues by year.

This table reports the annual number and percentage of bond issues by historically black colleges and universities (HBCUs) and non-HBCUs.

Bond issues	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
HBCU	2	2	2	1	4	5	1	2	8	4	8	3
Non-HBCU	115	105	78	129	168	200	116	89	143	150	222	231
Year total	117	107	80	130	172	205	117	91	151	154	230	234
Percent HBCU observations	1.96	1.96	1.96	0.98	3.92	4.90	0.98	1.96	7.84	3.92	7.84	2.94
Percent non-HBCU observations	2.84	2.60	1.93	3.19	4.16	4.95	2.87	2.20	3.54	3.71	5.49	5.71
Percent year total observations	2.82	2.58	1.93	3.14	4.15	4.95	2.82	2.20	3.64	3.72	5.55	5.65

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
HBCU	6	5	7	8	9	3	8	8	1	2	3	102
Non-HBCU	183	204	173	195	197	207	219	258	277	181	203	4043
Year total	189	209	180	203	206	210	227	266	278	183	206	4145
Percent HBCU observations	5.88	4.90	6.86	7.84	8.82	2.94	7.84	7.84	0.98	1.96	2.94	100.00
Percent non-HBCU observations	4.53	5.05	4.28	4.82	4.87	5.12	5.42	6.38	6.85	4.48	5.02	100.00
Percent year total observations	4.56	5.04	4.34	4.90	4.97	5.07	5.48	6.42	6.71	4.41	4.97	100.00

From this set, we then search the backer and issuer fields for the names of each HBCU identified in the DCPD. We also search the Committee on Uniform Security Identification Procedures (CUSIP) field in SDC for CUSIP codes associated with HBCUs.<sup>16</sup> We identify 102 HBCU bond issuances, each of which is listed in Fig. 1. Of the remaining 5940 non-HBCU issuances, 4071 are unique issuers and the rest are either non-identifiable or issued by multiple entities. After trimming an additional 28 issues due to missing values for student enrollment, our final data set consists of 4145 bond issuances, 4043 (102) issuances pertaining to non-HBCUs (HBCUs), representing 920 (45) unique institutions. In the average year, about 190 bond issuances are sold to the public, with about five originating from HBCUs. Table 1 tabulates the timeseries patterns of issuances for HBCUs and non-HBCUs separately.

#### 4.2. Underwriting costs

When universities issue bonds, underwriters are employed to both structure the deal and market it to investors. To do this, underwriters issue university debt in packages consisting of multiple bonds of varying amounts, maturities, and other features (Ang and Green, 2011). Thus, for our primary market analysis, we analyze underwriter pricing at the package level, with our sample consisting of the 4,145 deals summarized in Table 2.

In practice, underwriters are compensated in the form of discounts, i.e., purchasing bonds from the issuer for a price lower than it expects to sell them. As indicated in Eq. (1), higher values for search costs are reflected in a larger spread between the price at which the bond package is purchased from the issuer and sold to investors. At the time bonds are issued, the precise value of this quantity cannot be calculated, because the underwriter has not yet sold, or re-issued, the bonds to investors. Accordingly, underwriters provide an estimated selling price for each security in a package called an offering price, which accounts for prevailing rates, issuer risk, the timing and

amount of cash flows, call provisions, and other relevant attributes. Underwriters are compelled by the Internal Revenue Service to “make a bona fide effort to sell a substantial fraction of the bonds at a offering price” (Schultz, 2012, p. 492) although excess (insufficient) demand for a given bond issue can cause selling prices to deviate from offering prices.<sup>17</sup>

Most of our analysis focuses on the difference between offering and purchases prices, known in the bond industry as the underwriter spread or gross spread, as our measure for issuance costs.<sup>18</sup> This is our preferred measure because it is publicly disclosed in the offering’s official statement, and is observable at the time of issue.

Gross spreads are reported in basis points, as a fraction of the bond’s par value or its proceeds. We use the latter normalization, noting that because bonds are typically priced close to par, the estimates would be similar in either case. Table 2 indicates that among university-issued bonds, the average gross spread is 81 basis points, nearly identical to the O’Hara (2012) estimate for the universe of all municipal bonds issued during this time period.

In the table, we also report summary measures for various other issuance characteristics. The average deal is \$35 million, totaling almost \$150 billion over the entire sample. Nearly all deals contain bonds with call provisions (90%), and over half (56%) of the issuances are insured, with 42% securing AAA ratings; 17%, AA ratings; and the balance of deals, either below AA (14%) or unrated. Sinking fund provisions (61%) are sometimes used to provide additional protection against default. Virtually all university-issued securities are revenue bonds, indicating

<sup>17</sup> Even if such deviations are substantial, the relevant comparison for our purposes is whether such markups differ, on average, between HBCUs and non-HBCUs. As we show in Section 5.2, they do not.

<sup>18</sup> Gross spreads are sometimes further broken down into: takedown, which provides compensation for finding buyers, management fee, which pertains to structuring and managing the bond issue, and underwriter expenses, usually involving compliance and other regulatory functions. In our sample, these separate components of gross spreads are seldom disclosed, although for a small number (245), we find that takedown makes up some 62% of the total. This is consistent with industry data confirming that takedown is typically the largest component of spreads (Municipal Securities Rulemaking Board, MSRB, 2013).

<sup>16</sup> HBCU CUSIPs were identified by searching for each HBCU name on the Electronic Municipal Market Access interface ([www.emma.msrb.org](http://www.emma.msrb.org)).



**Table 2**

Bond issuance summary statistics.

This table reports descriptive statistics for our sample of university municipal bond issues. Statistics are reported for all issuances and separately for historically black colleges and universities (HBCU) and non-HBCU issuances: total number of observations (*N*), mean, and standard deviation. The issue-level variables reported are the issue gross spread (*GrossSpread*), the total amount of the issue (*Amount*), the longest maturity in the issue (*MaxMaturity*), a dummy variable that equals one if the issue is callable (*Callable*), a dummy variable that equals one if the issue is insured (*Insured*), dummy variables signifying if the issue is rated AAA (*AAA-rated*), rated AA (*AA-rated*), rated below AA (*BelowAA*), or unrated (*Unrated*), a dummy variable that equals one if the issue is sold to underwriters on a competitive (not negotiated) basis (*CompetitiveBid*), a dummy variable that equals one if the issue has an attached sinking fund (*SinkingFund*), a dummy variable that equals one if the bonds being issued are revenue bonds (*RevenueBond*), the total number of deals done within the syndicate by all members of the syndicate over the past five years (*# of Underwriter Deals*), the total number of underwriters in the syndicate (*# of Underwriters*), the number of full-time equivalent students in attendance at the issue's associated school (*Students*), a dummy variable that equals one if the issuing school uses a financial advisor (*Advisor*), a dummy variable that equals one if the issuing school is public (*Public*), annual alumni giving per student by the issuing school (*Student Giving*), and the issuing school's 2017 Wall Street Journal/Times Higher Education College Rankings. Column 10 displays mean differences between HBCU and non-HBCU variables with standard errors of the difference double-clustered by school and issuance date and statistical significance indicated as \*  $p < 0.10$ , \*\*  $p < 0.05$ , and \*\*\*  $p < 0.01$ .

Variable	All			Non-HBCU			HBCU			Difference
	<i>N</i> (1)	Mean (2)	Standard deviation (3)	<i>N</i> (4)	Mean (5)	Standard deviation (6)	<i>N</i> (7)	Mean (8)	Standard deviation (9)	
<i>Gross spread</i> (basis points)	4145	80.87	46.58	4043	80.59	46.59	102	92.06	45.05	11.47*
<i>Amount</i> (\$1,000,000)	4145	35.13	43.15	4043	35.38	43.55	102	25.24	19.30	-10.14***
<i>Max maturity</i>	4145	23.28	8.01	4043	23.26	8.05	102	24.03	6.25	0.77
<i>Callable</i>	4145	0.90	0.31	4043	0.90	0.31	102	0.91	0.29	0.01
<i>Insured</i>	4145	0.56	0.50	4043	0.55	0.50	102	0.80	0.40	0.25***
<i>AAA-rated</i>	4145	0.42	0.49	4043	0.41	0.49	102	0.54	0.50	0.13**
<i>AA-rated</i>	4145	0.17	0.38	4043	0.17	0.38	102	0.15	0.36	-0.02
<i>Below AA</i>	4145	0.14	0.35	4043	0.14	0.35	102	0.02	0.14	-0.12***
<i>Unrated</i>	4145	0.27	0.44	4043	0.27	0.44	102	0.29	0.46	0.02
<i>Competitive Bid</i>	4145	0.09	0.28	4043	0.09	0.28	102	0.08	0.27	-0.01
<i>Sinking Fund</i>	4145	0.61	0.49	4043	0.61	0.49	102	0.64	0.48	0.03
<i>Revenue Bond</i>	4145	0.96	0.19	4043	0.96	0.19	102	1.00	0.00	0.04***
<i># of Underwriter Deals</i>	4145	78.37	85.53	4043	78.88	86.17	102	57.87	50.96	-21.01***
<i># of Underwriters</i>	4145	2.14	2.12	4043	2.14	2.13	102	2.14	1.61	-0.01
<i>Students</i> (/1000)	4145	9.79	10.03	4043	9.94	10.11	102	3.97	2.45	-5.97***
<i>Advisor</i>	4145	0.42	0.49	4043	0.41	0.49	102	0.51	0.50	0.10
<i>Public</i>	4145	0.40	0.49	4043	0.40	0.49	102	0.57	0.50	0.17*
<i>Student Giving</i> (/1,000)	4145	4.97	4.80	4043	5.02	4.82	102	3.11	3.02	-1.91***
<i>School Ranking</i>	4145	54.90	17.39	4043	55.17	17.37	102	44.47	14.62	-10.70***

that they are backed by a stream of cash flows originating from a specific asset.<sup>19</sup>

The table reports summary statistics for underwriters and issuers. The average number of underwriters in the syndicate is approximately two. The total number of university-issued deals by all members of the syndicate over the past five years in our sample (e.g. for issuances in 1997, considering total issuances during 1993–1997) is 78 deals, on average. Financial advisors, which, among other things, provide assistance to issuers in selecting underwriters, are employed in 42% of the deals. The typical university has about ten thousand students enrolled, with about 40% being public schools. Giving among alumni averages about \$5000 per student.

Our main analysis compares gross spreads between bonds issued by HBCUs and non-HBCUs, while attempting to control for sources of heterogeneity related to school quality, issuer reputation, bond characteristics, geography, and other factors. Table 2 foreshadows our regression results, with HBCU gross spreads being higher by 11 basis

points ( $t = 1.87$ ,  $p = 6.2\%$ ), an increase of 15% relative to average gross spreads for non-HBCUs. Examining the other variables, some of this could reflect differences in issue size (HBCU amounts are lower), student enrollment (HBCUs are smaller), giving rates (HBCU alumni give less), or the number of past deals by the underwriting syndicate (HBCU underwriters appear less experienced). HBCUs are also more likely to be public universities, which, as shown by Boland and Gasman (2014), can further impair their creditworthiness via reduced access to public funds.

HBCUs are much more likely to purchase insurance (80% versus 55% for non-HBCUs), a finding that explains, in part, their superior distribution of credit ratings. Where 54% (69%) of deals issued by HBCUs are rated AAA (AA or better), these same figures are 41% and 58% for those issued by non-HBCUs. Only 2% of rated HBCU deals have credit ratings lower than AA, compared with 14% for other issuers. HBCUs are also more likely to use financial advisors (51% versus 41%), which, given that advisors tend to improve deal terms including gross spreads (Vijayakumar and Daniels, 2006) would appear to close, instead of widen, the gap in underwriting costs. These differences are useful to keep in mind when assessing the all-in gap in funding costs HBCUs face. Although data unavailability pre-

<sup>19</sup> The primary alternative is a general obligation bond, most often seen among municipalities with taxing authority.

vents a precise measurement, the additional cost of obtaining credit insurance or retaining financial advisors, or both, would appear to accrue disproportionately to HBCUs and, therefore, widen the overall gap between them and comparable non-HBCUs.

#### 4.3. Regression results

To more formally characterize the difference in gross spreads between HBCUs and other universities, we estimate the model

$$\begin{aligned} \text{Gross Spread} = & \alpha_0 + \alpha_1 \cdot \text{HBCU} + \beta_1 \cdot \text{Bond Characteristics} \\ & + \beta_2 \cdot \text{School Characteristics} + \beta_3 \cdot \text{state} \\ & \times \text{year fixed effects} + \varepsilon. \end{aligned} \quad (2)$$

The number of observations is 4145, one for each university-backed issue in our sample. The main coefficient of interest is *HBCU*, an indicator variable for whether the issuance is from a historically black college or university. A hypothesis based on search costs being elevated for race-based reasons predicts a positive sign on the *HBCU* coefficient,  $\alpha_1$ , as it represents the incremental gross spread charged for HBCU-issued bond packages, after controlling for various school, bond, underwriter, and geographic attributes we expect to be correlated with spreads charged by underwriters. As a benchmark, Column 1 of Table 3 shows the results when only the *HBCU* indicator is included as a covariate, replicating the univariate comparison shown in Table 2. Progressive columns sequentially incorporate controls for potentially confounding factors. While all results in Table 3 are clustered by both issuing school and day, inferences are nearly identical if we instead cluster by issuing school and week or by issuing school and month.

When interpreting the *HBCU* coefficient, one possible concern is geographic heterogeneity in costs that underwriters can face when attempting to sell bonds. Because of tax motivations, strong incentive exists for municipal bond investors to reside in the same state as the issuer (Schultz, 2013). Consequently, placing bonds in larger or richer states can be easier for underwriters, resulting in lower gross spreads. Given that HBCUs are regionally concentrated amongst some of the poorest states in the US, perhaps the *HBCU* indicator captures, in whole or part, cross-state heterogeneity in wealth, size, education, tax rates, political stability (Butler et al., 2009), or other relevant features of the potential investor base. Another possibility is that HBCUs tend to concentrate their bond issues in times when gross spreads are high (in aggregate).

Both possibilities are addressed by the inclusion of state  $\times$  year fixed effects, shown in Column 2. As seen by the dramatic increase in  $R^2$  from just 0.1% to 50.9%, the fit of the model improves substantially. Moreover, the magnitude on the *HBCU* coefficient nearly doubles to 21 basis points ( $t = 3.21$ ,  $p < 0.1\%$ ).<sup>20</sup> In the presence of these dynamic geographic controls, the *HBCU* effect is estimated within the

state-year unit, mitigating the impact of state-level wealth, demographics, tax rates, or other similar factors.

Column 3 adds to the regression controls for issue size and other features of the issue, including the credit rating if one exists (and an indicator for no rating otherwise), insurance, and sinking fund provisions. The extant literature shows that transaction costs in bond markets decrease in size and increase in time to maturity, instrument complexity, and credit risk (Harris and Piwowar, 2006). We find higher gross spreads for smaller issuances or those with longer maturities, or both, or complex valuation features such as callability and sinking fund provisions.<sup>21</sup> Measures of credit risk (beyond credit ratings, which are already included) also are significant predictors of gross spreads. Uninsured bonds have higher gross spreads, consistent with Butler (2008), as do revenue bonds, which are backstopped by the cash flows of particular projects instead of the university as a whole. Accounting for these contractual features of the bond issue, while again improving the fit of the model ( $R^2 = 61.2\%$ ), leaves the *HBCU* coefficient nearly unchanged at 19 basis points ( $t = 3.20$ ,  $p < 0.1\%$ ).

As shown in Table 2, HBCUs tend to use underwriting syndicates with less experience, with the typical HBCU syndicate having participated in 58 combined deals over the most recent five years versus 79 for non-HBCUs. To the extent that such differential experience reflects disparities in operating efficiency or rents, then the *HBCU* effect could reflect, at least in part, differences in underwriter efficiency.

Larger syndicates could have better developed networks of potential investors and, in other ways, likely enjoy economies of scale. The effect of such differences on transactions costs emerge immediately from the model presented in Section 3. Fixed cost of underwriting ( $k$ ) maps directly into transactions costs, and extending this to incorporate marginal costs is trivial. Suppose, for example, that underwriter  $i$ 's effort ( $e$ ) function is given by  $h_i^2 e + k_i$ , where the marginal cost of selling ( $h$ ) differs across underwriters  $i$ . In this case,  $P_{\text{sell}}^* - P_{\text{buy}}^* = h_i \gamma + \frac{k_i}{Q}$ , so that transactions costs increase in both marginal ( $h_i$ ) and fixed costs ( $k_i$ ).<sup>22</sup> Another potential determinant of gross spreads that may differ across underwriters is market power, a feature

Carolina, and Virginia, where the average gross spread for non-HBCUs is 71 basis points. Including state fixed effects instead of state  $\times$  year results in an estimated coefficient on the *HBCU* indicator of 17 basis points.

<sup>21</sup> Other examples of complexity occasionally include issuing a floating rate bond and coupling this with a floating for fixed swap contract. The vast majority of deals in our sample involve simple fixed-rate standard coupon (with no accompanying derivatives), with the percentage being essentially identical for HBCU (78.4%) and non-HBCU bonds (78.3%). Adding an indicator for fixed-rate bonds to the specification does little to the *HBCU* effect. In this case, the estimated coefficient is 14.8 basis points ( $p < 0.01$ ).

<sup>22</sup> With perfect competition, the underwriter with the lowest cost could capture the entire market at  $t = 0$ . A less stylized model could appeal to incomplete or costly information acquisition by issuers, or both, or other frictions that allow heterogeneous suppliers to simultaneously exist in equilibrium.

<sup>20</sup> The reason that the estimated coefficient increases is that HBCU-issued bonds are disproportionately issued from states in which gross spreads for non-HBCUs are lower than average. Over half (58 out of 102) of HBCU-issued bonds are issued in Alabama, Georgia, Mississippi, North

**Table 3**

Determinants of gross spread.

This table reports estimates of regressions of underwriter gross spreads on issue, underwriter, and school characteristics as outlined in Table 2 and issuance rating, issuance insurer, and issuer state-year fixed effects. Each regression observation represents one municipal bond issuance. Column 6 restricts the sample to only AAA-rated issuances. Column 7 and 8 restrict the sample to only insured issuances. Regression standard errors are in parentheses, are robust to heteroskedasticity, and are double-clustered by school and issuance date. Indicator variables for missing giving rates and school rankings are included in Columns 5–8 (Cohen and Cohen, 1985) and are not tabulated. Statistical significance is indicated as \*  $p < 0.10$ , \*\*  $p < 0.05$ , and \*\*\*  $p < 0.01$ .

Variable	All					AAA only	Insured only	
	Gross spread (1)	Gross spread (2)	Gross spread (3)	Gross spread (4)	Gross spread (5)	Gross spread (6)	Gross spread (7)	Gross spread (8)
HBCU	11.47* (6.15)	21.06*** (6.56)	18.61*** (5.82)	17.99*** (5.79)	15.72*** (5.27)	15.58* (8.02)	17.96*** (5.48)	16.98*** (5.69)
Log(Amount)			−11.79*** (0.80)	−11.28*** (0.90)	−9.14*** (0.95)	−5.28*** (1.52)	−5.88*** (1.28)	−5.58*** (1.33)
Log(Maturity)			13.66*** (1.66)	13.24*** (1.67)	12.65*** (1.67)	2.45 (3.54)	4.22 (3.24)	5.11 (3.20)
Callable			6.05** (2.42)	6.17** (2.42)	5.94** (2.46)	4.06 (3.48)	3.71 (3.16)	3.81 (3.27)
Insured			−9.23*** (2.12)	−9.38*** (2.14)	−15.34*** (2.03)	7.71 (4.70)	0.00 (0.00)	0.00 (0.00)
Competitive Bid			3.38 (3.83)	4.03 (4.10)	5.00 (3.96)	0.77 (6.00)	3.45 (5.36)	2.60 (5.11)
Sinking Fund			11.98*** (1.63)	12.18*** (1.62)	10.70*** (1.59)	3.74 (2.39)	2.28 (2.09)	1.17 (2.04)
Revenue Bond			19.10*** (5.70)	18.85*** (5.39)	21.98*** (5.33)	8.93 (13.94)	13.60 (10.49)	8.53 (9.38)
Log(# of Underwriter Deals)			−3.81*** (0.82)	−3.25*** (0.82)	−1.95* (1.05)	−1.47 (0.92)	−2.91*** (1.04)	−2.91*** (1.04)
Log(# of Underwriters)			3.31** (1.68)	3.18* (1.64)	1.18 (2.18)	−1.06 (2.11)	0.53 (2.06)	0.53 (2.06)
Log(Students)				0.01 (1.24)	−1.59 (1.63)	0.63 (1.51)	0.32 (1.59)	0.32 (1.59)
Advisor				−5.57*** (1.79)	−8.23*** (2.89)	−8.00*** (2.65)	−6.87** (2.88)	−6.87** (2.88)
Public				2.68 (2.96)	8.04** (4.02)	5.68 (3.47)	6.46* (3.54)	6.46* (3.54)
Log(Student Giving Rate)				−1.59 (1.20)	0.70 (1.65)	1.44 (1.49)	1.56 (1.53)	1.56 (1.53)
School Ranking				−0.28*** (0.08)	−0.17 (0.11)	−0.22** (0.10)	−0.21** (0.10)	−0.21** (0.10)
Rating fixed effects	No	No	Yes	Yes	Yes	No	Yes	Yes
Insurer fixed effects	No	No	No	No	No	No	Yes	Yes
State-year fixed effects	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	4145	4145	4145	4145	4145	1729	2314	2076
R <sup>2</sup>	0.001	0.509	0.612	0.616	0.628	0.719	0.735	0.733

we leave unmodeled but could differ between underwriters.<sup>23</sup>

To accommodate potential differences in marginal costs ( $h_i$ ), we include in Column 4 the number of university deals done by all members of the syndicate (in total) over the most recent five years. Consistent with Butler (2008), a strong negative relation exists between the number of deals and gross spreads, suggesting that syndicates with more (aggregate) experience can have a cost advantage. After controlling for experience, gross spreads are positively associated with the number of underwriters in a syndicate, which can reflect higher total fixed costs ( $k_i$ ). We observe a strongly positive relation with gross spreads, consistent with this interpretation. In any case, neither control has

much of an effect on the HBCU coefficient, which remains stable at 18 basis points ( $t = 3.11$ ,  $p < 0.1\%$ ).

We have experimented with additional ways of measuring underwriter quality, the results of which are reported in Online Appendix Table OA1. For example, in Column 1, we augment our existing specification with the lead underwriter's lagged five-year volume of all municipal bonds underwritten (4,335 on average), not limited to issuers in higher education, and the lead underwriter's experience in the same state as the issuer (382, on average). Neither coefficient estimates are significant and, more important, the estimated HBCU effect is nearly identical (16 basis points,  $t = 2.9$ ). The next column excludes from the sample the 7.5% of deals in which one of more underwriters that are affiliated with racial minorities (inferred by Google searches), under the joint hypothesis that HBCUs could be more likely to use minority-affiliated underwriters (they are; 33.3%) and that these underwriters could be less efficient. Yet, among this subset, the coefficient is nearly

<sup>23</sup> Bergstresser et al. (2013) find that issuers from more ethnically and religiously fractionalized counties pay higher yields on their municipal debt. They find some evidence that this is due to less efficient monitoring of the bond underwriting process.

identical to that in Column 1 (16 basis points,  $t = 2.8$ ) and to the estimates reported in Table 3. Column 3 shows the results with fixed effects for each unique underwriter in the syndicate (both lead and secondary), resulting in a point estimate of 11 basis points ( $t = 2.4$ ), nearly identical to the univariate difference in the first row of Table 2.

Cash flow characteristics aside, suppose that a school's reputation influences an investor's willingness to own its bonds. Though outside most mainstream asset pricing theory, there are two reasons to admit this possibility. The first is the Merton (1987) investor recognition hypothesis, which is based on the assumption that investors are unlikely to purchase securities issued by unknown firms. Applied to the municipal context, this assumption would increase underwriters' search costs for lesser-known universities, such as the small and provincial HBCUs.

The second possibility is that investors derive utility directly from owning securities, beyond their financial returns. This assumption forms the basis for the growing class of socially responsible funds, which include or exclude certain securities based on a priori criteria such as avoiding defense firms or investing in green energy companies. Hong and Kacperczyk (2009) explore this idea among equities, showing that sin stocks, i.e., firms involved in the production of alcohol, tobacco, or gambling, tend to be less widely held and, consequently, experience higher returns. Among universities, the idea is even more intuitive, especially among a school's alumni. To the extent that buying a school's bonds confers consumption value directly, search costs can be lower for highly reputed schools with larger and richer alumni.

To address this possibility, Column 5 of Table 3 shows the results when we augment our specification with various measures intended to proxy for school reputation, financial sophistication of its administrators, and alumni wealth. The school ranking variable corresponds to the Wall Street Journal/Times Higher Education (WSJ/THE) College Rankings overall score in 2017, in which higher values indicate better university reputations. Judging by the negative coefficient on school ranking ( $-0.28$ ,  $p < 0.01$ ), more prestigious schools are associated with lower gross spreads, suggesting that underwriters perceive these as being less costly to place with investors.<sup>24</sup>

Likewise, whether a university enlists the services of a financial advisor during its bond offering (perhaps an indication of the experience or financial sophistication of its administration) is negatively associated with underwriting spreads, confirming prior work by Vijayakumar and Daniels (2006). Other school-level controls include the size of the school's student body, giving rates by alumni, and an indicator for being a public institution. Whereas all of these are significant in isolation, the WSJ/THE rankings subsume the explanatory power of each.<sup>25</sup>

Despite the addition of these variables, the estimated magnitude of the HBCU indicator remains economically

and statistically significant. With the full family of controls for time, geography, contractual features, underwriter activity, and school characteristics, HBCUs are charged 15.7 basis points ( $t = 2.98$ ,  $p < 0.1\%$ ) more to issue bonds.

The final issue we consider is that HBCU-issued bonds could have, or are perceived to have, elevated credit risk, either through higher default or lower recovery rates. Although Columns 3–5 already include multiple controls for default risk (e.g., credit ratings, sinking fund provisions, school enrollment, etc.), these controls are likely imperfect. Columns 6–8 provide sharper tests to rule out residual concerns that HBCU-issued bonds are more likely than others to default.

Column 6 begins by considering only the subset of bond issuances that receive a credit rating of AAA (the highest possible rating) at issuance.<sup>26</sup> In a comprehensive study of municipal bond defaults from 1970 to 2011, Moody's finds that in the universe of all municipal issuers having obtained a rating of AAA, there were zero instances of default over the ensuing five years.<sup>27</sup> Hence, focusing on this sample should significantly limit any remaining heterogeneity in the credit risk of issuers. Despite cutting the sample by more than half, the estimated coefficient on HBCU remains stable at about 16 basis points.<sup>28</sup> The reduction in statistical significance ( $t = 1.94$ ,  $p = 5.3\%$ ) is due mostly to reduced precision as a result of smaller sample size ( $5.3 \times \sqrt{\frac{4145}{1729}} \approx 12.7$ ).

Column 7 considers only insured bonds and includes insurance company fixed effects. The average HBCU effect is identified by comparing gross spreads for HBCUs and non-HBCUs commonly insured by the same entity. This renders school-specific risk less relevant as the insurance company adds a layer of payment in the event of default. Here, too, we observe a nearly identical magnitude as before, with gross spreads for HBCU issued bonds being 18 basis points higher ( $t = 3.28$ ,  $p < 0.1\%$ ). Lest one be concerned about bond insurance being less credible during and after the financial crisis, Column 8 repeats the specification, but only for years 2007 and prior. Again, the coefficient and statistical significance remains virtually unchanged at 17 basis points ( $t = 2.98$ ,  $p < 0.1\%$ ).

<sup>26</sup> The three primary credit rating agencies differ in their nomenclature, with Standard and Poor's and Fitch using all capital letters (e.g., AAA, AA) and Moody's using a combination of upper- and lowercase letters and sometimes with numbers (e.g., Aaa, Aa1). Throughout the paper, we report ratings using the former convention, relying on the close correspondence between the Moody's classification scheme and that of the other two.

<sup>27</sup> See Exhibit 28, in US Municipal Bond Defaults and Recoveries 1970–2016, published by Moody's on June 27, 2017.

<sup>28</sup> Several of the coefficients become insignificant or even flip sign relative to previous columns. For example, neither *Revenue Bond* nor *Sinking Fund*, both measures of creditworthiness, are significant, suggesting that both are subsumed by a AAA rating. Also, the estimated coefficient on *Insured* becomes positive in this sample, indicating that among AAA-rated bonds, selling costs are lower for issuers with AAA ratings themselves, as opposed to obtaining this rating via insurance. Whether this represents differences in perceived credit risk, school quality, or other factors that influence investor willingness to pay, 100% of the HBCU-issued bonds with AAA ratings are insured, so that the coefficient on *Insured* has no impact on the HBCU coefficient.

<sup>24</sup> WSJ/THE reputation score are available for 75% of the schools in our sample. In cases of missing data, we set the value of these observations to the sample mean, and include a missing-value dummy variable (Cohen and Cohen, 1985).

<sup>25</sup> We thank an anonymous referee for this suggestion.

**Table 4**

Matching estimator for historically black colleges and universities (HBCU) treatment effects.

Panel A reports estimates of bias-adjusted average treatment effects on the treated for a nearest neighbor matched sample of 71 HBCU (treated) and non-HBCU (untreated) bond issue gross spreads (see [Abadie and Imbens, 2011](#)). Panel B reports the covariate means, standardized differences, and variance ratios for variables corresponding to our matched sample. Matches are derived from the high credit quality subsample (rating of AAA or AA or unrated with insurance) using a nearest neighbor matching estimator (see [Abadie and Imbens, 2006](#)) which matches on issue size, underwriter experience, school enrollment, alumni giving rates, school ranking, whether the bond was insured, and the year of issue. Exact matches were required on state and public school status. See, Appendix Table OA2 for a listing of treatment and control schools.

Panel A: Bias adjusted treatment effect on the treated (ATET)				
	ATET	Standard error	p-value	95% Confidence interval
	(1)	(2)	(3)	(4)
Estimated value	17.57	5.58	0.002	[6.63,28.52]
Panel B: Covariate balance diagnostics				
Variable	HBCU mean (1)	Non-HBCU mean (2)	Standardized difference (3)	Variance ratio (4)
<i>Log(Amount)</i>	3.04	3.21	−0.16	1.15
<i>Log(# of Underwriter Deals)</i>	3.57	4.02	−0.15	0.95
<i>Insured</i>	0.92	0.77	0.00	1.00
<i>Log(Students)</i>	8.24	9.19	−0.36	0.44
<i>Year</i>	2000.80	2000.49	−0.19	1.61
<i>Log(Student Giving Rate)</i>	7.31	7.63	−0.05	1.59
<i>School Ranking</i>	42.93	53.38	−0.18	1.20

#### 4.3.1. Matching

As a nonparametric alternative, we utilize a nearest neighbor matching estimator for treatment effects ([Abadie and Imbens, 2006](#)). We take HBCU status as the treatment and attempt to match each HBCU issue to a non-HBCU issue, based on statistically significant univariate differences (at the 5% level) between HBCUs and non-HBCUs in [Table 2](#). To minimize credit risk differences, we first condition into a high credit quality subsample ( $N = 2845$ ), with the issuance rated AAA or AA and, if not rated, insured. We then match to the nearest neighbor on issue size, underwriter experience, school reputation, school enrollment, alumni giving rates, bond insurance, and the year of issue. We require exact matches on state of issue and public school status. Successful matches were obtained in 71 cases.<sup>29</sup> In the first two columns of [Table 4](#), Panel B, we tabulate descriptive statistics for the match variables, from which trivial differences are observed. Formal covariate balance assessment, shown in Columns 3 and 4, reveals standardized differences close to zero and variation ratios close to one for the majority of covariates.

Panel A of [Table 4](#) reveals the average treatment effects on the treated (HBCU), after bias adjustment for continuous covariates ([Acharya et al., 2016](#)), is 17.6 basis points ( $p = 0.2\%$ ), similar to results shown in [Table 3](#). This result mitigates concerns about ordinary least squares not allowing for a sufficiently flexible relation between gross spreads and the relevant covariates. An additional benefit of this

exercise is that it allows us to name the HBCU matches, which are listed in [Table OA2](#) of the Online Appendix. Generally, non-HBCU controls are small, regional, and relatively obscure, e.g., Jacksonville State University (Jacksonville, Alabama), Rollins College (Winter Park, Florida), and Brenau University (Gainesville, Georgia). This helps address concerns about school attributes or reputation, beyond their impact on credit risk, conflating the relation between HBCU status and gross spreads.

#### 4.3.2. Remaining unobservables

[Oster \(2019\)](#) builds upon [Altonji et al. \(2005\)](#) by deriving a bias-adjusted true treatment effect in the presence of unobservables ( $\alpha^*$ ) as a function of estimated treatment effects (in our case  $\alpha$ , the HBCU coefficient) and model explanatory power ( $R^2$ ) without and with controls. This calculation requires an assumption about the coefficient of proportionality in the proportional selection relation ( $\delta$ ) and an assumption about the hypothetical explanatory power of a regression that includes both observables and unobservables ( $R_{max}$ ).

Treatment effect estimates and model explanatory power without (with) controls are presented in [Table 3](#), Column 1 (5). We assume equal selection ( $\delta = 1$ ), implying unobservables are not more important than observables in explaining the treatment. Without a strong view on the theoretical maximum  $R^2$  in our setting, we consider the following of values tending toward full explanatory power: 0.70, 0.80, 0.90 and 1.00. Using these inputs, the bias-adjusted treatment effects ( $\alpha^*$ ) are 16.2, 17.5, 19.1 and 21.1, respectively. These estimates suggest that were we able to better control for residual unobserved heterogeneity, the estimated HBCU effect would be slightly larger than those reported in [Table 3](#), not smaller. Also, the consistency between the matching algorithm above and the

<sup>29</sup> Of the 102 deals involving HBCU issuers, conditioning into high credit quality results in a loss of 14 observations. The remaining 88 – 71 = 17 unmatched HBCU observations are associated with somewhat smaller deal amounts and lower student enrollments, compared with the successful matches. These differences are modest, on the order of the differences observed between the 71 matching HBCUs and 71 control non-HBCUs.



exercise here, both of which give treatment effects in the neighborhood of 18 basis points.

#### 4.4. Cross-sectional analysis

To this point, our analysis has found that HBCU-issued bonds pay higher gross spreads compared with otherwise similar schools and that various controls for creditworthiness, bond features, underwriting syndicate characteristics, geographic variation, and school or alumni quality provide a poor account for this finding. In this section, we use geographic variation to explore two additional tests consistent with the hypothesis that investors' racial animus, at least in part, is responsible for the higher search costs faced by underwriters when attempting to sell HBCU-issued bonds. The first test (Section 4.4.1) explores cross-state differences in anti-black racial resentment, and the second (Section 4.4.2) examines the impact of state-tax rates on the HBCU effect.

##### 4.4.1. Racial animus

We measure cross-state differences in racial animus against blacks and then ask whether HBCU-issued bonds in the worst-offending states have even higher gross spreads, compared with HBCUs in locations with less racial animus.<sup>30</sup>

To measure variation in racial animus across states, we derive a composite of five variables. The first two metrics, racial resentment and opposition for affirmative action, are derived from the Cooperative Congressional Election Study (CCES; Ansolabehere, 2012). The CCES is a large survey of American adults by county, and recent research links current variation in racial resentment and opposition for affirmative action to geographic variation in slavery in the year 1860 (Acharya et al., 2016). The third measure captures state-level variation in racially charged Google searches, which, as shown by Stephens-Davidowitz (2014), inversely predict state-level vote shares obtained by Barack Obama in both the 2008 and 2012 elections. The fourth measure compares the state-level white vote share for Democratic presidential nominee Obama in 2008 to the white vote share for the 2004 Democratic nominee John Kerry. Vote share is measured from exit polling of Edison/Mitofsky with larger decreases capturing more animus. The final metric follows Zook (2012) and captures the geographic dispersion of geocoded racist Tweets in immediate response to Obama's reelection in 2012.

We rank all 50 states, in addition to the District of Columbia, on each metric from 1 (highest animus) to 51 (lowest animus). We designate states ranking in the top ten on each of the five metrics as high racism states. Online Appendix Table OA3 provides the complete ranking, from which a structural break separating Alabama, Louisiana, and Mississippi from Georgia and the other

states is clearly apparent.<sup>31</sup> While these states account for only 4.7% of all university issuances, they are home to over one-fourth (26%) of issuances by HBCUs.

Fig. 2 shows the basic result. On the left-hand side, we plot the average gross spreads for non-HBCUs (dark gray, 81 basis points) and HBCUs (light gray, 87 basis points) for states other than Alabama, Louisiana, and Mississippi. The right-hand side of the figure plots this same difference ( $106 - 82 = 24$  basis points) for these three states. The difference is over three times larger in states with high levels of racial animus (24 versus 7 basis points). Also, spreads for non-HBCU schools are essentially the same in the left- and right-hand sides of the figure (81 versus 82 basis points), suggesting that the difference in differences is driven almost entirely by changes in HBCU gross spreads.

To more formally examine these differences, Columns 1 and 2 of Table 5 show the results of reestimating our fully specified model (Column 5 of Table 3), for high-animus and low-animus states. The first regression indicates an estimated gross spread premium for HBCUs of 29.6 basis points, with a  $p$ -value less than 1%, despite containing less than 5% percent of the total observations.<sup>32</sup> Although the effect remains economically and statistically significant in Column 2, the HBCU effect among the low-animus sample is about one-third the size, at 10.5 basis points ( $t = 2.5$ ). An  $F$ -test reveals the difference in HBCU coefficients is significant at the 7% level.

##### 4.4.2. Tax privilege

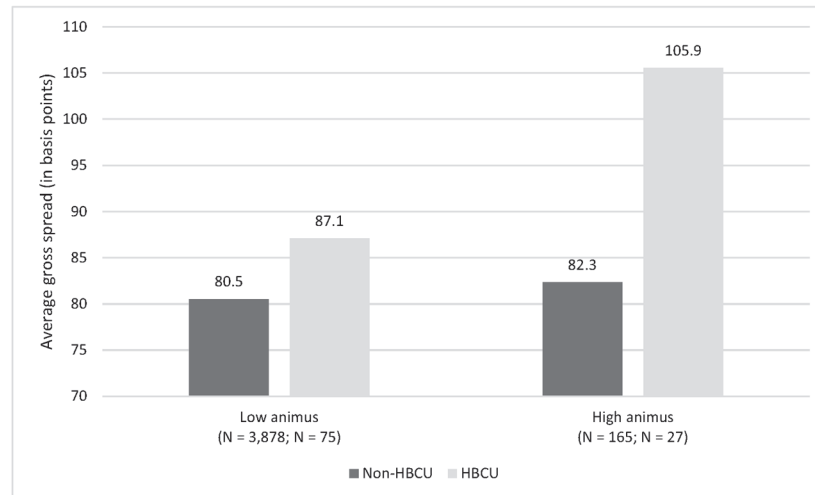
Our second cross-sectional tests involves a comparison between states differing in the incentive for resident investors to own locally issued municipal bonds. The most significant consideration, as described by Schultz (2012), is the extent to which interest payments are subject to state-level taxation. In most cases, states treat interest received by investors from issuers within same state, e.g., a North Carolina resident holding a bond issued by Duke University, as exempt from state taxes. Were this same investor to receive an interest payment from a bond issued by Emory University (located in Georgia), interest payments would be subject to state tax. Although this creates an incentive for municipal bonds to be held by local investors, the effect (all else equal) is strongest for states with high tax rates, such as California, and weakest for those with low ones, such as Texas.

A recent paper by Babina et al. (2017) combines data on state-level treatment of interest payments and tax rates to create an index of tax privilege for each US state. As they show, a higher tax privilege creates a more localized market for a state's municipal bond issuers, which is a key ingredient of the search cost hypothesis. When such tax incentives are minimal, the investor base expands to include investors from other states. Thus, the HBCU effect is

<sup>30</sup> Other recent studies also exploit cross-state variation in racial animus to study taste-based race discrimination with respect to wage differentials faced by blacks (Charles and Guryan, 2008) and differential access to credit card financing by black entrepreneurs (Chatterji and Seaman, 2012).

<sup>31</sup> This break occurs primarily because the states remain demographically unchanged with the majority of the whites being Southern born, compared with, say Georgia, where a much larger fraction of whites are non-native and not culturally Southern (Times-Picayune, 2008).

<sup>32</sup> All bonds in the high-animus sample are revenue bonds, which results in this variable dropping out of the estimation.



**Fig. 2.** Average gross spreads. This figure plots the average gross spreads in basis points of bond issuances by historically black colleges and universities (HBCUs) and non-HBCUs located in states with high racial animus versus low racial animus.

expected to be strongest primarily among states that offer a significant tax advantage for owning same-state bonds.

Ideally, the data would permit us to conduct a  $2 \times 2$  sort on racial animus and tax privilege, the diagonal elements of which should show the greatest differences. Unfortunately, tax privilege is almost uniform across the high-animus states of Alabama, Louisiana, and Mississippi. Thus, Columns 3 and 4 compare high tax privilege states with low tax privilege states, except for these three.<sup>33</sup> The HBCU effect is large and significant (18.4 basis points,  $p < 0.01$ ) among states with high tax privilege and virtually absent otherwise (4.63 basis points,  $p = 0.23$ ). An  $F$ -test rejects equivalence of the HBCU coefficient in high and low tax privilege states at the 8% level of significance.

### 5. Robustness and other considerations

The analysis thus far has focused on the interaction between HBCUs and bond underwriters. HBCUs pay more in underwriting costs, particularly in the Deep South, little of which appears to reflect issuer or bond fundamentals. In this section, we continue to trace the flow of bonds, first from underwriters to investors trading in the secondary market (Section 5.2) and then, months or even years later, between investors (Section 5.3). These additional tests es-

tablish robustness to our benchmark findings, provide perspective into the role played by financial intermediaries, and allow us to consider a richer set of outcome variables, such as the time required for a dealer to re-sell a bond (Section 5.4). In Section 5.5, we relate our findings to the literature on labor market discrimination, drawing on Becker (1957).

#### 5.1. Trade-level data

All analysis prior to now has been conducted at the deal level.<sup>34</sup> The analysis in this section disaggregates observations into individual trades, using data extracted from the Municipal Securities Rulemaking Board (MSRB). The secondary trading sample begins January 31, 2005 and ends June 30, 2010.<sup>35</sup> We exclude dealer-to-dealer transactions to isolate trades involving retail customers, remove 5,705 duplicate trades, and winsorize price changes, par values, and sales yields at the 1% and 99% thresholds.

We create two trade-level data sets, which are analyzed in Sections 5.2 and 5.3, respectively. The first is intended

<sup>34</sup> This is the natural unit of observation, as a single gross spread is reported for each deal.

<sup>35</sup> Although some trading data are available beginning in 1999, traders lacked uniform access to real-time prices until MSRB Rule G-14 took effect on January 31, 2005. Bond prices provide important information for investors, which in turn facilitate trading volume and liquidity in the secondary market (Bessembinder et al., 2006). Prior to Rule G-14, bonds that traded relatively infrequently (such as HBCUs) were more prone to delayed reporting of trade information. This delay potentially generates a differential information environment for HBCUs relative to other bonds.

<sup>33</sup> See the final column in Table OA3 for a list of each state's tax privilege measure from Babina et al. (2017). We designate each state outside the Deep South as low tax privilege when below the median (6) and high otherwise.

**Table 5**

Racial animus, tax privilege and the historically black colleges and universities (HBCU) effect.

Columns 1 and 2 report the same model as in Table 3, Column 5, restricting the sample in Column 1 to issuances originating in high racial animus states and in Column 2 to issuances originating in low racial animus states. Columns 3 and 4 restrict the sample to only low racial animus states, and further condition the sample into high-tax privilege states (Column 3) and low-tax privilege states (Column 4). States with tax privilege less than the median value of six per Appendix Table OA3 are considered low tax privilege and remaining states are considered high tax privilege. Indicator variables for missing giving rates and school rankings are included (Cohen and Cohen, 1985) and are not tabulated. Standard errors are in parentheses, are robust to heteroskedasticity, and are double clustered by school and issuance date. Statistical significance is indicated as \*  $p < 0.10$ , \*\*  $p < 0.05$ , and \*\*\*  $p < 0.01$ .

Variable	High animus, Gross spread (1)	Low animus, Gross spread (2)	High-tax privilege, Low animus, Gross spread (3)	Low-tax privilege, Low animus, Gross spread (4)
HBCU	29.63*** (10.94)	10.52** (4.20)	18.35*** (7.00)	4.63 (3.83)
Log(Amount)	-11.81** (5.25)	-8.92*** (0.99)	-10.57*** (1.34)	-6.95*** (1.37)
Log(Maturity)	13.50 (13.47)	12.47*** (1.69)	14.78*** (2.65)	10.20*** (2.17)
Callable	-12.57 (11.83)	6.53*** (2.53)	8.47** (3.83)	3.06 (3.30)
Insured	-17.79 (16.27)	-15.06*** (2.04)	-14.93*** (2.97)	-15.52*** (2.63)
Competitive Bid	15.14 (10.55)	4.60 (4.17)	-0.69 (5.04)	12.92* (6.94)
Sinking Fund	10.84** (4.98)	10.72*** (1.64)	10.74*** (2.49)	10.55*** (2.05)
Revenue Bond	- (0.84)	21.75*** (5.28)	20.80*** (6.16)	20.37** (8.45)
Log(# of Underwriter Deals)	0.84 (2.84)	-3.55*** (0.84)	-2.63** (1.25)	-4.92*** (1.10)
Log(# of Underwriters)	-4.27 (5.33)	3.59** (1.69)	0.77 (2.29)	8.28*** (2.34)
Log(Students)	10.13 (7.71)	-0.11 (1.25)	3.13 (1.90)	-3.92** (1.59)
Advisor	-25.10*** (8.40)	-5.03*** (1.82)	-5.26* (3.00)	-4.55** (2.30)
Public	-21.02 (17.15)	2.70 (3.00)	1.14 (4.28)	4.03 (3.93)
Log(Student Giving Rate)	5.38 (5.94)	-1.79 (1.20)	-0.91 (1.80)	-2.62* (1.56)
School Ranking	-1.85*** (0.52)	-0.24*** (0.08)	-0.29*** (0.11)	-0.18* (0.10)
Rating fixed effects	Yes	Yes	Yes	Yes
State-year fixed effects	Yes	Yes	Yes	Yes
Number of observations	192	3953	1996	1957
R <sup>2</sup>	0.689	0.630	0.626	0.640
p-value of HBCU coefficient difference Column 1 versus Column 2		0.07		
Column 3 versus Column 4				0.08

to track newly issued bonds, i.e., those that soon after being purchased by underwriters are placed with investors. Following Schultz (2012), this sample starts 25 days prior to the official issuance date and ends ten days afterward. There are 11226 unique CUSIP identifiers after imposing these criteria. The second sample contains only trades for seasoned bonds. For this sample construction, we follow Cestau et al. (2013) and consider all trades occurring 60 days (or more) after initial issuance, resulting in 16096 CUSIPs. This permits comparison with their study, though alternative cutoffs (e.g., ten days after issuance) make almost no difference to the results.

### 5.2. Markups on newly issued bonds

In Section 4, we took gross spreads as our estimate for an underwriter's revenues when issuing a bond. From

Section 4.2, gross spreads are calculated relative to the underwriter's estimate of the eventual selling price (the offering price), not the selling price. For a given bond package, the underwriter's profit,  $p_{sell}^{package} - p_{buy}^{package}$ , can be decomposed as

$$p_{sell}^{package} - p_{buy}^{package} = \underbrace{(p_{sell}^{package} - p_{offering}^{package})}_{Markup} + \underbrace{(p_{offering}^{package} - p_{buy}^{package})}_{Gross\ Spread}. \quad (3)$$

The second term is the gross spread. The first, known among municipal bond traders as the markup, measures the difference between the offering price and sales price.

To measure markups, we utilize the first of the two trade-level data sets. Panel A of Table 6 contains some



**Table 6**

Analysis of newly issued bonds.

Panel A reports descriptive statistics for the trade-level variables used to estimate the regressions reported in Panel B. Statistics for the bond-level and issue-level variables also used in these regressions are reported in Online Appendix Table O4A. Issue-level controls are identical to the control variables reported in Table 3, and bond-level controls include days since offering, bond maturity, and bond amount, which are calculated at the bond level, not package level. Panel B reports trade-level regression estimates of bond markups, reoffering prices, and sale prices on a historically black college and university (HBCU) dummy variable and other trade price determinants. All regression samples are restricted to a time period from 25 days prior to the offering date (the when issued period) to ten days following the offering date, following Schultz (2012). Heteroskedasticity robust standard errors are double-clustered on school and month of trade and are reported in parentheses. Statistical significance is indicated as \*  $p < 0.10$ , \*\*  $p < 0.05$ , and \*\*\*  $p < 0.01$ .

Panel A: Summary statistics						
	<i>N</i>	Mean	Standard deviation	Median	Minimum	Maximum
Variable	(1)	(2)	(3)	(4)	(5)	(6)
Trade level						
Markup (basis points)	116905	127.65	146.81	108.78	−1034.66	1652.12
Offering price	116905	99.80	3.58	98.91	15.25	119.35
Sale price	116905	101.05	3.07	100.00	16.12	119.10
Days since offering	116905	3.06	3.11	2.00	−25.00	10.00
Trade size (/1000)	116905	343.72	1247.19	30.00	5.00	10850.00
Panel B: Determinants of markup, offering price, and sale price						
	<i>Markup</i>		<i>Offering price</i>		<i>Sale price</i>	
Variable	(1)		(2)		(3)	
<i>HBCU</i>	7.84 (11.91)		0.07 (0.31)		0.09 (0.28)	
Rating fixed effects	Yes		Yes		Yes	
State-year fixed effects	Yes		Yes		Yes	
Trade-level controls	Yes		Yes		Yes	
Bond-level controls	Yes		Yes		Yes	
Issuance-level controls	Yes		Yes		Yes	
Macro controls	Yes		Yes		Yes	
Number of observations	116905		116905		116905	
<i>R</i> <sup>2</sup>	0.544		0.386		0.247	

summary statistics for individual trades. Relative to the analysis in Section 4, the number of observations is much higher ( $N = 116905$ ), implying that on average, a bond package requires  $\frac{116,905}{4145} \approx 28.2$  trades to deplete underwriter inventory. The typical trade is \$343,000 and occurs three days after the issuance date. Also, on average, sales occur at slight premia to both par (\$1.05 per \$100 notional value) and offering prices (\$101.05 − \$99.80 = \$1.25). Across all trades, the average markups relative to offering prices is 128 basis points.

Eq. (3) shows that markups and gross spreads are substitutes. Thus, if markups for HBCU bonds are systematically higher or lower than for non-HBCU bonds, differences in underwriter revenues perhaps are not well captured by differences in gross spreads. Panel B of Table 6 tests for this explicitly. The first row considers as the dependent variable each trade's Markup relative to the offering price. In addition to our coefficient of interest, the HBCU indicator, we include the bond and issuer controls considered in our analysis of gross spreads (Table 3). The regressions further include trade-level controls for the par value of the transaction, the time since the offer date (in days), and the change in the 20-year yield-to-maturity municipal bond index between the offer and sales date.<sup>36</sup>

Our estimate of the coefficient on the HBCU indicator is 8 basis points, although with a standard error nearly one and a half times as high (12), suggesting no statistically significant difference in markups between HBCUs and non-HBCUs.<sup>37</sup> In other words, even though Markup is positive on average, virtually no evidence exists that it is higher (or lower) for HBCU-issued bonds. We thus can focus on gross spreads (Table 3) as our measure of underwriting revenues. To the extent that there are any differences in Markup, it is higher for HBCUs, further increasing their cost of obtaining finance.

The second and third columns disaggregate markups into their components considering, respectively, the offering price and transaction price for each trade. Conditioned on controls, the HBCU coefficient is far from significant, with slightly positive point estimates for both. Thus, even though underwriting costs appear to be higher for HBCU-issued bonds, no evidence shows that transaction prices, or underwriter's expectation of them, are lower.

While these two phenomena can initially seem at odds, this is not necessarily the case. Foreshadowing our discussion in Section 5.5, underwriting costs more closely indicate the average level of discrimination (i.e., how many investors must be approached before one is willing to buy),

<sup>36</sup> Data for this series are available at <https://fred.stlouisfed.org/series/WSLB20/downloaddata>.

<sup>37</sup> Following Cestau et al. (2013), we also estimate markups aggregating by CUSIP, as well as by CUSIP  $\times$  day. In these specifications, we find no evidence that markups are higher for HBCU-issued bonds.

and prices reflect the discrimination of the marginal investor (i.e., the one who says yes). As [Becker \(1957\)](#) emphasizes, these can differ considerably in the cross section, resulting in differential observed outcomes for search costs and prices.

### 5.3. Turnover costs among seasoned bonds

This section compares the transactions costs between HBCUs and non-HBCUs trades occurring months to years after the initial issue. We conduct this analysis for two reasons. The first is for generalizability. If HBCU-issued bonds are more difficult to place initially, it stands to reason that they should be more difficult to place subsequently. The second reason is that by examining trades that are less likely to involve the original issuer or underwriter, the concern that our benchmark findings in [Section 4](#) reflect differential financial sophistication by the university or predatory pricing by underwriters, or both, is allayed.

To estimate transactions costs in secondary trades, we adapt the approach developed in [Cestau et al. \(2013\)](#), which tests for, and finds, elevated transactions costs of Build America Bonds, relative to other tax-exempt municipal bonds. In analogous fashion, we estimate:

$$\Delta P_i = \beta_0 + \beta_1 \Delta \text{Tradesign}_i + \beta_2 \Delta \text{Tradesign}_i \times \text{HBCU}_i + \beta_3 \text{HBCU}_i + \Gamma \text{Controls}_i + \varepsilon_i. \quad (4)$$

Each observation  $i$  corresponds to a trade. The average size of secondary market trades is \$236,000 (Panel A of [Table 7](#)), slightly lower than that for newly issued bonds.

For each trade-level observation, we calculate a percent price change,  $\Delta P_i$ , relative to the most recently recorded price for the same bond. Prices are reported per \$100 par value. Each trade is also associated with a *Tradesign*, which takes a value of one for a customer purchase, a negative one for a customer sale, and zero otherwise. The total percentage wise transaction cost is thus given by  $2\beta_1$ .

We are mostly interested in the interaction between *HBCU* and  $\Delta \text{Tradesign}$ , which estimates the additional cost of turning over an HBCU-issued bond. In addition to these variables, the regressions include state  $\times$  year fixed effects, along with the same set of bond and issuance characteristics included in [3](#).

Panel B of [Table 7](#) shows the results. Confirming prior work by [Cestau et al. \(2013\)](#), we estimate a coefficient on  $\Delta \text{Tradesign}$  of 0.85, nearly identical to their estimate (0.88). More important, the *HBCU* interaction term is positive (17 basis points) and significant ( $p < 0.1\%$ ). As we find in the primary market, HBCU bonds in secondary markets are about 20% more expensive to trade, with dealers taking  $(85 + 17) \times 2 = 204$  basis points on a round trip, compared with 170 basis points for non-HBCU bonds.

Columns 2 and 3 present the results when broken down by trade size. For trades less than \$50,000, round-trip costs are about 204 basis points, declining to 82 basis points for trades exceeding \$50,000.<sup>38</sup> These results are consistent with the model presented in [Section 3](#), which appeals

to underwriters (dealers in this setting) facing fixed costs. Against this backdrop, it is interesting that the HBCU interaction coefficient,  $\beta_2$ , increases with size.<sup>39</sup> For small trades, HBCU-issued bonds are about 10% more expensive to trade, but, for large trades, the increase is  $\frac{26}{41} = 63\%$ .

The simple model ([Section 3](#)) shows that discounts  $D$  are inversely related to underwriter effort  $e$  and vary directly with  $\gamma^2$ , a bond-specific scaling parameter intended to capture search costs. As  $\gamma$  increases, selling a bond for a given discount requires higher underwriter effort. In the benchmark case, this does not vary with the quantity being sold. In other words, there is no notion of saturation, whereby search frictions become increasingly expensive as trade volume increases.

While this could be realistic if the pool of potential investors is large relative to the volume of bonds, this perhaps is not the case for HBCU-issued bonds. Instead, after the first few bonds are sold, an already small pool of potential investors could quickly deplete, making it progressively more costly to find a willing buyer for the next. This can be accommodated by an extension to the basic model in which the discount for HBCU-issued bonds is  $\hat{D}(e) = \frac{\gamma}{\gamma + Q} Q^2$ , such that discounts increase in trade size,  $Q$ . Transactions costs then become  $\hat{P}_{\text{sell}}^* - \hat{P}_{\text{buy}}^* = \gamma Q + \frac{\gamma}{Q}$ , reflecting both the diminishing effect of fixed costs ( $\frac{\gamma}{Q}$ ) the increasing effect of larger trade size ( $\gamma Q$ ).

### 5.4. Time in dealer inventory

Columns 4–6 of [Table 7](#) explore whether, when HBCU bonds trade, they sit in dealer inventory longer. If true, this would be the most direct evidence that financial intermediaries face higher search costs when attempting to place HBCU bonds with investors. Of the 140825 bond purchases in our sample, we are able to precisely measure inventory time for 88063 of them.<sup>40</sup>

As shown in Panel A, the average bond sits in dealer inventory for a little more than four days, although this is highly right-skewed, with some trades happening the same day and others taking more than a month. Column 4 of Panel B shows the results of a regression for which the dependent variable is *Days in Inventory*. After controlling for the same variables in prior columns, we estimate that HBCU-issued bonds take an additional day to sell ( $p < 0.01$ ), an increase of 23% relative to the unconditional sample average. Columns 5 and 6 show the results for small and large trades, using the same \$50,000 cutoff. As with transactions costs, inventory times are most elevated for large (1.8 days,  $p < 0.01$ ) versus small (0.7 days,  $p = 0.07$ ) HBCU bond trades.

<sup>39</sup> We also estimate models of transactions separately for high and low tax privilege states (outside the Deep South), analogous to the results in [Table 5](#). As with underwriting spreads, we find that transactions costs in the secondary market are elevated for HBCU-issued bonds only in states with high tax privilege (positive 38 extra basis points per round-trip versus an insignificant negative 4 basis points). Moreover, the effects are roughly twice as large for trades over \$50,000 (66 basis points versus 38).

<sup>40</sup> Conducting an analogous analysis for issuances is not feasible because bonds can be pre-sold prior to the offering (the “when issued” period studied in [Schultz, 2012](#)), making the time in inventory difficult to measure.

<sup>38</sup> The  $p$ -value on the interaction between *HBCU* and  $\Delta \text{Tradesign}$  is 4.5% in Column 2, and less than 0.1% in Column 3.

**Table 7**

Analysis Of seasoned trades.

Panel A table reports summary statistics for the trade-level variables used to estimate secondary market trading costs in Panel B. Summary statistics for additional bond- and issue-level variables also used in these regressions are reported in Online Appendix Table OA5. Issue-level controls are identical to the control variables reported in Table 3, and bond-level controls include bond maturity and bond amount, which are calculated at the bond level, not package level. Columns 1–3 of Panel B reports regression estimates for

$$\Delta \text{Price} = \beta_0 + \beta_1 \Delta \text{Tradesign} + \beta_2 \Delta \text{Tradesign} \times \text{HBCU} + \beta_3 \text{HBCU} + \Gamma \text{Controls} + \varepsilon,$$

where  $\Delta \text{Price}$  is the percentage change in a bond's trade price,  $\Delta \text{Tradesign}$  is the change in *Tradesign* which is an indicator variable that equals one for dealer sells and negative one for dealer purchases, and *HBCU* and *Controls* are as defined in Online Appendix Table OA6. Columns 4–6 report regressions of the number of days for a bond to completely leave dealer inventory (*Days to Sell*), i.e., a trade consisting of a dealer purchase immediately followed by dealer sales that add to the same amount as the initial purchase amount, on *Controls*. Each regression observation corresponds to a bond trade. All regression samples are restricted to seasoned bond trades, i.e., only trades occurring at least 60 days after a bond's offering date. Columns 2, 3, 5, and 6 are further restricted by trade size. Columns 2 and 4 limit the sample to trades less than \$50,000; and Columns 3 and 6, to trades greater than \$50,000. Panel C reports regressions of bond sale yields on *HBCU* and controls for the full sample and by trade size. Heteroskedasticity robust standard errors are double-clustered on school and month of trade and are reported in parentheses. Statistical significance is indicated as \*  $p < 0.10$ , \*\*  $p < 0.05$ , and \*\*\*  $p < 0.01$ .

Panel A: Summary statistics						
	N	Mean	Standard deviation	Median	Minimum	Maximum
Variable	(1)	(2)	(3)	(4)	(5)	(6)
Trade level						
Trade Size (/1000)	378079	236.43	1083.36	25.00	5.00	10850
Sale Yield	237254	4.21	1.04	4.27	0.00	6.46
Days to Sell	88063	4.24	7.97	1.00	0.00	48.00
Panel B: Transaction costs and time in dealer inventory						
Variable	Transaction costs			Time in dealer inventory		
	All	\$5000 – \$50,000	≥ \$50,000	All	\$5000 – \$50,000	≥ \$50,000
	ΔPrice (1)	ΔPrice (2)	ΔPrice (3)	ΔDays to Sell (4)	ΔDays to Sell (5)	ΔDays to Sell (6)
ΔTrade <sub>design</sub>	0.85*** (0.03)	1.02*** (0.02)	0.41*** (0.03)			
HBCU	0.00 (0.02)	−0.01 (0.02)	0.06 (0.04)	0.95** (0.40)	0.68* (0.36)	1.83** (0.71)
ΔTrade <sub>design</sub> × HBCU	0.17*** (0.06)	0.10* (0.05)	0.26*** (0.06)			
Rating fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
State-year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Trade-level controls	Yes	Yes	Yes	Yes	Yes	Yes
Bond-level controls	Yes	Yes	Yes	Yes	Yes	Yes
Issuance-level controls	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	378079	283238	94841	88063	62524	25539
R <sup>2</sup>	0.400	0.500	0.165	0.052	0.045	0.085
Panel C: Sale yields						
Variable	All			\$5000 – \$50,000	≥ \$50,000	
	Sale yield (1)	Sale yield (2)		Sale yield (3)	Sale yield (4)	
HBCU	0.11 (0.09)	0.07 (0.10)		0.05 (0.10)	0.11 (0.13)	
Rating fixed effects	No	Yes		Yes	Yes	
State-year fixed effects	No	Yes		Yes	Yes	
School controls	No	Yes		Yes	Yes	
Bond-level controls	No	Yes		Yes	Yes	
Issuance-level controls	No	Yes		Yes	Yes	
Macro controls	No	Yes		Yes	Yes	
Underwriter controls	No	Yes		Yes	Yes	
Number of observations	237254	237254		189151	48103	
R <sup>2</sup>	0.000	0.446		0.462	0.393	

A natural question is whether, in the context of our simple model (Section 3), the magnitudes in Columns 4–6 are consistent with those in columns 1–3. That is, in a framework in which brokers compete away all profits, is

the cost of an additional day in dealer inventory sufficiently high to justify an extra 34 basis points in broker commissions? The typical *HBCU* trade is \$119,000, which multiplied by 0.34% gives about \$400. With the caveat that

we do not observe brokers' labor, capital (though this is somewhat offset by the bond's interest), or other costs related to turning over a bond, \$400 strikes us as being close to the value of a few hours of a trader's time. If true, then a competitive model with small rents accruing to brokers, versus one appealing to market power differences, could be sufficient.

##### 5.5. Marginal versus average discrimination: Becker (1957)

We have thus far focused on the process linking bonds to investors. Here, we analyze the end point of this process, asking whether, conditioned on observables, investors pay lower prices (higher yields) for HBCU-issued bonds. Panel C of Table 7 presents the results of cross-sectional regressions for which, instead of a buy-sell difference as in Table 6, the dependent variable (*Sales Yield*) is now a yield, expressed in basis points. Each observation corresponds to a sale from a broker-dealer to an investor.

Column 1 shows the results of univariate comparisons with no control variables. Although the estimate is positive (0.11 percentage points), it is not statistically significant. Adding controls for state  $\times$  year, credit ratings, school attributes, bond features, and prevailing yield on the 20-year municipal bond index explains almost 45% of the total variation in yields but has little effect on the estimated HBCU coefficient, which remains economically small and statistically insignificant. As in Panel B, Columns 3 and 4 show the results for small and large trades, respectively. In neither case do we estimate a significant effect, although the point estimate for large trades (0.11 percentage points) exceeds small trades (0.05 percentage points), perhaps suggesting a discount for large HBCU orders.

This weak result for bond yields could seem inconsistent with investors discriminating against HBCUs. However, as Becker (1957) argues in the context of labor market discrimination, equilibrium wages for black workers represent the discriminatory taste of the marginal employer which, because black workers constitute a relatively small fraction of the labor pool, can differ considerably from the taste of the average employer. A direct implication is that among a sample of employed black workers, or in our context, successfully sold HBCU-issued bonds, market prices (wages, bond yields) can reveal little if any evidence of discrimination. Charles and Guryan (2008) test this implication of Becker and find supporting evidence.

These results further illustrate the empirical challenges when attempting to estimate the all-in costs of discrimination. The problem here is one of selection. When a sale of an HBCU-issued bond occurs, this has already been conditioned on underwriters having found a willing buyer and, accordingly, having incurred the associated search costs. Nevertheless, small or even no discounts at sale implies neither that average discrimination is zero nor that HBCUs are immune from the costs associated with overcoming it. Similar to black workers having to look longer or harder, or both, to find a job (Bertrand and Mullainathan, 2004), the additional placement costs of HBCU bonds ultimately are born by the issuer.

Selection effects can operate even further upstream, in the decision to issue bonds at all. Only about half (45) of

the 88 four-year HBCUs raised capital from 1988 to 2010, with issuers having higher enrollments (11 thousand versus 8–400 students) and total tuition revenue (\$20 million versus \$40 million). These observations alone do not imply an inefficiency, as the funding needs for nonissuers could be lower. However, because either smaller or lower quality HBCUs could be particularly unattractive to investors, or as a result of fixed cost arguments, anticipated discrimination could cause some schools to forego the market altogether. To the extent that this is so, the total all-in costs of discrimination would be larger still.

## 6. Potential remedies

The paper concludes with a discussion of ways to alleviate the additional burden HBCUs face when attempting to access capital markets. Sections 6.2 and 6.1 describe, respectively, a pair of market-based solutions and highlight why either or their combination could be insufficient to fully eliminate the problem. Possible policy interventions are then explored in Section 6.3.

### 6.1. Out of state investors

If the key friction is that racial animus makes HBCU bonds unattractive to local (in-state) investors, a natural solution would seem to be selling HBCUs to investors in other areas. The problem is that for the typical investor, buying a nonlocal bond is associated with a tax penalty and thus demands a yield premium. The required yield on HBCU bonds,  $r^{HBCU}$ , must be at least  $\frac{r^*}{1-\tau^*}$ , where  $r^*$  is the yield on bonds issued in the out-of-state investor's home state and  $\tau^*$  is his marginal state-tax rate.

The relevant question, from the perspective of an HBCU, is the size of  $\tau^*$ , which determines the required premium to attract out-of-state investors. Statutory state-level tax rates range from 0% (e.g. Washington) to 13.3% (California), but because state taxes are deductible at the federal level, marginal rates will be closer to 0–6%. Given that the typical yield on municipal bonds is about 4.2% over our sample, if the marginal buyer faces a state tax rate in the middle of the distribution, then the required yield premium is approximately  $\approx 3\% \times 4.2\% \approx 13$  basis points.<sup>41</sup> This is in the neighborhood of the yield difference reported in Panel C of Table 7, suggesting that perhaps out-of-state investors participate to some extent already. A lower bound for  $\tau^*$  is zero, which would be the case if investors from zero or low tax states were sufficient to absorb most of the HBCU bond supply. Without data on the identities of investors, our ability to pinpoint whether, let alone which, nonlocal investors play an important role in this market is limited.

### 6.2. Local institutions

Throughout the paper, we have in mind that the central friction, racial bias, operates at the level of the individual investor. Yet, echoing an argument often raised in behavioral finance, why don't arbitrageurs, with behavior presumably less influenced by biases, step in to eliminate, or

<sup>41</sup> We thank Richard Roll for this observation.

at least mitigate, the problem? Possible candidates could include local banks, mutual funds, insurance companies, and even hedge funds.

The reason we are interested in local institutions *per se* is based on tax motivations. Institutions typically face incentives to own bonds issued within their state, although, compared with individuals, the tax advantages are generally less beneficial.<sup>42</sup> Nonetheless, the question we ask in this section is whether local institutions step in to fill the demand gap presumably created by retail investors reluctant to own HBCU bonds.

To address this issue, we compare the percent of municipal bonds supplied (issued) by colleges in each state with the percent demanded (held) by its local insurers. To illustrate, suppose that, across the US, Texas universities issue 5% of the total dollar volume of college issued municipal bonds from 2001 to 2010. If Texas-domiciled insurance companies place 10% of their invested capital in Texas-based university bonds, this would suggest overweighting, i.e., home bias, of 2. The question we ask is whether this ratio differs between HBCUs and non-HBCUs. If the ratio for HBCUs exceeds 2 (in this example), it would suggest an institutional tilt toward HBCUs, and vice versa.

We obtain data on institutional investor holdings from insurance companies, which are provided by the National Association of Insurance Commissioners (NAIC), available for the years 2001–2010. For each year from 2001 to 2010, we aggregate all positions in any college issued municipal bond from our set of 4145 issuances. Then, using school location, we calculate the fraction of total supply originating from each state, for non-HBCUs and HBCUs separately. Table 8 lists the ten states in which at least one HBCU issued a bond, and is held in a portfolio by an insurance company within the US.

The table is best understood with an example. Columns 2 and 3 indicate that insurance companies, on average, own \$154.68 million in notional value of bonds issued by non-HBCU colleges in Georgia, corresponding to 3.55% of the (average) total amount of college-issued bonds held (\$4.36 billion). Likewise, column 3 indicates that Georgia-based HBCUs account for \$12.69 million, for 0.29% of this same total. Unsurprisingly, the “other” states contribute the majority of non-HBCU bond supply, but (by construction) 0% for HBCU bonds.

Columns 4 through 6 present the dollar and percentage breakdowns for the insurance company portfolios domiciled in each state. The sum of Columns 4, 5, and 6 indicates that, Georgia-domiciled insurance companies invested, on average, \$10.13 million dollars in any of the college-issued bonds constituting our sample. Of this, \$8.26 million (81.6%) was invested in college-issued bonds outside of the state of Georgia (e.g., the University of Texas or University of Southern California), with the remaining \$1.87 million invested in Georgia based non-HBCU schools (e.g., Georgia Tech University or University of Georgia). No

insurance company in Georgia invested in a Georgia-based HBCU from 2001 to 2010.

Comparing the percentage values in Columns 2 and 5 allows us to determine the extent to which insurance companies exhibit home bias. If positions were allocated in proportion to their total supply, we would expect for Georgia’s insurance companies to invest 3.55% of their funds in Georgia-based non-HBCUs and 0.29% in Georgia-based HBCUs. Instead, what we observe is extreme home bias for non-HBCUs, i.e., actual holdings are over an order of magnitude larger (18.43% versus 3.55%) than proportional allocation would prescribe, and inverse home bias for HBCUs, with 0% invested versus a prediction of 0.29%.

The findings for Georgia generalize. Columns 7 and 8 calculate the home bias, respectively, for non-HBCUs and HBCUs, for each of the ten states listed. The average (median) home bias for non-HBCUs is 22.54 (15.23), versus 8.14 (0.46) for HBCUs. Of the ten states with HBCU-issued bonds in the insurance holdings sample, only half are owned by any insurance company in the issuing state.

Put differently, among all insurers domiciled in Alabama, Arkansas, Georgia, Louisiana, and Virginia, states that collectively invested 34.5 times as much in same-state bonds relative to a proportional allocation, not a single one invested in a HBCU originating from the same state. Of the remaining five states that did invest in HBCUs, two (Mississippi and Tennessee) exhibit less home bias versus non-HBCUs. With the caveat that North Carolina based HBCUs contribute 0.01% to the total dollar volume of college-issued bonds, and there appear to be almost no insurance companies domiciled in Washington DC, only Texas shows some slight favoritism for local HBCUs.

For robustness, we have conducted a similar exercise involving only HBCUs and their matched pairs, based on the criteria and methodology described in Section 4.3.1 (Table 4). Although this limits the analysis to a very small fraction of the overall sample, a similar picture emerges. For example, among the universe of CUSIPs (unique bond identifiers) associated with any of the 71 matching HBCU issuances, in-state insurance companies are over three times as likely to take a position in one of the 71 non-HBCU matching control schools (see Online Appendix Table OA2). Further, conditional on an in-state insurance company holding a bond from either an HBCU or non-HBCU match, the dollar amounts for the control schools are larger by a factor of eight. Whereas both differences are significant at the 1% level, a comparable analysis involving out-of-state insurance companies yields no significant differences.

Together, we interpret the evidence in this section as suggesting that although insurance companies seem to have a strong preference for issuers in the same state, this is not true for HBCUs. The apparent lack of interest from local institutions, to the extent that this can be generalized from the portfolios of insurers, means that HBCU-issued bonds must be sold either to retail investors, which can be difficult to find in states where HBCUs are located, or to institutional clients out of state, which can find these bonds less attractive for tax reasons.

Note also the consistency with Table 5, which found that among Alabama, Louisiana, and Mississippi, states

<sup>42</sup> Ang et al. (2014) study this issue explicitly, and use the sensitivity of bond prices to personal income tax rates to conclude that retail investors “dominate dealers and other institutions” in determining prices and trading volume.



**Table 8**

Insurance company holdings.

For this table, our sample is limited to only university bonds held by firms in the National Association of Insurance Commissioners (NAIC) database for the years 2001–2010. For each state, we calculate the annual dollar amount held of bonds issued by historically black colleges and universities (HBCUs) and non-HBCUs located within that state. Columns 2 and 3 then report the time-series average of these holdings for non-HBCUs and HBCUs. For both of these columns, the percent of average holdings per state relative to average holdings across all states is reported in parentheses. We interpret these percentages as the portfolio weights by issuer state for a randomly selected portfolio of university bonds. For example, the holdings of a randomly selected university bond portfolio should consist of approximately 3.16% of Alabama, non-HBCU bonds and 0.45% of Alabama, HBCU bonds. Next, for each state, we calculate the annual dollar amount held by NAIC firms domiciled within that state for bonds issued by a different state than the NAIC firm's state (Column 3), for bonds issued by a non-HBCU located within the same state as the NAIC firm (Column 4), and for bonds issued by an HBCU located within the same state as the NAIC firm (Column 5). In each of these columns, the relative percentage held of these three different categories is reported in parentheses. For example, the university bond holdings for NAIC firms headquartered in Alabama consists of 90.24% bonds issued by schools located outside of Alabama, 9.76% bonds issued by non-HBCUs located in Alabama, and 0% bonds issued by HBCUs located in Alabama. Column 6 (7) reports the average home bias for non-HBCU (HBCU) bonds calculated as the relative percent of bonds held in column 4 (5) divided by the relative percentage of bonds supplied in Column 1 (2). N/A indicates Not Applicable.

State	Bond supply by state		Bond demand (holding) by state for HBCU states			Home bias	
	Non-HBCU	HBCU	Out-of-state	In-state	In-state	Non-HBCU	HBCU
	(1)	(2)	All (3)	Non-HBCU (4)	HBCU (5)	(6)	(7)
Alabama	137.64 (3.16%)	19.77 (0.45%)	14.37 (90.24%)	1.55 (9.76%)	0.00 (0.00%)	3.09	0.00
Arkansas	52.19 (1.20%)	0.47 (0.01%)	1.19 (69.75%)	0.52 (30.25%)	0.00 (0.00%)	25.26	0.00
Georgia	154.68 (3.55%)	12.69 (0.29%)	8.26 (81.57%)	1.87 (18.43%)	0.00 (0.00%)	5.19	0.00
Louisiana	66.7 (1.53%)	8.25 (0.19%)	3.24 (15.71%)	17.4 (84.29%)	0.00 (0.00%)	55.08	0.00
Mississippi	26.46 (0.61%)	6.81 (0.16%)	18.68 (73.50%)	6.18 (24.33%)	0.55 (2.16%)	40.09	13.83
North Carolina	278.22 (6.38%)	0.25 (0.01%)	74.85 (88.90%)	9.15 (10.87%)	0.20 (0.23%)	1.70	41.20
Tennessee	23.45 (0.54%)	5.34 (0.12%)	33.52 (84.13%)	5.47 (13.74%)	0.85 (2.13%)	25.54	17.38
Texas	223.38 (5.13%)	7.53 (0.17%)	43.76 (76.07%)	12.96 (22.53%)	0.80 (1.39%)	4.40	8.06
Virginia	37.85 (0.87%)	1.44 (0.03%)	1.87 (43.68%)	2.41 (56.32%)	0.00 (0.00%)	64.87	0.00
Washington DC	33.54 (0.77%)	61.2 (1.40%)	1.33 (98.59%)	0.00 (0.11%)	0.02 (1.30%)	0.14	0.92
Other	3200.82 (73.44%)	0.00 (0.00%)	N/A	N/A	N/A	N/A	N/A
Total	4234.91 (97.16%)	123.75 (2.84%)					
Average	22.54	8.14					
Median	15.23	0.46					
Percent zero	0.00	0.50					

with the highest levels of anti-black racial animus, gross spreads for HBCUs were much higher compared with other states. In these three states (along with Georgia, with ranks fourth highest in racial animus), HBCUs are almost entirely excluded from insurance company portfolios, perhaps helping explain why underwriters and dealers face particular difficulty finding willing investors for these bonds.

### 6.3. Legislation

A perhaps more promising alternative would involve eliminating the incentive of investors to hold bonds of local issuers. Assuming home bias is not sufficiently binding, perhaps states could allow interest from out-of-state issuers to be tax-exempt. Eliminating state-level exemptions altogether would have the same effect. HBCUs could target investors in, say, New York or California, who could purchase HBCU bonds and not forgo the tax benefit that otherwise accrues only to purchasing home-state university bonds. With a larger pool of potential investors, gross spreads for HBCUs would, presumably, be reduced.

However promising, this potential solution faces a coordination problem, as described by Ang and Green (2011). The decision to honor, or not honor, state-level exemptions on municipal bonds from out-of-state issuers rests in the hands of local (state) government. And, although such a coordinated effort by multiple states would ease selling frictions for HBCUs (or other issuers facing geographically re-

lated frictions), this is not necessarily individually rational for each state.

Federal intervention could, as a result, be a reasonable solution. The federal government has intervened in the past to support HBCUs under the Higher Education Act of 1965. To relax frictions that HBCUs face in the bond market, the federal government could designate HBCU bonds as triple tax exempt, applying to federal, state, and local taxes. Such a designation has precedent as a means to widen bond market participation in the US territories of Guam and Puerto Rico and would serve to lessen the geographic captivity HBCUs currently face.

### Supplementary material

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.jfineco.2019.05.010.

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