The Brandeis International Business School's 2012 Municipal Finance Conference

Daniel Bergstresser*

Daniel Bergstresser provides a detailed description of the 14 papers and discussions about them that were presented at the Brandeis International Business School's First Municipal Finance Conference, held on August 3, 2012.

Roads, schools, fire stations, hospitals, airports, and much more—all of these different types of infrastructure are financed through municipal capital markets. These markets are vital to American households, both as savers and as consumers of the services these markets enable. Objective and informed research on the ways in which municipal markets operate can help inform the decisions of both policymakers and practitioners. High-quality academic research on municipal finance can

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The 2012 Brandeis Municipal Finance Conference was originally conceived by Daniel Bergstresser and his industry colleague Richard Ryffel, former managing director at Edward Jones. The aim of the event was to discuss the changing state of municipal capital markets, analyze the problems the political economy faces because of these changes, and provide insights into how these problems can be addressed. Professor Bergstresser is guest editor of this issue of the *Municipal Finance Journal*. He can be reached by email at *dberg@brandeis.edu*.

help markets function more efficiently and enhance our society's economic performance.

On August 3, 2012, the Brandeis International Business School hosted the First Municipal Finance Conference. This conference brought together more than 200 practitioners and researchers to discuss recent research on municipal markets. One goal was to start a conversation between and among academics, practitioners, and policymakers—a conversation about the best research, research methods, and sources of data on municipal markets. The silos that separate academics from practitioners can leave interested practitioners unaware of useful and state-of-the-art academic research and can leave the academic research community unaware of important developments in practice. Silos separate even different parts of the academic community: academic researchers who focus on municipal markets are distributed across public policy and public administration schools, in economics departments, finance departments, departments of accounting, and other parts of the university.

The goal of the conference was to break down these silos. The conference structure included 14 papers covering a broad range of topics. Authors were drawn mostly from different parts of the academic community, with a handful drawn from policymakers and practice. This and the following issue of *MFJ* include four of those papers, as well as discussions of the presentations.

The first two papers of the conference focused on credit ratings. The first paper, "How Did Increased Competition Affect Credit Ratings," was presented by Todd Milbourn, of Washington University in St. Louis.[1] Credit rating agencies have been criticized during and since the financial crisis, with many observers suggesting that the root of the problem is the lack of competition among the major credit rating agencies. Becker and Milbourn cited Investment Company Institute (ICI) president Paul Schott Stevens, who said: "I firmly believe that robust competition for the credit rating industry is the best way to promote the continued integrity and reliability of their ratings." There is some intuitive appeal to this view that competition could improve the performance of the ratings industry. Instincts about the effects of competition can lead reasonable people to suspect that more competitors will force market participants to increase the quality or reduce the price of what they offer.

Becker and Milbourn's paper suggested that in the case of credit ratings, an opposing force comes into play. Their paper was empirical, and they used the increasing penetration of Fitch to investigate the relationship between ratings quality and competition. Their empirical analysis was

[1] The paper was co-authored with Bo Becker, of Harvard Business School, and was published in the *Journal of Financial Economics*.

based on corporate issuers, but Milbourn noted that these findings would apply to the municipal market as well. Becker and Milbourn documented three effects of increasing competition. First, increasing competition raises the average credit rating by up to half a notch. Second, competition also appears to reduce the correlation between ratings and observed yields. Finally, increasing competition appears to reduce the predictive power of ratings for default events. All of these effects suggest that as competition increases, the quality of credit ratings falls.

Christopher Mier, of Loop Capital, served as the manager for this session and made a number of comments on the paper. Mier noted that the Becker/Milbourn paper suggested that, when it comes to ratings, the "whole thrust of promoting competition . . . may be counterproductive." Mier asked whether a system could be created to promote competition while mitigating its adverse effects. Mier also noted the partial nature of the paper's results—if the competition did indeed force down costs, then evidence of reduced informativeness of ratings should be balanced against the positive effect of the reduced costs. Milbourn noted in response to Mier's question that, although they did not have a full macroeconomic model that could weigh the costs of lower rating quality against potentially lower costs, the lower informativeness in the more competitive environment was troubling given the many uses to which ratings are put.

The second paper also focused on credit ratings. Marc Joffe, of Public Sector Credit Solutions, presented a paper entitled "Public Sector Credit Framework." Joffe's work can perhaps be best understood with an analogy to the corporate finance sector. In that sector, the firm KMV sought 20 years ago to challenge credit rating incumbents by introducing a quantitative predictive model for default.[2] At a high level, the KMV approach represents an effort to quantify the relationship between observed leverage and firm performance and default. Joffe's paper described his effort to produce a similar model for public sector issuers. Joffe described a laborious data collection effort that delivered a large sample of data and defaults. With this database, Joffe estimated a statistical relationship between borrower characteristics and default. The approach is quite interesting, but the results appear to be driven by the defaults during the Great Depression. The reasonable question for a user to ask is this: Is this time period—which at the moment appears to be the only time period with enough defaults to give a reliable econometric model—similar enough to the current day that the lessons from 80 years ago are valid for driving today's decisions?

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[2] KMV was founded in 1989, acquired by Moody's in 2002, and has since been renamed Moody's Analytics.

Lori Raineri, of Government Financial Strategies, Inc., served as moderator and session manager for this topic. She opened the discussion with a commercial question: “Who is going to use this?” She posed the question very specifically: “Is this product something that an investor would use? Something that an issuer would use?” Participants in the room pushed Joffe specifically on the question of the incremental value of his model, in terms of predictive power, above and beyond what is already available in credit ratings from the incumbent ratings agencies.

Two papers presented at the conference focused on political economy and the municipal bond market. The first paper, entitled “Elected Versus Appointed Policymakers: Evidence from City Treasurers,” was presented by Alexander Whalley, of the University of California, Merced. This paper, which is forthcoming in the *Journal of Law and Economics*, used an intriguing experimental design to address the question of whether elected or appointed policymakers perform better in terms of the borrowing costs that they achieve for the citizens to whom they are responsible. As Professor Whalley noted, estimating the impact of this policy is difficult—the types of localities that choose to have elected policymakers are different from the types of localities that choose to have appointed treasurers. Any apparent difference in borrowing costs between these different types of localities may reflect just their underlying characteristics, rather than the pure effect of whether they elect or appoint their officials.

Professor Whalley’s econometric approach was innovative, however. He focused on California, a state where localities periodically hold referenda to determine whether to change the way in which their treasurers are chosen. Whalley looked specifically at the localities where these votes were extremely close. Comparing a locality where the election goes 49%/51% to a locality where the election goes 51%/49%—presumably these localities are similar enough that any differences in their borrowing costs subsequently can be interpreted as a pure effect of this specific policy choice—Whalley’s new statistical approach uncovered large effects. He estimated that borrowing costs are a full percentage point lower for the California cities that appoint, rather than elect, their treasurers.

Mike Stanton, publisher of the *Bond Buyer*, led discussion of the paper. Stanton, in his remarks, highlighted the importance and timeliness of the paper. He pointed out that in today’s period of fiscal stress, anything that can reduce borrowing costs is appropriate. Stanton also noted that the results suggesting a relationship between borrowing costs and the election/appointment process are particularly intriguing given that the municipal market has now gotten rid of “pay-to-play,” and asked whether results like this suggest that the changes to the law may have just pushed pay-to-play underground.

A paper by Daniel Bergstresser, of Brandeis University, Randolph Cohen, of MIT, and Siddharth Shenai, of Bracebridge Capital, examined the relationship between demographic structure—in particular the ethnic and religious diversity of local areas—and municipal borrowing costs. Their paper, entitled "Demographic Fractionalization and the Municipal Bond Market," will appear in the fall issue of the *Municipal Finance Journal* (Vol. 34, No. 3), along with a written discussion of the paper by the session moderator Bart Mosley, of Alprion Capital Management.

The paper finds evidence that localities that are more demographically diverse have higher borrowing costs. This diversity is measured in different ways—one measure is ethnic diversity based on the U.S. Census, and another measure is religious diversity based on an unusual survey of the major religious denominations. It does not appear that the more diverse counties are actually riskier, either in the sense of observed default risk or ratings downgrade risk. There is some evidence that the bonds issued by the more diverse localities trade slightly higher in the secondary market immediately after issuance. Finally, it appears that this effect is strongest among the smallest bond issues—the effect disappears once the bond issue becomes large enough. The authors conclude that this pattern of evidence suggests some type of inefficiency is affecting borrowing costs and having a specific impact in the more diverse localities.

Mosley pointed out that the paper fits nicely into a broader literature on the limits of market efficiency—in particular the evidence that the higher borrowing costs for more diverse areas have not been associated with higher default probabilities. Mosley highlighted the fact that the paper appears to demonstrate the existence of some significant inefficiencies in municipal markets. He also commented on the importance, in empirical work like this, of making sure that alternative theories have been ruled out—for example, more diverse localities may also be less affluent, so the observed relationship may reflect wealth rather than diversity itself. Mosley noted that the authors included a large set of "control variables" to account for these alternative stories.

Erik Sirri presented a new paper at the conference, "Liquidity in the Municipal Bond Market," which investigated trading costs in the municipal market place. Professor Sirri is a finance professor at Babson College, served previously as the director of Trading and Markets at the SEC, and also served as the SEC's chief economist. The paper, which was commissioned by the Municipal Securities Rulemaking Board (MSRB) and used detailed data on bond trades matched to the specific dealers involved in the trade, allowed Sirri to address the question of how specific dealer characteristics and behavior affect customers' trading costs.

Sirri's paper documented a number of changes in trading patterns between 2003 and 2010. First, he proposed a measure of the "efficiency" of the municipal bond market—namely, the count of interdealer trades between a purchase of a bond from a customer and an eventual sale of that bond to a different customer. This measure suggests that the market has become more efficient over time: in 2005, the mean count of interdealer trades in the intermediation process was 3.6, whereas in 2010, the count had fallen to 1.7. This suggests that the path of bonds from a customer seller to the eventual customer purchaser is becoming more direct over time. Sirri also looked at estimates of trading costs, and his empirical work suggests that the introduction of 15-minute reporting has had a significant impact on trading costs. Depending on the specific econometric model Sirri used, he estimated that the effective spread on round-trip trades has fallen by between 0.21 and 0.54 percentage points of par.

Andrew Kalotay, of Andrew Kalotay Associates, LLP, in discussing the paper, highlighted the sparseness of the data. Kalotay pointed to his own experience advising, working on intraday pricing in the context of exchange-traded fund (ETF) pricing. Kalotay also suggested that Sirri focus on maturity. With institutional and retail investors preferring different maturities, Kalotay proposed that there could be different trading costs across different parts of the maturity structure, reflecting the different habitats of retail and institutional investors.

John Chalmers, of the University of Oregon, presented a second paper on municipal bond liquidity. This paper, entitled “Is Liquidity Priced? A Basic Test in the Municipal Bond Market,” was co-authored with Chung-Shin Liu, of the Southwestern University of Finance and Economics in Chengdu, China. Their paper shows that issuers of bonds that end up being more liquid in the secondary market pay lower coupons on their bonds. The effect appears to be economically important, with a move from the 25th to the 75th percentile of liquidity being associated with a 14 basis point reduction in the expected coupon rate for a bond issued at par. This result, in all likelihood, is not surprising for people involved in the markets—but what is new and useful with this line of inquiry are the authors’ specific estimates regarding the size of this effect.

Johan Rosenberg, of Blue Rose Capital Advisors, discussed the paper. Rosenberg suggested that, in addition to effects of liquidity on coupons, the coupons can also affect the liquidity. In particular, if coupons are higher for higher yield bonds, then the higher risk bonds may have lower liquidity because of the risk—so the effects appear to go in both directions.[3]

Two papers presented at the conference examined financial reporting and the municipal bond market. This topic has drawn a great deal of attention recently—in particular, the SEC’s recent report on the state of municipal

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[3] *Editor’s note:* Chalmers controls for credit rating on the bond, so this effect would have to be occurring even while controlling for Chalmers’ controls for credit risk.

markets highlighted the importance of timely and comparable financial information from state and local borrowers.[4] A paper by Justin Marlowe, who is an associate professor in the Evans School of Public Affairs at the University of Washington, investigated the relationship between financial reporting frequency and the efficiency of municipal bond markets. His paper, "Disclosure Frequency and Efficiency in the Municipal Capital Markets," focused on a sample of bonds issued by tax-exempt hospitals. These issuers are subject to different disclosure rules, depending on the state in which they are located. These differences give Marlowe an empirical approach for looking at the relationship between disclosure and market efficiency. Marlowe found evidence in his sample of issuers that some hospitals subject to quarterly (as opposed to less frequent) financial reporting requirements appear to pay 15 to 20 basis points more to borrow than hospitals subject to annual financial reporting, and that this effect is particularly pronounced among the weaker credits. Marlowe concluded that increased disclosure frequency enhances the market's understanding of these riskier issuers.

This session was moderated by Colin MacNaught, who serves the Commonwealth of Massachusetts as Assistant Treasurer for Debt Management. MacNaught, in his comments, noted the timeliness of this research given the SEC's current investigation into reporting and the current lack (until this paper) of empirical research on the economic effects of potential moves toward more frequent disclosure. MacNaught expressed some surprise at the results, in particular the finding that higher disclosure frequency—something that should benefit investors—raised borrowing costs. MacNaught looked forward to subsequent research that could broaden the sample beyond Marlowe's current sample, which includes only issuers in California, Massachusetts, New Jersey, and Washington.

A paper by Angela Gore, of the George Washington University School of Business, and co-authors focused on a different aspect of municipal financial reporting: the relationship between accounting restatements and borrowing costs. This paper, "Accounting Restatements, Governance, and Municipal Debt Financing," co-authored with William Baber, of Georgetown University; Kevin Rich, of Marquette University; and Ph.D. student Jean Zhang, of George Washington University, found that borrowing costs are much higher—35 basis points higher—after financial restatements are disclosed. This research is useful for at least two reasons. The first reason is that their work explicitly quantifies the magnitude of this restatement effect on bond yields. The second reason is that they collected data that

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[4] See U.S. Securities and Exchange Commission, *Report on the Municipal Securities Market*, page iv. Available at *http://www.sec.gov/news/studies/2012/munireport073112.pdf*.

allowed them to look separately across municipalities depending on their characteristics. They found that the effect of restatements is attenuated somewhat in municipalities with higher quality audit functions, and in municipalities where the political environment is more competitive. They interpreted the second result as suggesting that effective voter oversight attenuates somewhat the restatement-yield relationship. Discussion of this paper was moderated by Elizabeth Risik of Webster University.

Andrew Ang, of Columbia University, presented a paper entitled "Lowering Borrowing Costs Through CommonMuni," co-authored with Richard Green, of Carnegie Mellon University. Their paper articulates a specific proposal and will appear in the fall issue of the *Municipal Finance Journal* (Vol. 34, No. 3), along with two written commentaries. One commentary is by Win Smith, of Win Analytics, and one is by Richard Ryffel, of JP Morgan Private Bank. Ang and Green's paper includes both a description of the current state of the municipal market and a specific proposal aimed at improving the way in which this market serves borrowers and investors. They propose the establishment of a not-for-profit independent advisory firm, which they call "CommonMuni." Among other things, their proposal calls for CommonMuni to provide independent advice to issuers. They specifically mention advice regarding municipal use of derivatives, which has been a particular focus of concern recently. The authors also call for CommonMuni to collect and disseminate information about borrowing costs and to help promote standardization of issue characteristics. They point to standardization as one way to reduce trading costs and improve the liquidity of municipal issues.

Win Smith moderated the discussion and used his time to question Ang about the reception that his proposal has received. Ang noted that the reception has been somewhat hostile at times, but Ang is optimistic that their proposal will receive some funding. When Ang was asked about municipal bond banks, he noted that these bond banks reflect an entirely different model. He noted, specifically, that state bond banks reflect a top-down model, whereas his proposal is driven more by issuers. Ang also suggested that the municipal marketplace is characterized by a coordination problem: issuers would collectively benefit from a more liquid market. In Ang's view, the market would be more liquid if issues were more standardized. But any individual issuer, when deciding whether to issue a "vanilla" or a "non-standard" bond, reaps only part of the benefit arising through the collective liquidity effect. Issuers, making decisions individually, are all doing the right thing for their own interests by issuing non-standard instruments, but any individual issuer considering issuing bonds captures only a small part of the value. Ang pointed to the need for an external coordinating mechanism to push the market toward more standardized products—products for which liquidity will presumably be higher.

Dan Li, an economist on the staff of the Board of Governors of the Federal Reserve System, presented a paper co-authored with Norman Schuerhoff, of the University of Lausanne. Their paper is entitled "Dealer Networks," and in this paper the authors (like Erik Sirri in the paper discussed above) used MSRB data that identifies the dealers involved in specific trades. They used these data to examine the network structure of the municipal bond trading marketplace. Their empirical evidence suggests that the secondary market for municipal bonds includes about 30 highly central dealers and several hundred more peripheral dealers. The dealers at the center of the network trade frequently with a large number of other dealers, while the more peripheral dealers tend to be less densely "linked" in terms of their trading relationships.

The authors showed that the dealers at the center of the network charge larger spreads than the more peripheral dealers. These dealers appear to make higher gross profits on their trades. Li described an apparent tradeoff, though: she suggested that the more central dealers take larger positions and more inventory risk than the dealers who are more peripheral in the network. This line of research will deliver useful guidance for investment managers making decisions about where to take trades. The larger question the authors sought to answer is: How does market quality, efficiency, liquidity vary for a customer depending on what type of dealer they go to? Li pointed out that the answer to the question was not obvious—more connected dealers could deliver better or worse outcomes for their customers—on the one hand, they are more closely connected; on the other, they potentially have market power that they can exploit.

The authors' paper was discussed by Tom Coffin, of Breckinridge Capital Advisors. Coffin's comments highlighted the importance of overlaying market conditions with the empirical work that Li and Schuerhoff presented. Coffin specifically highlighted the importance of looking separately at 2008—a period of significant market volatility—against other more benign periods in the marketplace.

Martin Luby, of DePaul University, and Tima Moldogaziev, of the University of South Carolina, presented a paper entitled "An Empirical Examination of the Determinants of Municipal Bond Underwriting Fees." Their paper is included in this special issue of the *Municipal Finance Journal*. The paper seeks to address the question of how underwriting fees are determined, focusing not just on the specific characteristics of the underwriter, but also on the financial advisor and—interestingly—on the nature of the interaction between underwriter and financial advisor. The paper discusses bonds issued by Texas borrowers—bonds for which the Texas Bond Review Board collects and disseminates data on gross underwriting spreads. The rich data collected by the authors allow them to explore empirically the relationship between financial advisors, underwriters, and issuance costs. Among their intriguing results, they find that bond issues characterized by a "high-intensity" relationship between underwriter and advisor (one where the advisor and underwriter work together a great deal) are associated with higher issuance costs for issuers.

Discussion of this paper was moderated by Joseph Fichera, of Saber Partners. Fichera pointed out one important limitation of the study, which is the focus on the gross underwriting spread. Fichera raised the example of a mortgage underwriter who could issue mortgages with low transactions costs, as long as the borrowers do not care about the interest rates they are paying on their debt.

Mark Robbins, from the University of Connecticut, presented a paper, "Underwriting, Brokerage, and Risk in Municipal Bond Sales," co-authored with Lori Raineri and Keith Weaver, of Government Financial Strategies, and Bill Simonsen, of the University of Connecticut. Robbins pointed out that the goal of this research program is to understand the processes behind bond sales in the municipal marketplace. Their paper reflects, in particular, an effort to distinguish between underwriting and brokerage in the municipal market. Robbins noted that some of the spread reflects compensation for the risk-taking activity of the underwriter. In Robbins' taxonomy, brokerage reflects an issue that is pre-sold to such an extent that there is little or no risk for the underwriter. In their ongoing empirical work, Robbins and co-authors investigate some California local issues, evaluating the extent to which intermediaries are serving as brokers as opposed to underwriters in the primary market.

Discussion of this paper was moderated by Tom Kozlik, of Janney Montgomery Scott. Kozlik, in his comments, pointed out the importance of the work given the larger political circumstances. Kozlik noted that we live in a time when politicians and society seem to hold bankers in low esteem. Kozlik also pointed out the importance of considering the larger picture, in particular the interaction between the financial advisor and the underwriter, a relationship highlighted by the Luby and Moldogaziev paper presented in the same session.

Gabriel Petek, from Standard and Poor's, presented research entitled "California and Greece," a session that was managed by Anne Van Praagh, of Moody's. Petek described California's recent circumstances, during which the state suffered from an inability to come to a political compromise over the state budget. Petek described how, during this period of political turmoil, the rating agencies faced some questions regarding the investment-grade credit ratings assigned to the state. Many investors were looking at apparent similarities between California and Greece and asking how California could be retaining its investment-grade credit rating.

Petek noted that some similarities do in fact exist. For example, neither Greece nor California controls its own monetary or macroeconomic policy. Petek noted that both Greece and California have had steep declines in GDP and increases in unemployment. But Petek also noted that the California economy has begun to stabilize, and he pointed to the role of increased federal spending in California as a factor driving the California turnaround. Petek also pointed to progress in California during the subsequent budget cycles and to a significant reduction in the state's structural deficit.

Petek did point out some significant underlying problems in California: for example, that 60% of revenue comes from personal income tax—up from 40% a generation ago. Petek also pointed out that California's top 1% of income tax payers generate about 12% of general fund revenues. These revenues can be highly variable, depending on things like the post-IPO performance of high-profile growth companies.

Van Praagh, in her comments on Petek's paper, also contrasted the U.S. experience with Greece, where public sector wages have risen significantly. She described the permeability of Greek budget limits relative to those of U.S. states, with the significant exception of pension obligations. Van Praagh also noted the Greek problems with capital flight, in particular from the banking system—a problem that California does not have to deal with. Finally, Van Praagh noted that Greece now may be at a point high enough on the Laffer Curve that higher tax rates will have a limited impact on tax revenue.

Robert Doty, of American Government Financial Services (AGFS), presented a paper entitled "Diversity and Default Risks of Municipal Bonds." This paper is also included in this special issue of the *Municipal Finance Journal*. Doty's paper raises the important distinction between different types of municipal debt, highlighting the difference between general fund securities—backed only by the spending power of the municipalities' general fund—and general obligation (GO) securities. Doty describes some particularly odd securities, such as "general obligation appropriation securities," which are labeled as GO securities but which are subject to the annual appropriations process. He also highlights the importance, in evaluating municipal bonds, of considering whether the underlying statute authorizing the bond issuance gives bondholders the protection of a statutory lien, which guarantees that they will be paid even if the municipality attempts to file for Chapter 9 protection.

The session was moderated by Bart Hildreth, of Georgia State University. Hildreth described an exercise that he undertook after reading Doty's paper. He went through 30 years of papers, books, and other writing on municipal bonds, more than 20 different documents in all, authored by a range of writers including law professors, attorneys, SEC staffers, and finance professors. Hildreth looked across these documents for their description of “general obligation” and noted, almost across the board, that these authors describe “GO” using the familiar language of the “full faith and credit” pledge. He noted that none of the references he consulted addressed the question of the existence of a statutory lien on taxes, which is turning out to be extremely important in the context of recent municipal bankruptcies.