

## COVID-19 Municipal Disclosure

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The Municipal Securities Rulemaking Board's (MSRBs) response to COVID-19 included an effort to identify primary market and continuing disclosures that referenced the pandemic. In this research note, we discuss MSRB's initiative, suggest a methodology enhancement that might prove useful for future market-wide events, and review some of the more impactful disclosures MSRB identified.

News of the COVID-19 pandemic disrupted the municipal bond market last March. In the absence of information about issuer-specific impacts, there was a risk that valuations across the entire market would be marked down. Issuers facing limited COVID-19 impacts or well-positioned to withstand larger impacts may have unnecessarily lost market access, while investors may have faced losses unrelated to changes in the intrinsic value of their municipal bond investments. Thus, both issuers and investors stood to benefit from issuer-specific information about COVID-19 as did MSRB, whose mission involves protecting market stakeholders by promoting fairness and efficiency.<sup>1</sup>

In an April 2, 2020, press release,<sup>2</sup> MSRB announced an initiative to locate disclosures through full text searches for the word "COVID-19". At the time, the Board had identified a total of 631 disclosures containing this term. Its report contained a list of these disclosures, descriptive statistics, and links to each of the documents.

MSRB updated this analysis on a regular basis until May 6, 2021, enhancing its methodology for identifying and categorizing COVID disclosures. The final report included 44,498 primary market and continued disclosures. MSRB provided an Excel workbook with links to all of the disclosure document, making it possible to download a portion or even the entirety of the COVID-19 disclosure corpus in bulk.

In addition to searching for "COVID-19", MSRB added such additional keywords as "coronavirus" and "pandemic". The Board also added searches for reference to federal relief programs using terms such as "CARES Act", "Payroll Protection Program", "Coronavirus Relief Fund" and "Health Care Enhancement Act."

With a corpus of over 40,000 documents, MSRB added Term Frequency Scores to differentiate between disclosures that had isolated mentions of the keywords from those documents that used the terms frequently. These scores—one for references to COVID and a second for references to federal programs—can help users identify those disclosures that are most relevant to the pandemic.

In some cases, issuers have made pro forma references to COVID and its potential impacts. Such disclosures are less useful than those documents that specifically describe COVID's impacts on the issuer, the steps it is taking to address these effects, and its opportunities to leverage federal support.

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<sup>1</sup> Municipal Securities Rulemaking Board. Mission Statement. No Date. <https://www.msrb.org/About-MSRB/About-the-MSRB/Mission-Statement>

<sup>2</sup> Municipal Securities Rulemaking Board. MSRB Publishes Summary of State and Local Disclosures to Its EMMA System about Impact of COVID-19. April 2, 2020. <https://www.msrb.org/News-and-Events/~/link.aspx?id=9EE71DAF1B5A413D99998CB2964FC505&z=z>.

For example, a draft of the State of Alabama’s 2020 Annual Comprehensive Financial Report<sup>3</sup> filed by the state’s 21<sup>st</sup> Century Authority with respect to tobacco settlement revenue bonds received a term frequency score of 2 on a scale of 5. The ACFR included six qualifying words, three uses of COVID-19 and three occurrences of pandemic, but none of these references are of interest to holders of state tobacco bonds. The relevant portions read as follows:

Alabama’s economy was growing in fiscal year 2020 at a rate that exceeded the growth in 2019. However, the **COVID-19 pandemic** is causing economic disruptions. The long-term economic impact is uncertain but before the disruption Alabama's economy was headed upwards...

The number of employed workers increased from December 2018 to December 2019 from 2,122,000 to 2,195,000. However, the numbers for the second half of the 2020 fiscal year could be substantially different due to the **COVID-19 pandemic**...

Subsequent to the fiscal year end, the **COVID-19 pandemic** is having a significant negative impact on the global economy and state of affairs. As a result, the stock market is volatile and the market values of the investments held by the primary government, component units and fiduciary funds of the State of Alabama have been negatively affected in the short term. The long-term outlook is uncertain.

DPC Data, which provides enhanced municipal disclosure data on its proprietary MuniPOINTS platform, dealt with this issue by creating a COVID-19 disclosure flag hand coded by analysts who review each document.<sup>4</sup>

Although flags are available only to MuniPOINTS subscribers, DPC Data has made some summary data public. One of the company’s findings was that 13% of material event disclosures in April 2020 were COVID-related, with the monthly proportion falling into the range of 2%-3% from September 2020 on.<sup>5</sup> For the fifteen months ended March 31, 2020, DPC Data had assigned its COVID-19 flag to 14,740 disclosures—about a third the number identified by MSRB.

### **Possible Improvements to Relevancy Scores**

MSRB’s text analysis of disclosures is a major step forward toward municipal market transparency. Prior to the inception of EMMA, researchers would have been challenged to access the full corpus of municipal market disclosure, and, in the early years of EMMA, many disclosures existed solely in the form of scanned images that could not be readily analyzed.

Now that MSRB has centralized and digitized the disclosure universe, text analysis of the type implemented for COVID promises to provide retail investors and the public with greater insight into the impact of public health emergencies on state and local financial condition.

That said, there are further opportunities for improvement. As discussed below, we obtained promising results by computing the *percentage* of words in each disclosure that are COVID relevant. As opposed to

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<sup>3</sup> <https://emma.msrb.org/ES1367476-ES1065404-ES1471843.pdf>

<sup>4</sup> DPC Data. Press Release: New COVID-19 Disclosure Feature Announced for Muni POINTS. 2020. <https://www.dpcdata.com/resources/new-munipoints-covid-19-disclosure-feature/>

<sup>5</sup> DPC Data. COVID Disclosure Trends Charted in New Infographic. April 2021. <https://www.dpcdata.com/resources/year-covid-tagged-disclosures/>

high counts of COVID-relevant word counts, high percentages are associated with shorter documents that are more focused on pandemic impacts.

While enhancing text analysis could improve the results, changes to disclosure format would make identifying relevant documents much easier. In the municipal market, most disclosure takes the form of free form text, analogous to responses to essay questions on an exam. Teachers learned long ago that it is quicker to assess student performance by including multiple choice and fill-in-the-blank questions on their tests. Regulators can likewise facilitate analysis by providing issuers with forms consisting of standardized questions to answer. Form based responses, especially those that reflect choices from a constrained list or consist of a discrete numeric value, can be analyzed without the need for advanced text analysis techniques.

The inclusion of discrete response questions on disclosure forms need not replace free-form text. After the issuer answers such specific questions such as “Do you anticipate that COVID-19 will have a material impact on your organization’s revenues?”, it can then append an essay at the bottom of the disclosure.

Short of revising the format of disclosure instruments or intensively reading them (as DPC Data has done), it should be possible to fine tune the analysis of disclosure text to find the most COVID-19 relevant disclosures.

### **Percentage Analysis and Findings**

We downloaded and analyzed a non-random sample of 2956 COVID disclosures listed in MSRB’s most recent report. In addition to counting the occurrences of the words “COVID-19”, “pandemic” and “coronavirus”, we also counted the total number of words in each disclosure, excluded common “stop words” (such as “a” and “the”) from the total, and calculated the quotient of COVID words to total words (less stop words). We did not use the phrases pertaining to the federal programs used by the MSRB.

Very short disclosures specific to COVID-19 often had high prevalence of the chosen terms. The highest proportion we found was for a 26-word disclosure<sup>6</sup> filed by Wesleyan Homes Inc., for its 2014 retirement facilities revenue bonds issued through the New Hope Cultural Education Facilities Finance Corporation in Texas. The Wesleyan, a faith-based operator of assisted living and skilled nursing facilities, advised investors in the disclosure that it had created a web page for COVID-19 updates and provided a link to the page. It is not surprising perhaps that COVID-19 would have particular relevance to an assisted living facility,

Longer disclosures that had COVID-19-word proportions exceeding 3% generally met our admittedly subjective assessment of what constitutes a meaningful COVID disclosure. For example, Olathe Health Systems an issuer of Health Facility Revenue Bonds in Kansas provided the following text in an event-based disclosure<sup>7</sup> with a 3.04% COVID word proportion:

Hospital inpatient admissions in April 2020 were down 34% from April of 2019, surgeries were down 63%, Emergency Department visits were down 39% and consolidated clinic visits were down 36% from April of 2019. In May Olathe Health began to see increases in services across

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<sup>6</sup> <https://emma.msrb.org/RE1338242-RE1041766-RE1449775.pdf>

<sup>7</sup> <https://emma.msrb.org/P11403117-P11090893-P11499471.pdf>

most service lines as restrictions on elective surgeries and diagnostic procedures were relaxed, and as patients became more comfortable with the actions taken to protect them. June again saw another increase in most services and showed hospital inpatient admissions down 9% from 2019, surgeries down 3%, Emergency Department visits down 16%, and overall clinic visits increased 11% over June of 2019.

Expenses, however, were not down at the same rate, due to increased expenses related to surge preparations including staffing transitions and opening additional temporary hospital rooms, providing necessary personal protective equipment amidst supply chain disruptions, and additional testing and door screenings, etc. Year-to-date through June 30, Olathe Health incurred more than \$3 million in COVID-related expenses. This does not include the cost of lost revenue.

This statement clearly informs the reader that Olathe Health Systems was experiencing reduced net patient revenues.

On June 17, 2020, the City of New Haven Connecticut released a Statement<sup>8</sup> on the Impact of COVID-19 which had a COVID-19-word proportion of 4.32%. The disclosure advised investors that Connecticut had put in place two programs to reduce the cost for property owners to defer their property tax payments. To address anticipated revenue delays, the city announced plans to issue tax anticipation notes the following month.

## **Conclusion**

Fortunately for municipal bond investors, federal interventions, vaccines, and a rapid economic recovery have greatly limited the number of municipal bond defaults attributable to the COVID-19 pandemic. But future crises may have greater credit affects. Improving technology can keep investors more fully and promptly informed of credit-sensitive developments, thereby strengthening, and stabilizing the market.

By centralizing, digitizing, and text mining disclosure documents, MSRB has taken major steps toward improving crisis information flow. More advanced text analytics and adding forms-based disclosure could further improve information dissemination ahead of future market-wide events.

But issuers and investors could realize even greater benefits from the implementation of data standards. Text mining technology is imperfect and not equally accessible to all investors. Retail investors especially would benefit from seeing discrete data points in EMMA or third party municipal bond platforms as opposed to being expected to locate and digest often-lengthy text disclosures.

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<sup>8</sup> <https://emma.msrb.org/RE1353675-RE1052438-RE1461249.pdf>