**MSRB Support**

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Live support: 7:30 a.m. – 6:30 p.m. ET.  
E-mail support: 7:00 a.m. – 7:00 p.m. ET.

**Overview**

**About the MSRB**

The Municipal Securities Rulemaking Board (MSRB) protects and strengthens the municipal bond market, enabling access to capital, economic growth, and societal progress in tens of thousands of communities across the country. The MSRB fulfills this mission by creating trust in our market through informed regulation of dealers and municipal advisors that protects investors, issuers and the public interest; building technology systems that power our market and provide transparency for issuers, institutions, and the investing public; and serving as the steward of market data that empowers better decisions and fuels innovation for the future. The MSRB is a self-regulatory organization governed by a board of directors that has a majority of public members, in addition to representatives of regulated entities. The MSRB is overseen by the Securities and Exchange Commission and Congress.
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Part I: EMMA Labs Introduction

About EMMA Labs

EMMA Labs provides a hub for municipal market participants and technology experts to collaborate, innovate and create potential applications for market data. Applications that are tested and refined in EMMA Labs may find their way to the MSRB's EMMA website, where they can contribute to a fair, efficient and transparent municipal market.

Users can explore active prototypes and provide feedback on the user experience, features and functionality. The MSRB also may seek feedback on early-stage concepts.

Supported Browsers

To ensure the best experience with EMMA Labs, please use a supported browser; currently these are Chrome, Firefox, Safari or Microsoft Edge.

Terms of Use

After logging into the site for the first time, you will be prompted to review the EMMA Labs Terms of Use. You must accept the terms of use to use the EMMA Labs site. If you do not agree to the Terms of Use, you may click Decline and you will exit the site.

Technical Support

If you require technical assistance with EMMA Labs, please contact the MSRB at 202-838-1330 or MSRBsupport@msrb.org.
Part II: Accessing EMMA Labs

Signing up for EMMA Labs

Sign Up Process

All EMMA Labs users are required to create an account before accessing EMMA Labs.

To sign up for an EMMA Labs account, open a supported browser and navigate to
https://emmalabs.msrb.org/.

From the EMMA Labs homepage, click the Sign In / Sign Up button.
The MSB sign in page will appear. From the sign in page, click **Sign up**.
You will be prompted to fill out the sign-up form to create an account, ensuring all required fields are entered. Once complete, click Register.
A message indicating that a verification email has been sent to your email address will appear.

Navigate to the email box that you signed up with. In the email sent from donotreply@msrb.org, please click on the Activate Account button.
**Confirm Account**

After clicking on the **Activate Account** button from your email, you will be directed to the EMMA Labs login screen. Click **Sign In / Sign Up** to complete your account setup by setting up multi-factor authentication.

SMS authentication is required to increase the security of your account, click **Configure Factor** to add your mobile phone number.
Enter your mobile phone number and click **Send Code**, you will receive a verification code.
Enter your code to verify your account.
You can add additional multifactor authentication options by setting up the optional Okta Verify app. Otherwise, click **Finish** to login to EMMA Labs Homepage.
**Signing in to EMMA Labs**

To sign in to EMMA Labs, open a supported browser and navigate to [https://emmalabs.msrb.org/](https://emmalabs.msrb.org/).

From the EMMA Labs homepage, click the **Sign In / Sign Up** button.
You will be directed to EMMA Labs sign in page. To sign in to an existing account, enter your Username, password and hit the **Sign In** button.

Your Username is the email address you registered with.
If you need to confirm your account again using multi-factor authentication, you will be prompted to receive a code via SMS. Enter the code to confirm your account and you will be taken to the EMMA Labs home page. Otherwise, you will be taken to the EMMA Labs home page once you hit the **Sign In** button.
Resetting Your Password

Forgot Password

If you forget or need to reset your password, click on **Need help signing in?** link on the Sign In page.
With the need help options open, select **Forgot password**?

Enter your email or username, you will have two options to reset your password.

1) **SMS**: You will receive a text message with a verification code.
2) **Voice Call**: You will receive a verification code via voice call.
Once you receive the verification code, enter it and click **Verify**. After it is verified, you will be able to reset your password.
You will be prompted to enter a new password and to verify the password by typing it again. Enter your new password and hit the Reset Password button.

You will be taken back to the sign in page where you can sign in using your new password to access EMMA Labs.
Unlocking Your Account

If you enter your password incorrectly multiple times, you will be locked out of your account. You will receive an email informing you that your account has been locked. To unlock your account, you can click the Unlock Account button in the email or navigate to the EMMA Labs Sign In page and click on Need help signing in? link.
With the need help options open, select **Unlock Account**?

Enter your username and select an option to receive a code either via SMS or voice call.
Enter your code and hit the **Verify** button. Once verified, you will be notified that your account has been unlocked and to return to the Sign In page to enter your username and password. If you forgot your password, follow the steps above to reset it.

### Part III: Feedback

EMMA Labs users can leave feedback using the feedback icon located at the lower right of the page and the **TELL US WHAT YOU THINK** button under the user profile. Both the icon and button remain at the same location on every page of EMMA Labs and recognize which page you provide feedback on.

If you would like to leave feedback, click the feedback icon or the **TELL US WHAT YOU THINK** button.
When the EMMA Labs feedback form appears, you can rate the current page using the icons and leave comments in the text box below. Once complete, hit the **Submit** button.
Part IV: Active Labs

There are currently three active labs available on EMMA Labs:

**Structured Data** – Educational lab for market participants and the public that explores the difference between structured data and unstructured data.

**Disclosure Search** - Ability to perform keyword search on three years of disclosure documents submitted to the EMMA primary market disclosure service and EMMA continuing disclosure service.

**Market Analysis Tool** - Dynamic data dashboards and self-service charts and statistics quantifying trading patterns as reported to the Real-Time Transaction Reporting System (RTRS).

**Structured Data**

The Structured Data Lab provides education and case studies related to using XBRL to create and share financial statements.

**Navigation Section**

The navigation panel has three sections: Learn More, Case Studies, and See XBRL in Action. Clicking on each link takes you to that section in the lab, for the Learn More links it will open that page for you to read.
Learn More

The Learn More pages give users access to comprehensive information on structured data broken into five sections.
To navigate back and forth through the general background pages, click on the navigation panel on the left or on the tiles on the first section with icons and text that will take you to the appropriate pages when clicked. You can also click directly on the navigation buttons that are labeled “Next Section” and “Previous Section” for ease of sequential navigation.

**Case Studies**

The Case Studies section provides examples of three organizations that have completed projects that present their financial data as structured data. These three organizations are: City of Flint, Michigan; College of DuPage; and the MSRB.
To access the case studies home page, click the “Read” button in the case studies section on the left navigation panel.

Once on the case studies home page, you can view versions of Annual Comprehensive Financial Reports (ACFRs) for the three organizations in PDF and XBRL format for comparison. Each case study has collapsible subheadings discussing the organization’s relationship with XBRL.

**XBRL in Action with Municipal Obligors**

The XBRL in Action with Municipal Obligors page provides a demonstration of how the Security Details page on EMMA might work if XBRL financial data were collected by the MSRB. The page provides a mock-up of a Security Details page with two interactive features. The first is the ability to “pop-up” an interactive chart tool that allows users to view data from the underlying ACFRs for charts. The second is the ability to click on a link for a single document, which opens a new page with that XBRL document displayed.

The chart allows comparisons of a single data point over multiple years with one company, comparison of current ratio and debt ratio for multiple companies in the same industry, and comparison of a single data point over multiple years across multiple companies.
To access the security details mockup page, click the “Explore” button in the see XBRL in action section on the left navigation panel.

To navigate to the comparison charts, click on the blue Obligor Financial Data button or on the Obligor Data tab to the right of yield.
XBRL IN ACTION WITH MUNICIPAL OBLIGORS

Certain corporations that are obligated persons with regard to municipal securities may submit annual financial disclosures to both EMMA and the SEC's EDGAR system. On the EDGAR system, one such disclosure, the Form 10-K, is submitted as structured data but the copy is submitted to EMMA as an unstructured PDF document.

American Electric Power Company, Inc. is one such obligor which submits to both EMMA and EDGAR. One of its subsidiaries, Appalachian Power Company, is an obligated person for a West Virginia Economic Development Authority refunding bond (see associated page on EMMA with PDF Form 10-K filings). The charts below imagine one possible way an obligor's financial information could be used if the annual financial filings were provided as structured data instead of as a PDF.
Once opened, the chart tool provides the ability to select different financial statistics on the 3 separate charts using a drop down at the top of the chart page. Each chart provides different selections based on the underlying ACFR documents and the comparisons being made.

You can see a list of Associated Filings from EDGAR to the left of the comparison charts. The list updates dynamically to display the source XBRL document based on what the user selected from the drop-down menu.

**Disclosure Search**

Disclosure Search processes EMMA’s PDF repository into a format that makes it available for search and analytics.

**Key Term**
To search for disclosure documents on EMMA Labs, enter at least three characters of key terms to the Disclosure Search bar and hit the magnifying glass icon.

**Disclosure Type**

To search for specific types of disclosure documents, you can use the “Type” drop-down within the search bar to return results based on your specification.

**Results Page**

![Results Page Image]
On the results page, your search term and/or the disclosure type are shown at the top of the results table to inform you what selection(s) were made on the initial search page. To search for a new key term, simply type in a new term in the search bar and hit the magnifying glass icon.

The filters located on the left side of the screen allow you to further refine your results. If you have previously selected a disclosure type, the disclosure type should be selected under the “Disclosure Type” filter. These filters allow for multi-select and you can select as few or as many of them as you prefer. When a filter is selected or unselected, the results table updates to reflect what you have selected. You can reset the filters at any time by hitting the Reset button.

**Results Table**

![Results Table](image-url)
The Results Table displays documents from the most relevant to the search terms to the least relevant. You can sort your result by clicking on the column you would like the results to be ordered by. Click the column again to reverse the sort order. If you would like to return to the original sort order of the results you can click the Reset Sort button.

**Document Page**

When you click on an individual document in the results, the documents page will appear. This page provides the details of the document and allows you to view the pages of the document where the search term was found, highlighting any instances of the term.

Within the document page, there is a Back to Results button you can use to go back to the results page. You can return to the search page and make a new search by using the New
Search button. You can use the Previous Doc and Next Doc button to go to the previous or next document based on the results table.

Additionally, document information such as Issuer Name, Issuer State, Disclosure Type, Disclosure Category, and Document Date are listed on top of the PDF. If you want to view the Document on EMMA, you can click on the EMMA Link. This will open a new tab on your browser with the document details of the Issuer.

You can download the document you are viewing by clicking the Download button. To download documents from EMMA Labs, please ensure your browser allows pop-ups from the EMMA Labs site.

You can also navigate within pages where the search term was located in the document by using the Page Back and Page Forward button under the EMMA Link and Download button.
Market Analysis Tool

The Market Analysis Tool allows users to access, discover and visualize trading trends across the municipal market. The tool makes it easy to use controls and dynamic charts and graphs to manipulate data and analyze the secondary market trading data from RTRS.

Insights

The Insights tab displays a summary of market activity using tables and graphs to provide users with high-level trade trends. You can further filter the trade data that is displayed on the charts and tables by using the controls listed above the charts, including selecting start and end dates, the frequency to display in dashboard, the tax status and coupon type. There are controls across all tabs of the Market Analysis tool and they may differ depending on which tab you are on.

You can also dynamically update the charts and graphs by clicking on a data point, for example a State on the Total Number of Trades by State chart or a Sector in the Top 10 Sectors by Total Par Amount chart. You can click on the same data point again to return the charts and graphs to their original values.
Statistical Charts

The Statistical Charts tab shows additional detailed trade data charts and graphs, the first two charts displaying the sum of par amount traded, the middle two charts displaying total number of trades and the bottom two charts displaying the total number of distinct securities. You can modify the charts and graphs by using the controls at the top of page and dynamically update them by clicking a data point in any of the sections.

Statistical Data

The Statistical Data tab shows statistics of trade data in a tabular format, such as the statistics for overall volume, statistics for trade type, statistics for tax status and statistics for coupon type. You can modify the tables by applying controls at the top of the page.
Details
The Details tab on the Market Analysis Tool provides detailed information down to the trade level. You can modify the data provided in the table by applying controls using the panel at the top of the page.

Control Panel
The control panel is available across the tabs of the Market Analysis tool and allows you to further select which trade data you would like to view on the charts, graphs, and tables. To display the available controls on a tab, click the down arrow on the top of the table.

The control panel will open, and you will be able to add filters and drill down into the different data available on each tab using the data fields and drop downs.
Part IV: Idea Labs

The Idea Labs link provides information on potential concepts you can review and leave feedback on. Idea Labs consist of descriptions of the proposed idea and any additional details or potential value that the idea may provide to municipal market participants.

Navigate to Idea Labs

To navigate to Idea Labs, click on the Idea Labs link.

On the Idea Labs page, you can see all the ideas for potential prototypes or concepts. Each idea lab has a topic and a short description of the concept, you can read more about the idea by clicking Read More.

How to review and leave feedback

In the idea lab, there is a description that explains the concept in more detail, and the potential value that the concept would provide. If you would like to leave feedback on the concept, you can click on the Tell Us What You Think link.
The feedback form will show up on the right side of the screen, you can rate the lab using the icons and leave any comment related to the concept for the MSRB team to review.
Municipal Securities Rulemaking Board

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MSRB Website: www.msrb.org
EMMA Website: emma.msrb.org