## Revision History

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Description of Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>June 2015</td>
<td>Updated manual to reflect the addition of preview feature.</td>
</tr>
<tr>
<td>1.2</td>
<td>July 2015</td>
<td>Updated manual to reflect ability to save data for multiple plans.</td>
</tr>
<tr>
<td>1.3</td>
<td>August 2015</td>
<td>Updated the Resources and Support section to reflect the change in hours of operation for Email Support.</td>
</tr>
<tr>
<td>1.4</td>
<td>June 2016</td>
<td>Updated to reflect the user navigation changes to the MSRB.org homepage, MSRB Gateway Login and Main Menu landing pages.</td>
</tr>
<tr>
<td>2.0</td>
<td>June 2018</td>
<td>Updated to reflect the addition of ABLE submissions and inclusion of Plan Service and Transaction and Service Fee tabs (See MSRB Notice 2017-24) and updated references to College Savings Plans Network Disclosure Principles Statement No. 6. Other enhancements to Form G-45 include data quality check for Aggregate Plan Information entered and data quality check for Asset Class and Underlying Investment. Updated the automated computer-to-computer submission (B2B) to incorporate the enhancements made to Form G-45. Also, removed the word “College” from 529 savings plans to reflect the Tax Cuts and Jobs Act of 2017.</td>
</tr>
<tr>
<td>2.1</td>
<td>November 2018;</td>
<td>Updated to reflect the addition of two new data elements to the investment option submission:</td>
</tr>
<tr>
<td></td>
<td>Effective June 30, 2019</td>
<td>1. &quot;Closed to new investors&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. &quot;Closed to current investors&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Updated to reflect investment performance changes:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. Benchmark Three-Year Performance is no longer applicable on new submissions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Annualized Three-Year Return is no longer applicable on new submissions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Updated to reflect that the Investment Option information subsection “Program Management Fee” requires that an underwriter report the amount of the program management fee assessed by the 529 savings plan.</td>
</tr>
<tr>
<td>Version</td>
<td>Date</td>
<td>Description of Changes</td>
</tr>
<tr>
<td>---------</td>
<td>-----------</td>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td>3.0</td>
<td>August 2019</td>
<td>Updated to reflect EMMA Dataport user interface changes.</td>
</tr>
</tbody>
</table>
# Table of Contents

## Introduction
Introduction ................................................................................................................... 6

## PART 1: Submitting Form G-45 (529 Savings Plans/ABLE Programs) via EMMA Dataport

- Access to EMMA Dataport ......................................................................................... 8
- Log in to MSRB Gateway ......................................................................................... 12
- Create a New Form G-45 Submission ..................................................................... 14
- Preview and Submit Form G-45 ............................................................................ 24
- Modify Submitted Form G-45 ................................................................................ 29
- Pre-populate a New Submission with Existing Data ............................................ 33
- Recordkeeping .......................................................................................................... 35

## PART 2: Automated Submission of Form G-45

- Preparing for Computer-to-Computer Submission .................................................. 36
- Using the Computer-to-Computer Interface ............................................................ 36
- Web Service Interface Specifications ..................................................................... 37
- Test Web Service Interface ..................................................................................... 37
- Message Processing, Schemas, Data Tags and Required Elements ..................... 38

**Figure 1: Message Processing Overview** ................................................................... 42

**Figure 2: Form G-45 Data Tag Structure** ................................................................. 43

- Data Tags and Requirements for Form G-45 Disclosure ........................................ 44

**Table 1: Message Data Tag Glossary** .................................................................... 44

**Table 2: Required Message Tags** .......................................................................... 50

- XML Message Schemas .......................................................................................... 53
- Sample XML Header Trace Files ........................................................................... 61

**Data Message – Sample Header + Message Trace File** ........................................... 61

- Message Validation .................................................................................................. 67

**Figure 3: Validation Response Trace** .................................................................... 67

**Response Message – Sample Trace File** ................................................................. 68

- Message Error Responses ....................................................................................... 69

**Table 3: Data Message Error/Information Messages** ............................................. 69

- Form G-45 Sample XML Message ........................................................................ 75

- Data Message ........................................................................................................... 75

## Appendix – 529 Savings Plans and ABLE Programs

........................................................................................................................................ 81
Resources and Support

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

MSRB Support
Tel: 202-838-1330
Email: MSRBsupport@msrb.org
Live Support: 7:30 a.m.–6:30 p.m. ET
Email Support: 7:00 a.m.–7:00 p.m. ET

Municipal Securities Rulemaking Board
1300 I Street NW, Suite 1000
Washington, DC 20005
Tel: 202-838-1500

This resource is for informational purposes only and should be considered in conjunction with the applicable MSRB rules and any related interpretations. The complete text of all MSRB rules and interpretations is available at http://msrb.org/Rules-and-Interpretations/MSRB-Rules.aspx.
Introduction

The Municipal Securities Rulemaking Board (MSRB) protects investors, state and local governments and other municipal entities, and the public interest by promoting a fair and efficient municipal securities market. The MSRB fulfills this mission by regulating brokers, dealers, municipal securities dealers (collectively, “dealers”) and municipal advisors that engage in municipal securities and advisory activities. The MSRB is a self-regulatory organization established by Congress and governed by a 21-member Board of Directors. The MSRB is subject to oversight by the U.S. Securities and Exchange Commission (SEC).

To further protect market participants, the MSRB supports municipal market transparency through its Electronic Municipal Market Access (EMMA®) website, the official repository for municipal securities data and disclosure documents for virtually all municipal bonds offered. Investors, municipal entities and others also have access to objective municipal market information and interactive tools through the EMMA website. The MSRB also serves as an objective resource on the municipal market, conducts extensive education and outreach to market stakeholders, and provides market leadership on key issues affecting the municipal securities market.

The EMMA 529 savings plans/ABLE programs data submission service receives submissions of Form G-45 from dealers acting in the capacity of an underwriter for a 529 savings plan or ABLE program pursuant to MSRB Rule G-45.

Rule G-45 requires dealers, when acting in the capacity of an underwriter for a 529 savings plan or an ABLE program, to submit information on a semiannual or, in the case of performance data, annual basis, to the MSRB. The required information includes plan descriptive information, assets, asset allocation information for the assets of each investment option, contributions, withdrawals, fee and cost structure, performance data and other information related to the 529 savings plan or ABLE program. Rule G-45 requires this information to be submitted electronically through Form G-45 to the EMMA system. The information will not, at this time, be disseminated publicly.

Underwriters are required to submit the Form G-45 information to the EMMA system no later than 60 days following the end of each semi-annual reporting period ending on June 30 and December 31; provided, however, that performance data shall be reported annually by no later than 60 days following the end of the reporting period ending on December 31. This manual provides instructions and specifications for submitting Form G-45 to the EMMA system and is presented in two parts:

- **Part One** provides instructions for submitting Form G-45 via EMMA Dataport.
- **Part Two** provides instructions, figures and specifications for submitting Form G-45 via
an automated computer-to-computer (B2B) interface.

Form G-45, a collection of data elements provided in electronic format pursuant to Rule G-45, can be found in the appendix of this manual. The appendix also includes descriptions of the data elements required by Form G-45.
PART 1: Submitting Form G-45 (529 Savings Plans/ABLE Programs) via EMMA Dataport

Access to EMMA Dataport

EMMA Dataport is the application through which submissions of primary market, continuing disclosure documents and other information are made to the MSRB.

A Gateway account is required to make submissions to the EMMA system. MSRB Gateway serves as a secure access point for all MSRB systems. Dealers and municipal advisors are required to register with the MSRB via the online registration process in Gateway before an MSRB Gateway account is created. See the MSRB Registration Manual for guidance on how to register with the MSRB and establish an MSRB Gateway account.

Submissions of Form G-45 by underwriters under Rule G-45, and their designated agents, can only be made by users who have EMMA Form G-45 Submissions access rights assigned to them by their organization’s Master Account Administrator. See the MSRB Gateway User Manual for Dealers and Municipal Advisors for guidance on how to create and manage a user account.

Logging in to EMMA Dataport to make a Form G-45 submission can be done from the EMMA homepage at emma.msrb.org or the MSRB website homepage at msrb.org.

The beta version of EMMA Dataport for making test Form G-45 submissions is available at emmabeta.msrb.org.
Log in from the EMMA Homepage

From the EMMA homepage at http://emma.msrb.org, click the EMMA Dataport tab.
Then click the **Log in to MSRB Gateway** button.
Log in from the MSRB Homepage

From the MSRB homepage at msrb.org, click Login at the top of the screen.
Log in to MSRB Gateway

From the MSRB Gateway landing page at https://gw.msrb.org/Gateway/Login enter your User ID and Password and then click the Login button.

From the MSRB Gateway Main Menu, click EMMA Dataport.
If the EMMA Dataport link does not appear, expand the Account and Organization Management option, click on View Account Administrators and contact one of the listed individuals to request access to EMMA Dataport.

The EMMA Dataport link will direct you to the EMMA Dataport Submission Portal.

If your organization has the rights to act on the behalf of another organization, you will see a screen that allows you to select the organization from the drop-down menu for which you are making a submission.
Create a New Form G-45 Submission

The EMMA Dataport Submission Portal displays buttons that represent the submission types you are authorized to make within the EMMA system. To create a new submission of Form G-45, click the 529 Savings Plans/ABLE Programs (Rule G-45) button.

From the dropdown menu, select the state of the 529 savings plans/ABLE programs for which you are creating a new submission. A list of all available 529 savings plans or ABLE programs will appear for the selected state, with the MSRB-assigned plan ID.

If a state has not previously submitted a plan disclosure document to EMMA, a message will indicate that no plans were found. Refer to the EMMA Dataport Manual for 529 Savings Plans/ABLE Programs Disclosure Submissions Manual for guidance on how to submit new 529 savings plans or ABLE programs and related disclosure documents to the EMMA system.
Click **Create New** next to the plan for which you are making a Form G-45 submission.

<table>
<thead>
<tr>
<th>Plan ID</th>
<th>Plan Name</th>
<th>Form G-45 Submissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>AK:0002</td>
<td>Alaska 529 Plan</td>
<td>Create New</td>
</tr>
<tr>
<td>AK:0003</td>
<td>529 Savings Plan of Alaska</td>
<td>Create New</td>
</tr>
<tr>
<td>AK:0004</td>
<td>State of Alaska Savings Plan</td>
<td>Create New</td>
</tr>
<tr>
<td>AK:0005</td>
<td>AK College Savings Plan 2</td>
<td>Create New</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Plan ID</th>
<th>Plan Name</th>
<th>Form G-45 Submissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>AK:0001</td>
<td>ABLE 529 Testing</td>
<td>Create New</td>
</tr>
</tbody>
</table>
Form G-45 requires the submission of information falling into four main categories, described below: Plan Descriptive Information, Aggregate Plan Information, Plan Service and Transaction Fees, and Investment Option Information.

A complete listing of the Form G-45 data elements and their descriptions are provided in the appendix of this manual.

To begin, use the dropdown menu to select the reporting period covered by the submission.
Plan Descriptive Information
Rule G-45 requires underwriters to report to the MSRB the following information: the name of the state; the name of the plan; the name of the underwriter and their contact information; the name of other underwriters on whose behalf the underwriter is submitting information; the name of the program manager and their contact information; and the plan website address and type of marketing channel (whether a “direct-sold” or “advisor-sold” plan).

Enter the appropriate information into each of the fields on the Plan Descriptive Information subpage.
Aggregate Plan Information

Under Rule G-45, underwriters must report to the MSRB, for the most recent semi-annual reporting period, the total plan assets, total contributions and total distributions.

Enter the appropriate values into each of the fields on the **Aggregate Plan Information** screen.

![Aggregate Plan Information Screen](image-url)
Plan Service and Transaction Fees

Complete the Plan Service and Transaction Fees section, as applicable.

<table>
<thead>
<tr>
<th>PLAN SERVICE AND TRANSACTION FEES (AS APPLICABLE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Account Opening Fee ($)</td>
</tr>
<tr>
<td>Investment Administration Fee ($)</td>
</tr>
<tr>
<td>Cancellation/Withdrawal Fee ($)</td>
</tr>
<tr>
<td>Change in Account Owner Fee ($)</td>
</tr>
<tr>
<td>Change in Investment Option/Transfer Fee ($)</td>
</tr>
<tr>
<td>Rollover Fee ($)</td>
</tr>
<tr>
<td>Returned Excess Aggregate Contributions Fee ($)</td>
</tr>
<tr>
<td>Rejected ACH or EFT Fee ($)</td>
</tr>
<tr>
<td>Overnight Delivery Fee ($)</td>
</tr>
<tr>
<td>In-Network ATM Fee ($)</td>
</tr>
<tr>
<td>Out-of-Network ATM Fee ($)</td>
</tr>
<tr>
<td>ATM Mini Statement Fee ($)</td>
</tr>
<tr>
<td>International POS/ATM Transaction Fee ($)</td>
</tr>
<tr>
<td>Foreign Transaction Fee ($)</td>
</tr>
</tbody>
</table>
**Investment Option Information**

For each investment option offered by the plan, Rule G-45 requires underwriters to provide the MSRB with the following information:

- The name and type of investment option;
- The inception date of the investment option;
- Total assets, contributions and distributions in the investment option as of the end of the most recent semi-annual period;
- The plan service and transaction fee in effect as of the most recent semi-annual reporting period;
- The asset classes in the investment option;
- The actual asset class allocation of the investment option as of the end of the most recent semi-annual period;
- The name and allocation percentage of each underlying investment in each investment option, as of the end of the most recent semi-annual period;
- The investment option’s performance for the most recent calendar year, as well as any benchmark and its performance for the most recent calendar year;
- Total contributions to and distributions from the investment option for the most recent semi-annual reporting period; and
- The fee and expense structure at the investment option level in effect as of the end of the most recent semi-annual reporting period.
Click the **Investment Option Information** tab and then click the **Add Investment Option/Share Class** link to provide the required information listed above.

You are directed to the **Investment Option Information** screen.

The Investment Option ID must be a unique identifier of each investment option and can include up to nine alphanumeric characters.

Click the **Add Asset Class** link to add asset classes in the investment option, as well as the allocation percentage. Or, click the **Add Underlying Investment** link to provide the name and allocation percentage of all underlying investments in each investment option.
A data quality check is provided under **Asset Class** and **Underlying Investment** to display the total percentage entered. Numerals in decimals up to three digits can be entered.

<table>
<thead>
<tr>
<th>INVESTMENT OPTION INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment Option: James River5</td>
</tr>
<tr>
<td>ID: 99999AB1</td>
</tr>
<tr>
<td>Name: Investment Option</td>
</tr>
<tr>
<td>Inception Date: 9/1/2018</td>
</tr>
<tr>
<td>Investment Type: Age Based or Year of Enrollment</td>
</tr>
<tr>
<td>Total Assets ($) 999</td>
</tr>
<tr>
<td>Total Contributions ($) 999</td>
</tr>
<tr>
<td>Total Distributions ($) 999</td>
</tr>
<tr>
<td>Closed to New Investors: Yes No</td>
</tr>
<tr>
<td>Closed to Current Investors: Yes No</td>
</tr>
</tbody>
</table>

Provide the investment option’s performance data, as well as any benchmark and its performance for the most recent calendar year.

Click the **Add Note** link under the Investment Performance table to add explanatory text or footnotes explaining principles followed, and any additional information that, in your judgment, enhances a reviewer’s understanding of the direct-sold or advisor-sold plan’s performance, as applicable.

Investment performance, as well as any benchmark information, is required for annual submissions only.
Complete the Fees and Expenses section, then click the **Save Investment Option** button at the bottom of the Investment Option screen.

Leave fields blank that do not apply

To add more investment options, click the **Add Investment Option/Share Class** link that appears under the list of investment options you have previously added.
From this screen, you can also edit any of the investment option information you previously provided by clicking the **Edit** link next to the investment option.

Once you have populated all the required fields, review your submission for accuracy and completeness.

### Preview and Submit Form G-45

To review your submission before submitting, click the **Preview** button.

Clicking the **Save** button will save the data you have entered before submitting.

Users can save data but cannot save a plan from a different reporting period at the same time.

Clicking the **Exit** button closes the EMMA Dataport Submission Portal without saving any work. You will also lose all work if your computer is inactive and “times out” after 20 minutes of inactivity. If you must leave your computer after entering data, but before being able to submit, it is recommended that you click **Save**.

In the course of making a submission, the **Submission Status** field at the top of each EMMA Dataport screen displays either Not Submitted or Submitted. This indicates whether any information has been submitted. To meet obligations under Rule G-45, you must have a “Submitted” status for each plan included in Form G-45.
Review the information on the Preview or Print Preview screens to check for accuracy and completeness. If revisions are needed, click the Edit button.

An error message will display if the information provided at the Aggregate Plan Information level does not match the combined Total Assets, Total Contributions or Total Distributions provided at each Investment Option Information level.
If you click Yes: Continue, you will be navigated to the Preview page.

If you click **No: Edit**, you will be navigated to the Aggregate Plan Information level page, which will display the combined sum of all Investment Options in addition to the Aggregate Plan Information total. When you are done making changes, click **Preview**. If you choose not to make any changes, continue to preview the submission.
The Preview page will appear and you will be able to review your submission.

Once you are satisfied with your submission information, click the Submit button. A confirmation screen will appear. When you are ready to submit the form to the MSRB, click Yes: Submit.
After submitting, a confirmation screen containing the following information will appear:

- A submission ID (EA00000000000005 in the example below), which is a unique identifier of the submission;
- A link to print your submission confirmation, which provides you with a printer-friendly version of your completed Form G-45, along with the date and time of submission to EMMA, for recordkeeping purposes;
- A link to start a new submission or modify your existing submission; and
- A link to send your submission confirmation to a secondary email address.

Upon successful submission, the EMMA system sends an electronic receipt to the submitter. The receipt includes the submitted information and a link to EMMA Dataport to view or modify the submission.
Modify Submitted Form G-45

To make changes to information previously submitted in Form G-45, click the View Existing link next to the plan for which you have previously made Form G-45 submissions.
A list of previous Form G-45 submissions, labeled by reporting period, will appear on the **529 savings plans/ABLE programs (Rule G-45)** screen. Click the **Modify** link next to the submission which you wish to modify.
A screen showing the details of the submission will appear. Verify or modify the information previously submitted in Form G-45 and click Submit to resubmit the form.

Form G-45 Submission Preview (Reporting Period: 2017, Ending June 30)

PLAN DESCRIPTIVE INFORMATION

Plan Information
Plan Name: VA STATE COLLEGE SAVINGS PLAN (State: VA)
Plan ID: VA-0001
Plan Website URL: https://collegesavingsplan4.com
Marketing Channel: Advisor Sold

Program Manager Information
Organization Name: Program Manager Org Name
Primary Contact First Name: John
Last Name: Smith
Address: 1300 1st NW
City: Washington
State: DC
Zip: 20005
Phone Number: 703-4576741
Email Address: jdoe@programmanagerorgname.com

Underwriter Information
Organization Name: Program Manager Org Name 2
Primary Contact First Name: John
Last Name: Smith
Address: 1300 1st NW
City: Washington
State: DC
Zip: 20005
Phone Number: 7094561231
Email Address: jdoe@programmanagerorgname.com

AGGREGATE PLAN INFORMATION
Total Assets ($): 67
Total Contributions ($): 57
Total Distributions ($): 765

Plan Service and Transaction Fees (As applicable)
Account Opening Fee ($) : 28
Investment Administration Fee ($) : 534
Cancellation/Withdrawal Fee ($) : 2
Change in Account Owner Fee ($) : 34
Change in Investment Option/Transfer Fee ($) : 566
Rollover Fee ($) : 43
Returned Excess Aggregate Contributions Fee ($) : 23
Rejected ACH or EFT Fee ($) : 457
Overnight Delivery Fee ($) :
In-Network ATM Fee ($) :
Out-of-Network ATM Fee ($) :
ATM Mini Statement Fee ($) :
International POS/ATM Transaction Fee ($) :
Foreign Transaction Fee ($) :
Overdraft Fee ($) : 834
Copy of Check or Statement Fee (per request) ($) : 35
Copy of Check Images Mailed with Monthly Statement Fee ($) : 222
Check Fee ($) : 232
Returned Check Fee ($) : 100
Checking Account Option Fee ($) : 10
Re-Issue of Disbursement Check Fee ($) : 442
Stop Payment Fee ($) :
Debit Card Fee ($) :
Debit Card Replacement Fee ($) :
Outgoing Wire Fee ($) :
Expected Debit Card Rush Delivery Fee ($) :
Paper Fee ($) :
Miscellaneous Fee ($) :
**Submission Preview Continued**

**Investment Option Information**

<table>
<thead>
<tr>
<th>Investment Option ID: 999999999</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name: Tom</td>
</tr>
<tr>
<td>Inception Date: 01/01/2019</td>
</tr>
<tr>
<td>Investment Type: Age Based or Year of Enrollment</td>
</tr>
<tr>
<td>Closed to New Investors: No</td>
</tr>
<tr>
<td>Closed to Current Investors: No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Assets ($)</th>
<th>Total Contributions ($)</th>
<th>Total Distributions ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>576</td>
<td>45</td>
<td>33</td>
</tr>
</tbody>
</table>

**Asset Class**

<table>
<thead>
<tr>
<th>Asset Class: Cash or Cash Equivalents</th>
<th>Allocation Percentage: 34</th>
</tr>
</thead>
</table>

**Underlying Investment**

<table>
<thead>
<tr>
<th>Underlying Investment Name: test</th>
<th>Allocation Percentage: 50</th>
</tr>
</thead>
</table>

**Investment Performance**

<table>
<thead>
<tr>
<th></th>
<th>YTD Return (%)</th>
<th>1 Year Return (%)</th>
<th>Annualized 5 Year Return (%)</th>
<th>Annualized 10 Year Return (%)</th>
<th>Annualized Since Inception Return (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Returns Including Sales Charge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual Returns Excluding Sales Charge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Benchmark Performance**

There are no benchmarks.

**Fees and Expenses**

<table>
<thead>
<tr>
<th>Asset-Based Fees</th>
<th>Additional Investor Expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Underlying Fund Expenses (%)</td>
<td>Maximum Initial Sales Charge ($)</td>
</tr>
<tr>
<td>Program Management Fee (%)</td>
<td>Maximum Deferred Sales Charge (%)</td>
</tr>
<tr>
<td>State Fee ($)</td>
<td>Annual Account Maintenance Fee ($) In-State: Out of State:</td>
</tr>
<tr>
<td>Miscellaneous Fee ($)</td>
<td>Audit Fee ($)</td>
</tr>
<tr>
<td>Annual Distribution/Service/Sales Fee (%)</td>
<td>Bank Administration Fee ($)</td>
</tr>
<tr>
<td>Total Annual Asset-Based Fees (%)</td>
<td></td>
</tr>
</tbody>
</table>

A confirmation screen containing a submission ID and link to print the submission for recordkeeping purposes will appear. Submitters will receive an electronic receipt upon successful submission.
Pre-populate a New Submission with Existing Data

Form G-45 allows submitters to pre-populate many of the required data elements with information from a prior submission. This function allows submitters to make a submission without having to re-enter data elements that typically do not change from one submission to the next.

To create a new Form G-45 submission using the pre-populated function, click the Create New link next to the plan for which you wish to submit Form G-45. Then click the Pre-Populated Form option from the pop-up box.

A pre-populated form with the following data elements from the most recent submission will appear.
Plan Descriptive Information

- Plan Name
- Plan ID
- Plan Website URL
- Marketing Channel
- Program Manager Information and Underwriter Information:
  - Organization Name
  - Primary Contact
  - Address
  - City
  - State
  - Zip
  - Phone Number
  - Email Address

Plan Service and Transaction Fees

- Account Opening Fee
- Investment Administration Fee
- Cancellation/Withdrawal Fee
- Change in Account Owner Fee
- Change in Investment Option/Transfer Fee
- Rollover Fee
- Returned Excess Aggregate Contributions Fee
- Rejected ACH or EFT Fee
- Overnight Delivery Fee
- In-Network ATM Fee
- Out of Network ATM Fee
- ATM Mini Statement Fee
- International POS/ATM Transaction Fee
- Foreign Transaction Fee
- Overdraft Fee
- Copy of Check or Statement Fee (per request)
- Copy of Check Images Mailed with Monthly Statement Fee
- Check Fee
- Returned Check Fee
- Checking Account Option Fee
- Re-Issue of Disbursement Check Fee
- Stop Payment Fee
- Debit Card Fee
- Debit Card Replacement Fee
- Outgoing Wire Fee
- Expedited Debt Card Rush Delivery Fee
- Paper Fee
- Miscellaneous Fee

Investment Option Information
- Investment option ID
- Investment option name and type
- Inception date
- Asset classes in the investment option
- Name of each underlying investment option
- Benchmark name, if any
- Fees and expenses

Enter the appropriate information for the data elements that are not pre-populated and make any necessary corrections to the pre-populated data elements. Click the Submit button to complete the submission.

**Recordkeeping**

**Rule G-8**, on books and records, and **Rule G-9**, on preservation of records, have been modified to reflect Rule G-45 requirements. In general, underwriters are required to retain electronic copies of Form G-45 and related XML data files they submit to the EMMA system. Upon successful submission of Form G-45, the submitter has an opportunity to print a confirmation of the submission. In addition, EMMA sends an email to the submitter after a completed submission containing information required by Rule G-8.
PART 2: Automated Submission of Form G-45

The EMMA Form G-45 Submission Service includes an automated computer-to-computer submission interface as an alternative to the web interface submission process described in part one of this manual. The EMMA Dataport web user interface is designed to accept input for a single submission at a time, while the computer-to-computer interface supports input of multiple submissions.

While the specifications are intended for technical specialists, non-technical submitters may note these features.

Preparing for Computer-to-Computer Submission

The main steps in preparing to use the computer-to-computer interface are:

- Review the schema, which defines the structure and content of submission data messages (data messages consist of required Form G-45 information);
- Identify within your organization the sources of data to be submitted within the schema;
- Set up a client proxy using commercially available tools (some examples are Java or .NET);
- Establish a connection between your firm’s client proxy and the EMMA web service interface;
- Set up test cases;
- Communicate with the MSRB to arrange to test interoperability of your client proxy and EMMA; and
- Conduct systems testing.

Using the Computer-to-Computer Interface

- The EMMA Dataport web interface (sometimes called the “web form”) is the portion of the EMMA system tailored for individual users to manually submit Form G-45 and other disclosure information. Submissions made through the computer-to-computer interface may be viewed and updated by the submitter on the web form. Generally,
the submission appears immediately on the web form after receipt through the computer-to-computer interface.

- Each message that reaches EMMA will be followed immediately by a response message to the submitter’s computer.

- Response messages will include the Submission ID, Submission Status and Message Return Code. Subsequent updates must use the Submission ID, Plan Reference ID along with the Reporting Year and Reporting Period as submission update identifiers.

- Response messages will be returned to the submitter system when certain types of conditions exist with respect to the data submitted. Response messages are classified as Error or Information depending on the nature and severity of the exception:
  - An error message indicates termination of message processing with failure of the intended action. The submitter should take appropriate corrective action and re-submit as needed.
  - An information message indicates certain action taken by EMMA that does not materially affect completeness of the submission but of which the submitter should be aware.

**Web Service Interface Specifications**

The MSRB exposes a web service interface allowing for the submission of SOAP (Simple Object Access Protocol) standard XML (extensible markup language) messages using secure, computer-to-computer communications. This interface is remotely consumed by applications written by or for submitters in a wide variety of programming languages and running on a wide variety of platforms.

Submitters using the automated submission interface connect to the web service (production) interface using the following URL:

https://services.emma.msrb.org/DisclosureServices/G45Disclosure.svc

**Test Web Service Interface**

The beta version of the automated submission interface serves as a platform for submitters to conduct tests and ensure proper programming and configuration of their applications for making Form G-45 submissions to the EMMA system.
The URL for the beta version of the web service interface for making automated Form G-45 submissions is:

https://servicesbeta.emma.msrb.org/DisclosureServices/G45Disclosure.svc

**Message Processing, Schemas, Data Tags and Required Elements**

Data is submitted through the automated submission interface as Simple Object Access Protocol (SOAP) messages. Data elements submitted in a data message for Form G-45 submissions are organized in a hierarchical relationship into the following categories: (i) submission data; (ii) submitter data; (iii) plan data; (iv) program manager and underwriter contact data; (v) option data; (vi) asset class data; (vii) underlying investments data; (viii) investment performance data; (ix) benchmark performance data; and (x) fees and expenses data. These categories and the available data tags applicable to each category shall, as applicable, be included in the XML message payload. Each message must also include a header containing an authentication token and web services protocol support as detailed in the XML Message Schemas section of this manual. Below are the typical data elements provided in a data message, together with the value to be selected or entered. Sample XML messages representing a standard submission are also provided below.

- **submission data**
  i. submission status (select **Publish**)
  ii. submission id (only for update scenario)

- **submitter data**
  i. managing MSRB ID (enter MSRB ID)

- **plan data**
  i. plan reference ID (enter plan reference identifier). Click here for a list of G-45 plan reference IDs
  ii. reporting year (enter calendar year)
  iii. reporting period (select value: ending June 30 or ending December 31)
  iv. plan information website (enter value)
  v. marketing channel (select value: direct sold or advisor sold)
  vi. total aggregate assets (enter value)
  vii. total aggregate contributions (enter value)
  viii. total aggregate distributions (enter value)

- **program manager data**
  i. organization name (enter full organization name)
ii. contact first name (enter name)
iii. contact last name (enter name)
iv. address (enter address)
v. city (enter city)
vi. state (enter state code)
vii. zip code (enter zip code)
viii. phone number (enter phone number)
ix. phone extension (enter phone extension)
x. email address (enter email address)

• **underwriter data**
  i. organization name (enter full organization name)
  ii. contact first name (enter name)
  iii. contact last name (enter name)
  iv. address (enter address)
  v. city (enter city)
  vi. state (enter state code)
  vii. zip code (enter zip code)
  viii. phone number (enter phone number)
  ix. phone extension (enter phone extension)
  x. email address (enter email address)

• **plan service and transaction fees** (enter values)
  i. account opening fee
  ii. investment administration fee
  iii. cancellation withdrawal fee
  iv. change in account owner fee
  v. change in investment option transfer fee
  vi. rollover fee
  vii. returned excess aggregate contributions fee
  viii. rejected ACH or EFT fee
  ix. overnight delivery fee
  x. in network ATM fee
  xi. out of network ATM fee
  xii. international POS/ATM transaction fee
  xiii. foreign transaction fee
  xiv. overdraft fee
  xv. copy of check or statement fee, per request
  xvi. copy of check images mailed with monthly statement fee
  xvii. ATM mini statement fee
  xviii. check fee
  xix. returned check fee
  xx. checking account option fee
  xxi. reissue of disbursement checks fee
  xxii. stop payment fee
xxiii. debit card fee  
xxiv. debit card replacement fee  
xxv. outgoing wire fee  
xxvi. expedited debit card rush delivery fee  
xxvii. paper fee  
xxviii. miscellaneous fee  
xxix. note  

- **Investment option data**  
  i. closed to new investors (enter value)  
  ii. closed to current investors (enter value)  
  iii. investment option external ID (enter value)  
  iv. name (enter name of investment option)  
  v. inception date (enter date)  
  vi. investment type (select value: age based or year of enrollment, individual or stand alone, static or fixed)  
  vii. total assets (enter value)  
  viii. total contributions (enter value)  
  ix. total distributions (enter value)  

- **Asset class data**  
  i. asset class (select value: domestic equities, international equities, fixed income products, commodities, insurance products, bank products, cash and cash equivalents or other products)  
  ii. allocation percent (enter value)  

- **Underlying investments data**  
  i. name (enter name)  
  ii. allocation percent (enter value)  

- **Investment performance data**  
  i. total annual return percent including sales charges (enter values for YTD, 1 Year, 5 Year, 10 Year and Since Inception)  
  ii. total annual return percent excluding sales charges (enter values for YTD, 1 Year, 5 Year, 10 Year and Since Inception)  
  iii. note (enter text)  

- **Benchmark performance data**  
  i. benchmark name (enter name)  
  ii. benchmark annual return percent (enter value for YTD, 1 Year and Since Inception)  

- **Fees and expenses data** (enter values)  
  i. estimated underlying fund expenses  
  ii. program management fee  
  iii. state fee  
  iv. miscellaneous fee  
  v. annual distribution/service/sales fee  
  vi. total annual asset-based fees
vii. additional investor expenses  
viii. maximum initial sales charge  
ix. maximum deferred sales charge  
x. audit fee  
xi. annual account maintenance fee (in state and/or out of state)  
-xii. bank administration fee
Figure 1: Message Processing Overview
Figure 2: Form G-45 Data Tag Structure

Form G-45 Data Message

DATA Message Type
(SoP Envelope)

(Header)

Submission

SubmissionIdentifier
SubmissionStatus

ManagingMSRBID

PlanReferenceID
ReportingYear
ReportingPeriod
PlanInformationWebsite
MarketingChannel
TotalAggregateAssets
TotalAggregateContributions
TotalAggregateDistributions

Plan

OrganizationName
ContactFirstName
ContactLastName
Address
City
State
ZipCode
PhoneNumber
PhoneExtension
EMailAddress

Fee
Note

InvestmentOptionExternalID
Name
InceptionDate
InvestmentType
TotalAssets
TotalContributions
TotalDistributions

ClosedToNewInvestorsFlag
ClosedToCurrentInvestorsFlag

Option

AssetClass
AllocationPercent

UnderlyingInvestments

Name
AllocationPercent

IncludingSalesCharges (AnnualReturnPercent)
ExcludingSalesCharges (AnnualReturnPercent)

Note

BenchmarkPerformance

BenchmarkName
BenchmarkAnnualReturnPercent

AssetClassAllocation

UnderlyingInvestments

InvestmentPerformance

FeesAndExpenses

Fees
Note

SOAP (Simple Object Access Protocol) - foundation layer of the web services protocol stack

MTOM (SOAP Message Transmission Optimization Mechanism) - a method of efficiently sending binary data to and from web services
Data Tags and Requirements for Form G-45 Disclosure

Table 1: Message Data Tag Glossary

Below is a list of data tags to be used for submitting Form G-45 data messages using the EMMA website’s automated (computer-to-computer) submission interface. These data elements are organized in a hierarchical data relationship. This glossary includes each data element’s XML container, data tag, data specifications, listing of enumerated values, and an example of the data format where the submitter is to enter a value.

A complete listing of the Form G-45 data elements and their descriptions are provided in the appendix of this manual.

<table>
<thead>
<tr>
<th>XML Container</th>
<th>Data Tag</th>
<th>Data Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submission</td>
<td>Submission Status</td>
<td>SubmissionStatusType</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Enumerated Value:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Publish</td>
</tr>
<tr>
<td></td>
<td>Submission Identifier</td>
<td>Max15Text</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ex: EA00000000000063</td>
</tr>
<tr>
<td>Submitter</td>
<td>Managing MSRBID</td>
<td>Max15Text</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ex: A12345</td>
</tr>
<tr>
<td>Plan</td>
<td>Plan Reference ID</td>
<td>String {Max10Text}</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ex: AK-000001</td>
</tr>
<tr>
<td></td>
<td>Reporting Year</td>
<td>YearType</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ex: 2015</td>
</tr>
<tr>
<td></td>
<td>Reporting Period</td>
<td>ReportingPeriodType</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Enumerated Value:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• EndingJune30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• EndingDecember31</td>
</tr>
<tr>
<td></td>
<td>Plan Information Website</td>
<td>String {Max150Text}</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ex: <a href="http://www.plan.com">www.plan.com</a></td>
</tr>
<tr>
<td></td>
<td>Marketing Channel</td>
<td>MarketingChannelType</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Enumerated Value:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• AdvisorSold</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• DirectSold</td>
</tr>
<tr>
<td>Submission Data Tags</td>
<td>Description and Specification</td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td>-------------------------------</td>
<td></td>
</tr>
<tr>
<td>Form G-45 Submissions</td>
<td>EMMA G-45 Disclosure Service Message</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>XML Container</th>
<th>Data Tag</th>
<th>Data Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Manager Information</td>
<td>Total Aggregate Assets</td>
<td>MoneyType{Max15Numbers} ex:10000000</td>
</tr>
<tr>
<td></td>
<td>Total Aggregate Contributions</td>
<td>MoneyType{Max15Numbers} ex:10000000</td>
</tr>
<tr>
<td></td>
<td>Total Aggregate Distributions</td>
<td>MoneyType{Max15Numbers} ex:10000000</td>
</tr>
<tr>
<td></td>
<td>Organization Name</td>
<td>String {Max250Text} ex: 529 Underwriter</td>
</tr>
<tr>
<td></td>
<td>Contact First Name</td>
<td>String {Max50Text} ex: Emma</td>
</tr>
<tr>
<td></td>
<td>Contact Last Name</td>
<td>String {Max50Text} ex: Jones</td>
</tr>
<tr>
<td></td>
<td>Address</td>
<td>String {Max250Text} ex: 123 Security Road</td>
</tr>
<tr>
<td></td>
<td>City</td>
<td>String {Max50Text} ex: Alexandria</td>
</tr>
<tr>
<td></td>
<td>State</td>
<td>String; StateCode;2 ex: VA</td>
</tr>
<tr>
<td></td>
<td>Zip Code</td>
<td>ZipType ex: 22301-5555</td>
</tr>
<tr>
<td></td>
<td>Phone Number</td>
<td>PhoneType ex: 703-555-2222</td>
</tr>
<tr>
<td></td>
<td>Phone Extension</td>
<td>PhoneExtType ex: 12345</td>
</tr>
<tr>
<td></td>
<td>Email Address</td>
<td>EmailType ex: <a href="mailto:ejones@underwriter.com">ejones@underwriter.com</a></td>
</tr>
<tr>
<td>Underwriter Information</td>
<td>Organization Name</td>
<td>String {Max250Text} ex: ABLE Underwriter</td>
</tr>
<tr>
<td></td>
<td>Contact First Name</td>
<td>String {Max50Text} ex: Emma</td>
</tr>
<tr>
<td></td>
<td>Contact Last Name</td>
<td>String {Max50Text} ex: Jones</td>
</tr>
<tr>
<td></td>
<td>Address</td>
<td>String {Max250Text} ex: 123 Security Road</td>
</tr>
<tr>
<td></td>
<td>City</td>
<td>String {Max50Text} ex: Alexandria</td>
</tr>
<tr>
<td></td>
<td>State</td>
<td>String; StateCode;2 ex: VA</td>
</tr>
<tr>
<td>XML Container</td>
<td>Data Tag</td>
<td>Data Specification</td>
</tr>
<tr>
<td>------------------------</td>
<td>----------------------------------------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td></td>
<td>Zip Code</td>
<td>ZipType ex: 22301-5555</td>
</tr>
<tr>
<td></td>
<td>Phone Number</td>
<td>PhoneType ex: 703-555-2222</td>
</tr>
<tr>
<td></td>
<td>Phone Extension</td>
<td>PhoneExtType ex: 12345</td>
</tr>
<tr>
<td></td>
<td>Email Address</td>
<td>EmailType ex: <a href="mailto:ejones@underwriter.com">ejones@underwriter.com</a></td>
</tr>
<tr>
<td></td>
<td>Account Opening Fee</td>
<td>MoneyType ex: 100</td>
</tr>
<tr>
<td></td>
<td>Investment Administration Fee</td>
<td>MoneyType ex: 100 MoneyType ex: 100</td>
</tr>
<tr>
<td></td>
<td>Cancellation Withdrawal Fee</td>
<td>MoneyType ex: 100</td>
</tr>
<tr>
<td></td>
<td>Change in Account Owner Fee</td>
<td>MoneyType ex: 100</td>
</tr>
<tr>
<td></td>
<td>Change in Investment Option Transfer Fee</td>
<td>MoneyType ex: 100</td>
</tr>
<tr>
<td></td>
<td>Rollover Fee</td>
<td>MoneyType ex: 100</td>
</tr>
<tr>
<td></td>
<td>Returned Excess Aggregate Contributions Fee</td>
<td>MoneyType ex: 100</td>
</tr>
<tr>
<td></td>
<td>Rejected ACH or EFT Fee</td>
<td>MoneyType ex: 100</td>
</tr>
<tr>
<td></td>
<td>Overnight Delivery Fee</td>
<td>MoneyType ex: 100</td>
</tr>
<tr>
<td></td>
<td>In Network ATM Fee</td>
<td>MoneyType ex: 100</td>
</tr>
<tr>
<td></td>
<td>Out of Network ATM Fee</td>
<td>MoneyType ex: 100</td>
</tr>
<tr>
<td></td>
<td>ATM Mini Statement Fee</td>
<td>MoneyType ex: 100</td>
</tr>
<tr>
<td></td>
<td>International POS ATM Transaction Fee</td>
<td>DecimalType +/- ###.### ex: 0.125</td>
</tr>
<tr>
<td></td>
<td>Foreign Transaction Fee</td>
<td>DecimalType +/- ###.### ex: 0.125</td>
</tr>
<tr>
<td></td>
<td>Overdraft Fee</td>
<td>MoneyType ex: 100</td>
</tr>
<tr>
<td></td>
<td>Copy of Check or Statement Fee Per Request</td>
<td>MoneyType ex: 100</td>
</tr>
<tr>
<td></td>
<td>Copy of Check Images Mailed with Monthly Statement Fee</td>
<td>MoneyType ex: 100</td>
</tr>
<tr>
<td></td>
<td>Check Fee</td>
<td>MoneyType ex: 100</td>
</tr>
</tbody>
</table>
## Submission Data Tags
### Description and Specification

### Form G-45 Submissions
#### EMMA G-45 Disclosure Service Message

<table>
<thead>
<tr>
<th>XML Container</th>
<th>Data Tag</th>
<th>Data Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Returned Check Fee</td>
<td>MoneyType ex: 100</td>
</tr>
<tr>
<td></td>
<td>Checking Account Option Fee</td>
<td>MoneyType ex: 100</td>
</tr>
<tr>
<td></td>
<td>Reissue of Disbursement Checks Fee</td>
<td>MoneyType ex: 100</td>
</tr>
<tr>
<td></td>
<td>Stop Payment Fee</td>
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</tr>
<tr>
<td></td>
<td>Debit Card Fee</td>
<td>MoneyType ex: 100</td>
</tr>
<tr>
<td></td>
<td>Debit Card Replacement Fee</td>
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</tr>
<tr>
<td></td>
<td>Outgoing Wire Fee</td>
<td>MoneyType ex: 100</td>
</tr>
<tr>
<td></td>
<td>Expedited Debit Card Rush Delivery Fee</td>
<td>MoneyType ex: 100</td>
</tr>
<tr>
<td></td>
<td>Paper Fee</td>
<td>MoneyType ex: 100</td>
</tr>
<tr>
<td></td>
<td>Miscellaneous Fee</td>
<td>MoneyType ex: 100</td>
</tr>
<tr>
<td></td>
<td>Note</td>
<td>Text</td>
</tr>
<tr>
<td>Option</td>
<td>Closed To New Investors Flag</td>
<td>BooleanType ex: Yes/No</td>
</tr>
<tr>
<td></td>
<td>Closed To Current Investors Flag</td>
<td>BooleanType ex: Yes/No</td>
</tr>
<tr>
<td></td>
<td>Investment Option External ID</td>
<td>InvestmentOptionIdType ex: 125888884</td>
</tr>
<tr>
<td></td>
<td>Name</td>
<td>String [Max250Text] ex: Jones River Progressive Fund</td>
</tr>
<tr>
<td></td>
<td>Inception Date</td>
<td>ISODate Ex: 2012-05-20</td>
</tr>
</tbody>
</table>
|               | Investment Type | Enumerated Value:  
|               | Total Assets | MoneyType(Max15Numbers) ex: 1500000 |
|               | Total Contributions | MoneyType(Max15Numbers) ex: 1500000 |
|               | Total Distributions | MoneyType(Max15Numbers) ex: 1500000 |
## Submission Data Tags
### Description and Specification

### Form G-45 Submissions
**EMMA G-45 Disclosure Service Message**

<table>
<thead>
<tr>
<th>XML Container</th>
<th>Data Tag</th>
<th>Data Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Asset Class Allocation</strong></td>
<td>Asset Class</td>
<td>AssetClassType&lt;br&gt;Enumerated Value:&lt;br&gt;• DomesticEquities&lt;br&gt;• InternationalEquities&lt;br&gt;• FixedIncomeProducts&lt;br&gt;• Commodities&lt;br&gt;• InsuranceProducts&lt;br&gt;• BankProducts&lt;br&gt;• CashOrCashEquivalents&lt;br&gt;• OtherProductTypes</td>
</tr>
<tr>
<td></td>
<td>Allocation Percent</td>
<td>DecimalType {+/- ####.####}&lt;br&gt;ex: 5.50</td>
</tr>
<tr>
<td><strong>Underlying Investments</strong></td>
<td>Name</td>
<td>String{Max250Text}&lt;br&gt;ex: Total Stock Market Index</td>
</tr>
<tr>
<td></td>
<td>Allocation Percent</td>
<td>DecimalType {+/- ####.####}&lt;br&gt;ex: 5.50</td>
</tr>
<tr>
<td><strong>Investment Option Performance</strong></td>
<td>Including Sales Charges (Annual Return Percent)</td>
<td>DecimalType {+/- ####.####}&lt;br&gt;ex: 4.25</td>
</tr>
<tr>
<td></td>
<td>Excluding Sales Charges (Annual Return Percent)</td>
<td>DecimalType {+/- ####.####}&lt;br&gt;ex: 4.30</td>
</tr>
<tr>
<td></td>
<td>Note</td>
<td>String {Max3500Text}&lt;br&gt;ex: performance free text note</td>
</tr>
<tr>
<td><strong>Benchmark Performance</strong></td>
<td>Benchmark Name</td>
<td>String {Max250Text}&lt;br&gt;ex: Benchmark Name</td>
</tr>
<tr>
<td></td>
<td>Benchmark (Annual Return Percent)</td>
<td>DecimalType {+/- ####.####}&lt;br&gt;ex: 15.50</td>
</tr>
<tr>
<td><strong>Fees and Expenses</strong></td>
<td>Estimated Underlying Fund Expenses</td>
<td>DecimalType {+/- ####.####}&lt;br&gt;ex: 0.125</td>
</tr>
<tr>
<td></td>
<td>Program Management Fee</td>
<td>DecimalType {+/- ####.####}&lt;br&gt;ex: 0.125</td>
</tr>
<tr>
<td></td>
<td>State Fee</td>
<td>DecimalType {+/- ####.####}&lt;br&gt;ex: 0.125</td>
</tr>
<tr>
<td></td>
<td>Miscellaneous Fees</td>
<td>DecimalType {+/- ####.####}&lt;br&gt;ex: 0.125</td>
</tr>
<tr>
<td></td>
<td>Annual Distribution Service Sales Fee</td>
<td>DecimalType {+/- ####.####}&lt;br&gt;ex: 0.125</td>
</tr>
<tr>
<td></td>
<td>Total Annual Asset Based Fees</td>
<td>DecimalType {+/- ####.####}&lt;br&gt;ex: 0.125</td>
</tr>
<tr>
<td></td>
<td>Maximum Initial Sales Charge</td>
<td>DecimalType {+/- ####.####}&lt;br&gt;ex: 0.125</td>
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<td>XML Container</td>
<td>Data Tag</td>
<td>Data Specification</td>
</tr>
<tr>
<td>---------------</td>
<td>----------------------------------------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td></td>
<td>Maximum Deferred Sales Charge</td>
<td>DecimalType {+-###.###}</td>
</tr>
<tr>
<td></td>
<td>Annual Account Maintenance Fee (In-State/Out-of-State)</td>
<td>MoneyType ex: 100</td>
</tr>
<tr>
<td></td>
<td>Audit Fee</td>
<td>DecimalType {+-###.###}</td>
</tr>
<tr>
<td></td>
<td>Bank Administration Fee</td>
<td>MoneyType ex: 100</td>
</tr>
<tr>
<td></td>
<td>Note</td>
<td>Text</td>
</tr>
</tbody>
</table>
Table 2: Required Message Tags

Below is a list of the data tags required for submission data messages. The data elements are organized in a hierarchical data relationship. This specification sets out each data element’s XML container, data tag and if the tag value is required, optional, as applicable or not applicable, and possible qualifying conditions.

<table>
<thead>
<tr>
<th>Submission Message Tags</th>
<th>Form G-45 Submissions</th>
<th>EMMA G45 Disclosure Service Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>XML Container</td>
<td>Data Tag</td>
<td>Required Indicator</td>
</tr>
<tr>
<td>Submission</td>
<td>Submission Status</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td>Submission Identifier</td>
<td>R (Only when updating existing submissions)</td>
</tr>
<tr>
<td>Submitter</td>
<td>Managing MSRBID</td>
<td>R</td>
</tr>
<tr>
<td>Plan</td>
<td>Plan Reference ID</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td>Reporting Year</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td>Reporting Period</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td>Plan Information Website</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td>Marketing Channel</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td>Total Aggregate Assets</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td>Total Aggregate Contributions</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td>Total Aggregate Distributions</td>
<td>R</td>
</tr>
<tr>
<td>Program Manager Information and Underwriter Information</td>
<td>Organization Name</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td>Contact First Name</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td>Contact Last Name</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td>Address</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td>City</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td>State</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td>Zip Code</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td>Phone Number</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td>Phone Extension</td>
<td>AA</td>
</tr>
<tr>
<td></td>
<td>Email Address</td>
<td>R</td>
</tr>
</tbody>
</table>
### Submission Message Tags

**Form G-45 Submissions**

**EMMA G45 Disclosure Service Message**

<table>
<thead>
<tr>
<th>XML Container</th>
<th>Data Tag</th>
<th>Required Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan Service and Transaction Fees</td>
<td>&lt;Fee Name=&quot;AccountOpeningFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;InvestmentAdministrationFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;CancellationWithdrawalFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;ChangeInAccountOwnerFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;ChangeInInvestmentOptionTransferFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;RolloverFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;ReturnedExcessAggregateContributionsFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;RejectedACHorEFTFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;OvernightDeliveryFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;InNetworkATMFees&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;OutofNetworkATMFees&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;ATMMiniStatementFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;InternationalPOSATMTransactionFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;ForeignTransactionFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;OverdraftFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;CopyofCheckorStatementFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;CopyofCheckImagesMailedWithMonthlyStatementFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;CheckFee&quot; &gt;</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;ReturnedCheckFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;CheckingAccountOptionFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;ReissueofDisbursementChecksFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;StopPaymentFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;DebitCardFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;DebitCardReplacementFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;OutgoingWireFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot; ExpeditedDebitCardRushDeliveryFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;PaperFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;MiscellaneousFees&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Note</strong></td>
<td>O</td>
</tr>
</tbody>
</table>

| Investment Option                      | Closed to Current Investors Flag                                        | O                  |
|                                       | Closed to New Investors Flag                                            | O                  |
|                                       | Investment Option External ID                                           | R                  |
|                                       | Name                                                                    | R                  |
|                                       | Inception Date                                                          | R                  |
|                                       | Investment Type                                                         | R                  |
|                                       | Total Assets                                                            | R                  |
|                                       | Total Contributions                                                     | R                  |
|                                       | Total Distributions                                                     | R                  |
## Submission Message Tags

**Form G-45 Submissions**

**EMMA G45 Disclosure Service Message**

<table>
<thead>
<tr>
<th>XML Container</th>
<th>Data Tag</th>
<th>Required Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asset Class Allocation</td>
<td>Asset Class</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td>Allocation Percent</td>
<td>R</td>
</tr>
<tr>
<td>Underlying Investments</td>
<td>Name</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td>Allocation Percent</td>
<td>R</td>
</tr>
<tr>
<td>Investment Performance</td>
<td>Total annual return percent including Sales Charges</td>
<td>At least one field is required if the reporting period is Ending December 31.</td>
</tr>
<tr>
<td></td>
<td>Total annual return percent excluding Sales Charges</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Note</td>
<td>O</td>
</tr>
<tr>
<td>Benchmark Performance</td>
<td>Benchmark Name</td>
<td>If benchmark tag exists, then: R</td>
</tr>
<tr>
<td></td>
<td>Benchmark Annual Return Percentages</td>
<td>If benchmark tag exists, then: R</td>
</tr>
<tr>
<td>Fees and Expenses</td>
<td>&lt;Fee Name=&quot;EstimatedUnderlyingFundExpenses&quot; &gt;</td>
<td>R</td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;ProgramManagementFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;StateFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;OtherMiscFees&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;AnnualDistributionServiceSalesFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;TotalAnnualAssetBasedFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;MaximumInitialSalesCharge&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;MaximumDeferredSalesCharge&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;AuditFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;AnnualAccountMaintenanceFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;BankAdministrationFee&quot; &gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Note</td>
<td>O</td>
</tr>
</tbody>
</table>

### Footnotes:

- **R** Required for a complete data submission
- **O** Optional
- **AA** As Applicable
- **N/A** Not Applicable – signifies that no data is to be provided for a data element because such data is not needed for such submission.
XML Message Schemas

Detailed below are the relevant schemas applicable to Form G-45 XML submission messages.

G45DisclosureService_0.xsd

```xml
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
    xmlns:tns="http://emma.msrb.org/schemas/disclosuremessages/G45Disclosure" elementFormDefault="qualified"
    targetNamespace="http://emma.msrb.org/schemas/disclosuremessages/G45Disclosure">
    <xs:import schemaLocation="G45Disclosure_1.xsd" namespace="http://emma.msrb.org/schemas/G45DisclosureService" />
    <xs:element name="G45DisclosureServiceRequest">
        <xs:complexType>
            <xs:sequence>
                <xs:element xmlns:q1="http://emma.msrb.org/schemas/G45DisclosureService" minOccurs="0" maxOccurs="1"
                    ref="q1:G45Message" />
            </xs:sequence>
        </xs:complexType>
    </xs:element>
</xs:schema>
```

G45DisclosureService_1.xsd

```xml
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
    <xs:import schemaLocation="G45Disclosure_2.xsd" namespace="http://emma.msrb.org/schemas/disclosuremessages/G45Disclosure/types" />
    <xs:element xmlns:q1="http://emma.msrb.org/schemas/disclosuremessages/G45Disclosure/types" name="G45Message" type="q1:G45Message" />
</xs:schema>
```

G45DisclosureService_2.xsd

```xml
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
    <xs:complexType name="G45Message">
        <xs:sequence>
            <xs:element minOccurs="1" maxOccurs="1" name="Submission" type="tns:SubmissionDetailsType" />
            <xs:element minOccurs="1" maxOccurs="1" name="Plan" type="tns:G45PlanDetailsType" />
            <xs:element minOccurs="1" maxOccurs="1" name="Submitter" type="tns:SubmitterDetailsType" />
        </xs:sequence>
    </xs:complexType>
    <xs:complexType name="SubmissionDetailsType">
        <xs:attribute name="SubmissionIdentifier" type="tns:Max15Text" />
        <xs:attribute name="SubmissionStatus" type="tns:SubmissionStatusType" />
    </xs:complexType>
    <xs:simpleType name="SubmissionStatusType">
        <xs:restriction base="xs:string">
            <xs:enumeration value="Publish" />
            <xs:enumeration value="Test" />
        </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="G45PlanDetailsType">
        <xs:sequence>
            <xs:element ...
```
<xs:element minOccurs="1" maxOccurs="1" name="ProgramManagerInformation" type="tns:ManagementInformationType"/>
<xs:element minOccurs="1" maxOccurs="1" name="UnderwriterInformation" type="tns:ArrayOfManagementInformationType"/>
<xs:element minOccurs="0" maxOccurs="1" name="PlanServiceAndTransactionFees" type="tns:G45FeesAndExpensesType"/>
<xs:element minOccurs="1" maxOccurs="1" name="InvestmentOptions" type="tns:ArrayOfG45OptionDetailsType"/>
</xs:sequence>
<xs:attribute name="PlanReferenceID" type="tns:Max10Text" use="required"/>
<xs:attribute name="ReportingYear" type="tns:YearType" use="required"/>
<xs:attribute name="ReportingPeriod" type="tns:ReportingPeriodType"/>
<xs:attribute name="PlanInformationWebsite" type="tns:Max150Text" use="required"/>
<xs:attribute name="MarketingChannel" type="tns:MarketingChannelType"/>
<xs:attribute name="TotalAggregateAssets" type="tns:MoneyType"/>
<xs:attribute name="TotalAggregateContributions" type="tns:MoneyType"/>
<xs:attribute name="TotalAggregateDistributions" type="tns:MoneyType"/>
</xs:complexType>
<xs:complexType name="ManagementInformationType">
<xs:attribute name="OrganizationName" type="tns:Max250Text" use="required"/>
<xs:attribute name="ContactFirstName" type="tns:Max50Text" use="required"/>
<xs:attribute name="ContactLastName" type="tns:Max50Text" use="required"/>
<xs:attribute name="Address" type="tns:Max250Text" use="required"/>
<xs:attribute name="City" type="tns:Max50Text" use="required"/>
<xs:attribute name="State" type="tns:StateCode" use="required"/>
<xs:attribute name="ZipCode" type="tns:ZipType" use="required"/>
<xs:attribute name="PhoneNumber" type="tns:PhoneType" use="required"/>
<xs:attribute name="PhoneExtension" type="tns:PhoneExtType"/>
<xs:attribute name="EMailAddress" type="tns:EmailType" use="required"/>
</xs:complexType>
<xs:complexType name="ArrayOfManagementInformationType">
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<xs:element minOccurs="1" maxOccurs="unbounded" name="Underwriter" type="tns:ManagementInformationType"/>
</xs:sequence>
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<xs:complexType name="G45OptionDetailsType">
<xs:sequence>
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<xs:element minOccurs="1" maxOccurs="1" name="UnderlyingInvestments" type="tns:ArrayOfUnderlyingInvestmentType"/>
</xs:sequence>
</xs:complexType>
</xs:complexType>
<xs:complexType name="ProgramManagerInformationType">
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<xs:complexType name="UnderwriterInformationType">
<xs:attribute name="UnderwriterInformation" type="tns:ArrayOfManagementInformationType"/>
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  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Fees" type="tns:ArrayOfG45Fees" />
  </xs:sequence>
  <xs:attribute name="Note" type="tns:Max3500Text" />
</xs:complexType>
<xs:complexType name="ArrayOfG45Fees">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="unbounded" name="Fee" type="tns:G45Fee" />
  </xs:sequence>
</xs:complexType>
<xs:complexType name="G45Fee">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="FeeTypes" type="tns:ArrayOfG45FeeTypes" />
  </xs:sequence>
  <xs:attribute name="Name" type="xs:string" use="required"/>
</xs:complexType>
<xs:complexType name="ArrayOfG45FeeTypes">
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    <xs:element minOccurs="0" maxOccurs="unbounded" name="FeeType" nillable="true" type="tns:G45FeeType" />
  </xs:sequence>
</xs:complexType>
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  <xs:attribute name="Amount" type="xs:string" use="required"/>
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  <xs:sequence>
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  </xs:sequence>
</xs:complexType>
<xs:complexType name="ClassAllocationType">
  <xs:attribute name="AssetClass" type="tns:AssetClassType" />
  <xs:attribute name="AllocationPercent" type="tns:DecimalType" />
</xs:complexType>
<xs:simpleType name="AssetClassType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="DomesticEquities" />
    <xs:enumeration value="InternationalEquities" />
    <xs:enumeration value="FixedIncomeProducts" />
    <xs:enumeration value="Commodities" />
    <xs:enumeration value="InsuranceProducts" />
    <xs:enumeration value="BankProducts" />
    <xs:enumeration value="CashOrCashEquivalents" />
    <xs:enumeration value="OtherProductTypes" />
  </xs:restriction>
</xs:simpleType>
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  <xs:sequence>
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  </xs:sequence>
</xs:complexType>
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  <xs:attribute name="AllocationPercent" type="tns:DecimalType" />
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<xs:complexType name="InvestmentPerformanceType">
  <xs:sequence>
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<xs:element minOccurs="0" maxOccurs="1" name="ExcludingSalesCharges" type="tns:AnnualReturnType" />
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<xs:attribute name="AnnualReturnPercent_1Year" type="tns:DecimalType" />
<xs:attribute name="AnnualReturnPercent_3Year" type="tns:DecimalType" />
<xs:attribute name="AnnualReturnPercent_5Year" type="tns:DecimalType" />
<xs:attribute name="AnnualReturnPercent_10Year" type="tns:DecimalType" />
<xs:attribute name="AnnualReturnPercent_SinceInception" type="tns:DecimalType" />
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<xs:attribute name="BenchmarkAnnualReturnPercent_YearToDate" type="tns:DecimalType" />
<xs:attribute name="BenchmarkAnnualReturnPercent_1Year" type="tns:DecimalType" />
<xs:attribute name="BenchmarkAnnualReturnPercent_3Year" type="tns:DecimalType" />
<xs:attribute name="BenchmarkAnnualReturnPercent_SinceInception" type="tns:DecimalType" />
</xs:complexType>
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<xs:enumeration value="StaticOrFixed" />
<xs:enumeration value="IndividualOrStandAlone" />
</xs:restriction>
</xs:simpleType>
<xs:simpleType name="ReportingPeriodType">
<xs:restriction base="xs:string">
<xs:enumeration value="EndingJune30" />
<xs:enumeration value="EndingDecember31" />
</xs:restriction>
</xs:simpleType>
<xs:simpleType name="MarketingChannelType">
<xs:restriction base="xs:string">
<xs:enumeration value="AdvisorSold" />
<xs:enumeration value="DirectSold" />
</xs:restriction>
</xs:simpleType>
<xs:complexType name="SubmitterDetailsType">
<xs:attribute name="ManagingMSRBID" type="tns:Max15Text" use="required" />
</xs:complexType>
<xs:simpleType name="StateCode">
<xs:restriction base="xs:string">
<xs:pattern value="[A-Z]{2}" />
</xs:restriction>
</xs:simpleType>
<xs:simpleType name="ISODate">
<xs:restriction base="xs:date" />
</xs:simpleType>
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  <xs:restriction base="xs:string">
    <xs:minLength value="1"/>
    <xs:maxLength value="3500"/>
    <xs:pattern value=".*\[^s].*"/>
  </xs:restriction>
</xs:simpleType>

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  <xs:restriction base="xs:string">
    <xs:minLength value="1"/>
    <xs:maxLength value="250"/>
    <xs:pattern value=".*\[^s].*"/>
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="Max150Text">
  <xs:restriction base="xs:string">
    <xs:minLength value="1"/>
    <xs:maxLength value="150"/>
    <xs:pattern value=".*\[^s].*"/>
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="Max140Text">
  <xs:restriction base="xs:string">
    <xs:minLength value="1"/>
    <xs:maxLength value="140"/>
    <xs:pattern value=".*\[^s].*"/>
  </xs:restriction>
</xs:simpleType>

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    <xs:minLength value="1"/>
    <xs:maxLength value="50"/>
    <xs:pattern value=".*\[^s].*"/>
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="Max15Text">
  <xs:restriction base="xs:string">
    <xs:minLength value="1"/>
    <xs:maxLength value="15"/>
    <xs:pattern value=".*\[^s].*"/>
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="Max10Text">
  <xs:restriction base="xs:string">
    <xs:minLength value="1"/>
    <xs:maxLength value="10"/>
    <xs:pattern value=".*\[^s].*"/>
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="YearType">
  <xs:restriction base="xs:integer">
  </xs:restriction>
</xs:simpleType>
<xs:pattern value="[0-9]{4,4}"/>
</xs:restriction>
</xs:simpleType>

<xs:simpleType name="InvestmentOptionIdType">
  <xs:restriction base="xs:string">
    <xs:minLength value="9" />
    <xs:maxLength value="9" />
    <xs:pattern value=".*[^s].*" />
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="DecimalType">
  <xs:restriction base="xs:decimal">
    <xs:pattern value="^[+][-]0-9]{1,3}(?:\.[0-9]{1,3})?$/" />
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="FeeDecimalType">
  <xs:restriction base="xs:decimal">
    <xs:pattern value="^[+][-]0-9]{1,3}(?:\.[0-9]{1,5})?$/" />
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="MoneyType">
  <xs:restriction base="xs:decimal">
    <xs:pattern value="[0-9]{1,15}" />
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="ZipType">
  <xs:restriction base="xs:string">
    <xs:maxLength value="15" />
    <xs:pattern value="^[d]{5}(-[d]{4})?$" />
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="PhoneType">
  <xs:restriction base="xs:string">
    <xs:maxLength value="15" />
    <xs:pattern value="^[0-9]{3}[-. ]?[0-9]{3}[-. ]?[0-9]{4}$" />
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="PhoneExtType">
  <xs:restriction base="xs:string">
    <xs:maxLength value="10" />
    <xs:pattern value="^[0-9]+$" />
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="EmailType">
  <xs:restriction base="xs:string">
    <xs:maxLength value="140" />
    <xs:pattern value="^[a-zA-Z0-9.\-\.\_\+]+@[a-zA-Z0-9.\-\_\+\(\)\]\{2,5}$" />
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="BooleanType">
<xs:restriction base="xs:string">
<xs:enumeration value="Yes"/>
<xs:enumeration value="No"/>
</xs:restriction>
</xs:simpleType>

G45Disclosure_3.xsd
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:tns="http://emma.msrb.org/schemas/disclosuremessages"
elementFormDefault="qualified" targetNamespace="http://emma.msrb.org/schemas/disclosuremessages">
<xs:import schemaLocation="G45Disclosure_4.xsd" namespace="http://emma.msrb.org/schemas/disclosuremessages/types"/>
<xs:element name="DisclosureMessageResponse">
<xs:complexType>
<xs:sequence>
<xs:element minOccurs="0" maxOccurs="1" name="Submission" type="tns:SubmissionStructureType"/>
<xs:element minOccurs="0" maxOccurs="unbounded" name="Message" type="tns:MessageStructureType"/>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

G45Disclosure_4.xsd
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:tns="http://emma.msrb.org/schemas/disclosuremessages/types" elementFormDefault="qualified"
targetNamespace="http://emma.msrb.org/schemas/disclosuremessages/types">
<xs:element name="DisclosureResponseDetails" type="tns:DisclosureMessageResponseType"/>
<xs:complexType name="DisclosureMessageResponseType">
<xs:sequence>
<xs:element minOccurs="0" maxOccurs="1" name="Submission" type="tns:SubmissionStructureType"/>
<xs:element minOccurs="0" maxOccurs="unbounded" name="Message" type="tns:MessageStructureType"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="SubmissionStructureType">
<xs:attribute name="SubmissionID" type="xs:string"/>
<xs:attribute name="SubmissionState" type="tns:SubmissionProcessingStateType"/>
<xs:attribute name="SubmissionStatus" type="tns:SubmissionProcessingStatusType" use="required"/>
</xs:complexType>
<xs:complexType name="SubmissionProcessingStateType">
<xs:restriction base="xs:string">
<xs:enumeration value="Published"/>
<xs:enumeration value="InWorkspace"/>
</xs:restriction>
</xs:complexType>
<xs:complexType name="SubmissionProcessingStatusType">
<xs:restriction base="xs:string">
<xs:enumeration value="Added"/>
<xs:enumeration value="Updated"/>
<xs:enumeration value="Rejected"/>
<xs:enumeration value="Deleted"/>
<xs:enumeration value="Failure"/>
</xs:restriction>
</xs:complexType>
<xs:simpleType>
  <xs:complexType name="MessageStructureType">
    <xs:attribute name="MessageReturnCode" type="tns:MessageReturnCodeType" />
    <xs:attribute name="MessageContent" type="xs:string" />
  </xs:complexType>
</xs:simpleType>
<xs:simpleType name="MessageReturnCodeType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Error" />
    <xs:enumeration value="Warning" />
    <xs:enumeration value="Information" />
  </xs:restriction>
</xs:simpleType>
Sample XML Header Trace Files

Data Message – Sample Header + Message Trace File

```xml
  <s:Header>
    <o:Security s:mustUnderstand="1" xmlns:o="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd">
  </s:Header>
</s:Header>
  <?xml version="1.0" encoding="UTF-8"?>
  <G45Message>
    <Subscription SubmissionIdentifier="SUBMISSION_ID_0001" SubmissionStatus="Publish"/>
    <Submission SubmissionIdentifier="SUBMISSION_ID_0001" SubmissionStatus="Publish"/>
    <Plan PlanReferenceID="HI-0002" ReportingYear="2014" ReportingPeriod="EndingDecember31">
      <MarketingChannel="AdvisorSold">
        <TotalAggregateAssets>55000000000</TotalAggregateAssets>
        <TotalAggregateContributions>250000000</TotalAggregateContributions>
        <TotalAggregateDistributions>500000</TotalAggregateDistributions>
        <ProgramManagerInformation OrganizationName="Top College Funds" ContactFirstName="Program" ContactLastName="Manager" PhoneNumber="888-567-0540" Address="123 529 Road" City="Alex" State="VA" ZipCode="22222-5555" EMailAddress="pm@2.com"/>
        <UnderwriterInformation OrganizationName="Underwriter_1" ContactFirstName="Under" ContactLastName="Writer1" PhoneNumber="888-567-0540" Address="123 529 Road" City="Alex" State="VA" ZipCode="22222-5555" EMailAddress="uw@1.com"/>
        <UnderwriterInformation OrganizationName="Underwriter_2" ContactFirstName="Under" ContactLastName="Writer2" PhoneNumber="888-567-0540" Address="123 529 Road" City="Alex" State="VA" ZipCode="22222-5555" EMailAddress="uw@2.com"/>
      </MarketingChannel>
      <PlanServiceAndTransactionFees Note="Enter note for Plan-level service and transactin fees.">
        <Fee Name="AccountOpeningFee">
          <FeeTypes>
            <FeeType Name="General" Amount="0.41"/>
          </FeeTypes>
        </Fee>
        <Fee Name="InvestmentAdministrationFee">
          <FeeTypes>
            <FeeType Name="General" Amount="0.25"/>
          </FeeTypes>
        </Fee>
        <Fee Name="CancellationWithdrawalFee">
          <FeeTypes>
            <FeeType Name="General" Amount="0.1"/>
          </FeeTypes>
        </Fee>
      </PlanServiceAndTransactionFees>
    </Plan>
  </G45Message>
</s:Body>
</s:Envelope>
```
<Fee Name="ChangeInAccountOwnerFee">
    <FeeTypes>
        <FeeType Name="General" Amount="0.25" />
    </FeeTypes>
</Fee>

<Fee Name="ChangeInInvestmentOptionTransferFee">
    <FeeTypes>
        <FeeType Name="General" Amount="0.25" />
    </FeeTypes>
</Fee>

<Fee Name="RolloverFee">
    <FeeTypes>
        <FeeType Name="General" Amount="0.25" />
    </FeeTypes>
</Fee>

<Fee Name="ReturnedExcessAggregateContributionsFee">
    <FeeTypes>
        <FeeType Name="General" Amount="0.25" />
    </FeeTypes>
</Fee>

<Fee Name="RejectedACHorEFTFee">
    <FeeTypes>
        <FeeType Name="General" Amount="0.25" />
    </FeeTypes>
</Fee>

<Fee Name="OvernightDeliveryFee">
    <FeeTypes>
        <FeeType Name="General" Amount="0.25" />
    </FeeTypes>
</Fee>

<Fee Name="InNetworkATMFees">
    <FeeTypes>
        <FeeType Name="General" Amount="0.25" />
    </FeeTypes>
</Fee>

<Fee Name="OutOfNetworkATMFees">
    <FeeTypes>
        <FeeType Name="General" Amount="0.25" />
    </FeeTypes>
</Fee>

<Fee Name="ATMMiniStatementFee">
    <FeeTypes>
        <FeeType Name="General" Amount="0.25" />
    </FeeTypes>
</Fee>

<Fee Name="InternationalPOSATMTransactionFee">
    <FeeTypes>
        <FeeType Name="General" Amount="0.25" />
    </FeeTypes>
</Fee>

<Fee Name="ForeignTransactionFee">
    <FeeTypes>
        <FeeType Name="General" Amount="0.25" />
    </FeeTypes>
</Fee>

<Fee Name="OverdraftFee">
    <FeeTypes>
        <FeeType Name="General" Amount="0.25" />
    </FeeTypes>
</Fee>
<FeeTypes>
</FeeTypes>

<Fee Name="CopyofCheckStatementFee">
    <FeeTypes>
        <FeeType Name="General" Amount="0.25"/>
    </FeeTypes>
</Fee>

<Fee Name="CopyofCheckImagesMailedWithMonthlyStatementFee">
    <FeeTypes>
        <FeeType Name="General" Amount="0.25"/>
    </FeeTypes>
</Fee>

<Fee Name="CopyofCheckFee">
    <FeeTypes>
        <FeeType Name="General" Amount="0.25"/>
    </FeeTypes>
</Fee>

<Fee Name="ReturnedCheckFee">
    <FeeTypes>
        <FeeType Name="General" Amount="0.25"/>
    </FeeTypes>
</Fee>

<Fee Name="CheckingAccountOptionFee">
    <FeeTypes>
        <FeeType Name="General" Amount="0.25"/>
    </FeeTypes>
</Fee>

<Fee Name="ReissueofDisbursementChecksFee">
    <FeeTypes>
        <FeeType Name="General" Amount="0.25"/>
    </FeeTypes>
</Fee>

<Fee Name="StopPaymentFee">
    <FeeTypes>
        <FeeType Name="General" Amount="0.25"/>
    </FeeTypes>
</Fee>

<Fee Name="DebitCardFee">
    <FeeTypes>
        <FeeType Name="General" Amount="0.25"/>
    </FeeTypes>
</Fee>

<Fee Name="DebitCardReplacementFee">
    <FeeTypes>
        <FeeType Name="General" Amount="0.25"/>
    </FeeTypes>
</Fee>

<Fee Name="OutgoingWireFee">
    <FeeTypes>
        <FeeType Name="General" Amount="0.25"/>
    </FeeTypes>
</Fee>

<Fee Name="ExpeditedDebitCardRushDeliveryFee">
    <FeeTypes>
        <FeeType Name="General" Amount="0.25"/>
    </FeeTypes>
</Fee>

<Fee Name="PaperFee">
    <FeeTypes>
        <FeeType Name="General" Amount="0.25"/>
    </FeeTypes>
</Fee>
<FeeTypes>
  <FeeType Name="General" Amount="0.25" />
</FeeTypes>
</Fee>

<Fee Name="MiscellaneousFees">
  <FeeTypes>
    <FeeType Name="General" Amount="0.25" />
  </FeeTypes>
</Fee>
</Fees>
</PlanServiceAndTransactionFees>

<InvestmentOptions>
  <Option InvestmentOptionExternalID="123456789" Name="Age-Based 0-6 Years Portfolio"
    InceptionDate="2012-05-20" InvestmentType="AgeBasedOrYearOfEnrollment"
    TotalAssets="5000000" TotalContributions="5000000" TotalDistributions="5000000"
    ClosedToNewInvestorsFlag="Yes" ClosedToCurrentInvestorsFlag="No">
    <AssetClassAllocation>
      <Allocation AssetClass="DomesticEquities" AllocationPercent="12.5"/>
      <Allocation AssetClass="InternationalEquities" AllocationPercent="12.5"/>
      <Allocation AssetClass="FixedIncomeProducts" AllocationPercent="12.5"/>
      <Allocation AssetClass="Commodities" AllocationPercent="12.5"/>
      <Allocation AssetClass="InsuranceProducts" AllocationPercent="12.5"/>
      <Allocation AssetClass="BankProducts" AllocationPercent="12.5"/>
      <Allocation AssetClass="CashOrCashEquivalents" AllocationPercent="12.5"/>
      <Allocation AssetClass="OtherProductTypes" AllocationPercent="12.5"/>
    </AssetClassAllocation>
    <UnderlyingInvestments>
      <Investment Name="T. Rowe Price Large-Cap Growth Fund" AllocationPercent="17"/>
      <Investment Name="Artisan Value Fund Institutional Class" AllocationPercent="17"/>
      <Investment Name="William Blair Growth Fund Class I" AllocationPercent="13"/>
      <Investment Name="Dodge &amp; Cox International Stock Fund" AllocationPercent="25"/>
      <Investment Name="DFA U.S. Small Cap Portfolio International Class" AllocationPercent="13"/>
      <Investment Name="Dreyfus Bond Market Index Fund BASIC Class" AllocationPercent="10"/>
      <Investment Name="DFA Inflation-Protected Securities Portfolio Institutional Class" AllocationPercent="0"/>
      <Investment Name="Invesco Liquid Assets Portfolio Institutional Class" AllocationPercent="0"/>
    </UnderlyingInvestments>
  </Option>
</InvestmentOptions>

<InvestmentPerformance Note="Investment performance note.">
  <IncludingSalesCharges
    AnnualReturnPercent_YearToDate="24.65"
    AnnualReturnPercent_1Year="28.81"
    AnnualReturnPercent_3Year="14.31"
    AnnualReturnPercent_5Year="18.81"
    AnnualReturnPercent_10Year="7.95"
    AnnualReturnPercent_SinceInception="3.93" />
  <ExcludingSalesCharges
    AnnualReturnPercent_YearToDate="24.15"
    AnnualReturnPercent_1Year="28.31"
    AnnualReturnPercent_3Year="14.26"
    AnnualReturnPercent_5Year="18.26"
    AnnualReturnPercent_10Year="7.45"
    AnnualReturnPercent_SinceInception="3.53" />
</InvestmentPerformance>
<BenchmarkPerformance>
<Benchmark BenchmarkName="Russell 1000 Growth Index"
BenchmarkAnnualReturnPercent_YearToDate="3.5" BenchmarkAnnualReturnPercent_1Year="4.5"
><Benchmark BenchmarkName="Russell 1000 Value Index"
BenchmarkAnnualReturnPercent_YearToDate="3.5" BenchmarkAnnualReturnPercent_1Year="4.5"
><Benchmark BenchmarkName="Jones U.S. Total Stock Market Index"
BenchmarkAnnualReturnPercent_YearToDate="3.5" BenchmarkAnnualReturnPercent_1Year="4.5"
><Benchmark BenchmarkName="Russell 2000 Index"
BenchmarkAnnualReturnPercent_YearToDate="3.5" BenchmarkAnnualReturnPercent_1Year="4.5"
><Benchmark BenchmarkName="MSCI All Country World ex-U.S. Index"
BenchmarkAnnualReturnPercent_YearToDate="3.5" BenchmarkAnnualReturnPercent_1Year="4.5"
><Benchmark BenchmarkName="MSCI EAFE Index"
BenchmarkAnnualReturnPercent_YearToDate="3.5" BenchmarkAnnualReturnPercent_1Year="4.5"
><Benchmark BenchmarkName="S&amp;P 500 Index"
BenchmarkAnnualReturnPercent_YearToDate="3.5" BenchmarkAnnualReturnPercent_1Year="4.5"
><Benchmark BenchmarkName="All Country World ex-U.S. Index"
BenchmarkAnnualReturnPercent_YearToDate="3.5" BenchmarkAnnualReturnPercent_1Year="4.5"
><Benchmark BenchmarkName="Barclays U.S. Aggregate Bond"
BenchmarkAnnualReturnPercent_YearToDate="3.5" BenchmarkAnnualReturnPercent_1Year="4.5"
><Benchmark BenchmarkName="Barclays U.S. TIPS"
BenchmarkAnnualReturnPercent_YearToDate="3.5" BenchmarkAnnualReturnPercent_1Year="4.5"
><Benchmark BenchmarkName="Citigroup 1-Month Treasury Bill Index"
BenchmarkAnnualReturnPercent_YearToDate="3.5" BenchmarkAnnualReturnPercent_1Year="4.5"
></BenchmarkPerformance>
</BenchmarkFeesAndExpenses>

<FeesAndExpenses Not="Enter notes pertaining to Investment Option Fees and Expenses.">
<Fees>
<Fee Name="EstimatedUnderlyingFundExpenses" >
<FeeTypes>
<FeeType Name="General" Amount="0.25" />
</FeeTypes>
</Fee>

<Fee Name="ProgramManagementFee" >
<FeeTypes>
<FeeType Name="General" Amount="0.25" />
</FeeTypes>
</Fee>

<Fee Name="StateFee" >
<FeeTypes>
<FeeType Name="General" Amount="0.25" />
</FeeTypes>
</Fee>

<Fee Name="OtherMiscFees" >
<FeeTypes>
<FeeType Name="General" Amount="0.25" />
</FeeTypes>
</Fee>

<Fee Name="AnnualDistributionServiceSalesFee" >
<FeeTypes>
</FeeTypes>
</Fee>
</Fees>
</FeesAndExpenses>
<Fee Type="Gen" Amount="0.25" />
</FeeTypes>
</Fee>
<br />

</Option>
</InvestmentOptions>
</Plan>
</Submitter ManagingMSRBID="X0999999"/>
</G45Message>
</s:Body>
</s:Envelope>
Message Validation

Figure 3: Validation Response Trace

As submission messages are processed by EMMA, the message content will be verified relative to business rules of expected data relationships. Exception response messages will be returned to the submitter system when certain types of conditions exist with respect to the data submitted. Response messages are classified as Error or Information depending on the nature and severity of the exception as follows:

- An error message indicates termination of message processing with failure of the intended action. The submitter should take appropriate corrective action and re-submit, as appropriate.
- An information message indicates certain action taken by the EMMA platform that does not materially affect completeness of the submission, but of which the submitter should be aware.

An abstract representation of a Response Message, shown below, will be returned to the Submitter System with the Response Message Content, defined in the table below, contained in the body of the message.

<table>
<thead>
<tr>
<th>Response Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>(SOAP Envelope )</td>
</tr>
<tr>
<td>(Header )</td>
</tr>
<tr>
<td>WebServices Protocol Support</td>
</tr>
<tr>
<td>(Body)</td>
</tr>
<tr>
<td>SubmissionID</td>
</tr>
<tr>
<td>SubmissionStatus (Accepted, Rejected, Updated, Added)</td>
</tr>
<tr>
<td>MessageReturnCode (Error, Information)</td>
</tr>
<tr>
<td>MessageContent [Data Tag, Description]</td>
</tr>
</tbody>
</table>
Below is a sample Response Message trace where a submission event has been confirmed as added successfully. This sample is intended to show the general structure of response messages.

Response Message – Sample Trace File

```xml
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Header>
    <Action s:mustUnderstand="1"
      xmlns="http://schemas.microsoft.com/ws/2005/05/addressing/none" s:mustUnderstand="1"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xsi:type="s:Body">
      <DisclosureMessageResponse xmlns="http://emma.msrb.org/schemas/disclosuremessages">
        <DisclosureResponseDetails xmlns="http://emma.msrb.org/schemas/disclosurereviceservice">
          <Submission SubmissionID="EA1734" SubmissionStatus="Added"
            xmlns="http://emma.msrb.org/schemas/disclosuremessages/types">
          </Submission>
          <Message MessageReturnCode="Information" MessageContent="Advance refunding submission added."
            xmlns="http://emma.msrb.org/schemas/disclosuremessages/types">
          </Message>
        </DisclosureResponseDetails>
      </DisclosureMessageResponse>
    </s:Header>
    </s:Body>
  </s:Envelope>
```
## Message Error Responses

### Table 3: Data Message Error/Information Messages

<table>
<thead>
<tr>
<th>XML Block</th>
<th>Data Tag</th>
<th>Message Return Code</th>
<th>Response Message Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submission</td>
<td>Submission Identifier</td>
<td>Error</td>
<td>Required Field – Submission Identifier is a required field for updating existing submissions</td>
</tr>
<tr>
<td>Submission</td>
<td>Submission Status</td>
<td>Error</td>
<td>Required Field – Submission Status is a required field.</td>
</tr>
<tr>
<td>Submitter</td>
<td>Managing MSRBID</td>
<td>Error</td>
<td>Data Validation - You are not authorized to submit on behalf of the party indicated by the Managing MSRB ID.</td>
</tr>
<tr>
<td>Plan</td>
<td>Plan Reference ID</td>
<td>Error</td>
<td>Data Validation-Invalid Plan ID</td>
</tr>
<tr>
<td>Plan</td>
<td>Reporting Year</td>
<td>Error</td>
<td>Data Validation - Invalid Reporting Year.</td>
</tr>
<tr>
<td>Plan</td>
<td>Reporting Period</td>
<td>Error</td>
<td>Data Validation - Invalid Reporting Period.</td>
</tr>
<tr>
<td>Plan</td>
<td>Plan Information Website</td>
<td>Error</td>
<td>Form G-45 submission already exists for the specified reporting period.</td>
</tr>
<tr>
<td>Plan</td>
<td>Plan Information Website</td>
<td>Error</td>
<td>Required Field – Reporting Period is a required field.</td>
</tr>
<tr>
<td>Plan</td>
<td>Plan Information Website</td>
<td>Error</td>
<td>Data Validation - Plan information website URL should start with 'http://' or 'https://'.</td>
</tr>
<tr>
<td>Plan</td>
<td>Plan Information Website</td>
<td>Error</td>
<td>Data Validation - Invalid Plan Information Website.</td>
</tr>
</tbody>
</table>
# XML Submission Validation - Response Messages

## Form G-45 (Data Message)

<table>
<thead>
<tr>
<th>XML Block</th>
<th>Data Tag</th>
<th>Message Return Code</th>
<th>Response Message Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td></td>
<td>Error</td>
<td>Data Validation - Invalid State in Program Manager Information.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Error</td>
<td>Data Validation - Invalid State in Underwriter Information.</td>
</tr>
<tr>
<td>Marketing Channel</td>
<td></td>
<td>Error</td>
<td>Required Field – Marketing Channel is a required field.</td>
</tr>
<tr>
<td>Total Aggregate Assets</td>
<td></td>
<td>Error</td>
<td>Required Field – Total Aggregate Assets is a required field.</td>
</tr>
<tr>
<td>Total Aggregate Contributions</td>
<td></td>
<td>Error</td>
<td>Required Field – Total Aggregate Contributions is a required field.</td>
</tr>
<tr>
<td>Total Aggregate Distributions</td>
<td></td>
<td>Error</td>
<td>Required Field – Total Aggregate Distributions is a required field.</td>
</tr>
<tr>
<td>&lt;Fees&gt;</td>
<td></td>
<td>Error</td>
<td>Data Validation - FeeName: &quot;&lt;&lt;feename&gt;&gt;&quot; is duplicated for Plan: &lt;&lt;planreferenceid&gt;&gt;.</td>
</tr>
<tr>
<td>&lt;Fee Name=&quot;UserEnteredFeeName&quot; &gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;Fee Name=&quot;AccountOpeningFee&quot; &gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## XML Submission Validation - Response Messages

### Form G-45 (Data Message)

<table>
<thead>
<tr>
<th>XML Block</th>
<th>Data Tag</th>
<th>Message Return Code</th>
<th>Response Message Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan Service and Transaction Fees</td>
<td>&lt;Fee Name=&quot;InvestmentAdministrationFee&quot; &gt; &lt;Fee Name=&quot;CancellationWithdrawalFee&quot; &gt; &lt;Fee Name=&quot;ChangelnAccountOwnerFee&quot; &gt; &lt;Fee Name=&quot;ChangelnInvestmentOptionTransferFee&quot; &gt; &lt;Fee Name=&quot;RolloverFee&quot; &gt; &lt;Fee Name=&quot;ReturnedExcessAggregateContributionsFee&quot; &gt; &lt;Fee Name=&quot;RejectedACHorEFTFee&quot; &gt; &lt;Fee Name=&quot;OvernightDeliveryFee&quot; &gt; &lt;Fee Name=&quot;InNetworkATMFees&quot; &gt; &lt;Fee Name=&quot;OutOfNetworkATMFees&quot; &gt; &lt;Fee Name=&quot;ATMMiniStatementFee&quot; &gt; &lt;Fee Name=&quot;InternationalPOSATMTransactionFee&quot;&gt; &lt;Fee Name=&quot;ForeignTransactionFee&quot;&gt; &lt;Fee Name=&quot;OverdraftFee&quot; &gt; &lt;Fee Name=&quot;CopyofCheckStatementFee&quot; &gt; &lt;Fee Name=&quot;CopyofCheckImagesMailedWithMonthlyStatement Fee&quot; &gt; &lt;Fee Name=&quot;CheckFee&quot; &gt; &lt;Fee Name=&quot;ReturnedCheckFee&quot; &gt; &lt;Fee Name=&quot;CheckingAccountOptionFee&quot; &gt; &lt;Fee Name=&quot;ReissueofDisbursementChecksFee&quot; &gt; &lt;Fee Name=&quot;StopPaymentFee&quot; &gt; &lt;Fee Name=&quot;DebitCardFee&quot; &gt; &lt;Fee Name=&quot;DebitCardReplacementFee&quot; &gt; &lt;Fee Name=&quot;OutgoingWireFee&quot; &gt; &lt;Fee Name=&quot;ExpeditedDebitCardRushDeliveryFee&quot; &gt; &lt;Fee Name=&quot;PaperFee&quot; &gt; &lt;Fee Name=&quot;MiscellaneousFees&quot; &gt;</td>
<td>Error</td>
<td>Data Validation - FeeName: &quot;&lt;&lt;feename&gt;&gt;&quot; is invalid for Plan: &lt;&lt;planreferenceid&gt;&gt;.</td>
</tr>
<tr>
<td></td>
<td>&lt;Fees&gt; &lt;Fee&gt; &lt;FeeTypes&gt; &lt;FeeType Name=&quot;General&quot; ...&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Error</td>
<td>Data Validation - FeeType: &quot;&lt;&lt;feetype&gt;&gt;&quot; for FeeName: &quot;&lt;&lt;feename&gt;&gt;&quot; is duplicated for Plan: &lt;&lt;planreferenceid&gt;&gt;.</td>
</tr>
</tbody>
</table>
### XML Submission Validation - Response Messages

**Form G-45 (Data Message)**

<table>
<thead>
<tr>
<th>XML Block</th>
<th>Data Tag</th>
<th>Message Return Code</th>
<th>Response Message Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment Options</td>
<td>Investment Option External ID</td>
<td>Error</td>
<td>Data Validation - Duplicate Investment Option IDs exist for &lt;Investment Option ID&gt;.</td>
</tr>
<tr>
<td>Investment Options</td>
<td>Inception Date</td>
<td>Error</td>
<td>Data Validation - Space is not allowed in Investment Option ID: &lt;Investment Option ID&gt;.</td>
</tr>
<tr>
<td>Investment Options</td>
<td>Investment Type</td>
<td>Error</td>
<td>Required Field – Inception Date is a required field for Investment Option ID: &lt;Investment Option ID&gt;.</td>
</tr>
<tr>
<td>Investment Options</td>
<td>Total Assets</td>
<td>Error</td>
<td>Required Field – Inception Date cannot be in future for Investment Option ID: &lt;Investment Option ID&gt;.</td>
</tr>
<tr>
<td>Investment Options</td>
<td>Total Contributions</td>
<td>Error</td>
<td>Required Field – Total Contributions is a required field for Investment Option ID: &lt;Investment Option ID&gt;.</td>
</tr>
<tr>
<td>Investment Options</td>
<td>Total Distributions</td>
<td>Error</td>
<td>Required Field – Total Distributions is a required field for Investment Option ID: &lt;Investment Option ID&gt;.</td>
</tr>
</tbody>
</table>

**XML Example:**

```xml
<Fees>
  <Fee Name="Fee Name"/>
  <FeeTypes>
    <FeeType Name="General"/>
  </FeeTypes>
  <Fee/>
</Fees>
```

**Response Message:**

- Error: Data Validation - FeeType: "<<feetype>>" for FeeName: "<<feename>>" is invalid for Plan: <<planreferenceid>>.
- Error: Data Validation - Duplicate Investment Option IDs exist for <Investment Option ID>.
- Error: Data Validation - Space is not allowed in Investment Option ID: <Investment Option ID>.
- Error: Required Field – Inception Date is a required field for Investment Option ID: <Investment Option ID>.
- Error: Data Validation - Inception Date cannot be in future for Investment Option ID: <Investment Option ID>.
- Error: Required Field – Total Assets is a required field for Investment Option ID: <Investment Option ID>.
- Error: Required Field – Total Contributions is a required field for Investment Option ID: <Investment Option ID>.
- Error: Required Field – Total Distributions is a required field for Investment Option ID: <Investment Option ID>.
## XML Submission Validation - Response Messages

### Form G-45 (Data Message)

<table>
<thead>
<tr>
<th>XML Block</th>
<th>Data Tag</th>
<th>Message Return Code</th>
<th>Response Message Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asset Class Allocation</td>
<td>Asset Class</td>
<td>Error</td>
<td>Required Field – Asset Class Type is a required field for Investment Option ID: &lt;Investment Option ID&gt;.</td>
</tr>
<tr>
<td></td>
<td>Allocation Percent</td>
<td>Error</td>
<td>Required Field – Asset Class Allocation Percent is a required field for Investment Option ID: &lt;Investment Option ID&gt;.</td>
</tr>
<tr>
<td>Underlying Investments</td>
<td>Allocation Percent</td>
<td>Error</td>
<td>Required Field – Underlying Investment Allocation Percent is a required field for Investment Option ID: &lt;Investment Option ID&gt;.</td>
</tr>
<tr>
<td>Investment Performance</td>
<td>Including Sales Charges</td>
<td>Error</td>
<td>Required Field - At least one field is required in Investment Performance for Investment Option ID: &lt;Investment Option ID&gt;.</td>
</tr>
<tr>
<td></td>
<td>(Annual Return Percent)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Excluding Sales Charges</td>
<td>Error</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Annual Return Percent)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Annual Return Percent 3 Year</td>
<td>Error</td>
<td>AnnualReturnPercent_3Year is no longer valid.</td>
</tr>
<tr>
<td></td>
<td>Note</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benchmark Performance</td>
<td>Benchmark Annual Return Percent YTD</td>
<td>Error</td>
<td>Required Field – Benchmark YTD annual return percent is a required field for Investment Option ID: &lt;Investment Option ID&gt;.</td>
</tr>
<tr>
<td></td>
<td>Benchmark Annual Return Percent 1 Year</td>
<td>Error</td>
<td>Required Field – Benchmark one-year annual return percent is a required field for Investment Option ID: &lt;Investment Option ID&gt;.</td>
</tr>
<tr>
<td></td>
<td>Benchmark Annual Return Percent 3 Year</td>
<td>Error</td>
<td>BenchmarkAnnualReturnPercent_3Year is no longer valid.</td>
</tr>
<tr>
<td></td>
<td>Benchmark Annual Return Percent Since Inception</td>
<td>Error</td>
<td>Required Field – Benchmark annual return percent since inception is a required field for Investment Option ID: &lt;Investment Option ID&gt;.</td>
</tr>
<tr>
<td>Fees and Expenses</td>
<td>&lt;Fees&gt;</td>
<td>Error</td>
<td>Required Field- At least one fee is required in Fees and Expenses for Investment Option ID: &lt;Investment Option ID&gt;.</td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;UserEnteredFeeName&quot;&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;EstimatedUnderlyingFundExpenses&quot;&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;Fee Name=&quot;ProgramManagementFee&quot; &gt;</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### XML Submission Validation - Response Messages

**Form G-45 (Data Message)**

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<tr>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Error</td>
<td>Data Validation - FeeName: &quot;&lt;&lt;feename&gt;&gt;&quot; is duplicated for Investment Option Id: &lt;&lt;investmentoptionid&gt;&gt;.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Error</td>
<td>Data Validation - FeeName: &quot;&lt;&lt;feename&gt;&gt;&quot; is invalid for Investment Option Id: &lt;&lt;investmentoptionid&gt;&gt;.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Error</td>
<td>Data Validation - FeeType: &quot;&lt;&lt;feetype&gt;&gt;&quot; for FeeName: &quot;&lt;&lt;feename&gt;&gt;&quot; is duplicated for Investment Option Id: &lt;&lt;investmentoptionid&gt;&gt;.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Error</td>
<td>Data Validation - FeeType: &quot;&lt;&lt;feetype&gt;&gt;&quot; for FeeName: &quot;&lt;&lt;feename&gt;&gt;&quot; is invalid for Investment Option Id: &lt;&lt;investmentoptionid&gt;&gt;.</td>
</tr>
</tbody>
</table>

Note

- -
Form G-45 Sample XML Message

Data Message
<?xml version="1.0" encoding="UTF-8"?>
<G45Message>
<Submission SubmissionStatus="Publish"
<Plan PlanReferenceID="HI-0002" ReportingYear="2014" ReportingPeriod="EndingDecember31"
MarketingChannel="AdvisorSold" PlanInformationWebsite="http://www.Google2.com"
TotalAggregateAssets="55000000000" TotalAggregateContributions="250000000" TotalAggregateDistributions="5000000"
<ProgramManagerInformation OrganizationName="Top College Funds" ContactFirstName="Program"
ContactLastName="Manager" PhoneNumber="888-567-0540" Address="123 529 Road" City="Alex" State="VA"
ZipCode="22222-5555" EMailAddress="pm@2.com"/>

<UnderwriterInformation
<Underwriter OrganizationName="Underwriter_1" ContactFirstName="Under" ContactLastName="Writer1"
PhoneNumber="888-567-0540" Address="123 529 Road" City="Alex" State="VA" ZipCode="22222-5555"
EMailAddress="uw@1.com"/>

<Underwriter OrganizationName="Underwriter_2" ContactFirstName="Under" ContactLastName="Writer2"
PhoneNumber="888-567-0540" Address="123 529 Road" City="Alex" State="VA" ZipCode="22222-5555"
EMailAddress="uw@2.com"/>

<PlanServiceAndTransactionFees Note="Enter note for Plan-level service and transaction fees."
<Fees>
  <Fee Name="AccountOpeningFee" >
    <FeeTypes>
      <FeeType Name="General" Amount="0.41" />
    </FeeTypes>
  </Fee>
  <Fee Name="InvestmentAdministrationFee" >
    <FeeTypes>
      <FeeType Name="General" Amount="0.25" />
    </FeeTypes>
  </Fee>
  <Fee Name="CancellationWithdrawalFee" >
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      <FeeType Name="General" Amount="0.1" />
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  </Fee>
  <Fee Name="ChangeInAccountOwnerFee" >
    <FeeTypes>
      <FeeType Name="General" Amount="0.25" />
    </FeeTypes>
  </Fee>
  <Fee Name="ChangeInInvestmentOptionTransferFee" >
    <FeeTypes>
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    </FeeTypes>
  </Fee>
  <Fee Name="RolloverFee" >
    <FeeTypes>
      <FeeType Name="General" Amount="0.25" />
    </FeeTypes>
  </Fee>
  <Fee Name="ReturnedExcessAggregateContributionsFee" >
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  </Fee>
</Fees>
</Fee>
<Fee Name="RejectedACHorEFTFee" >
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</Fee>
</Fee>
<Fee Name="OvernightDeliveryFee" >
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    <FeeType Name="General" Amount="0.25" />
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</Fee>
</Fee>
<Fee Name="InNetworkATMFees" >
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    <FeeType Name="General" Amount="0.25" />
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</Fee>
</Fee>
<Fee Name="OutOfNetworkATMFees" >
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    <FeeType Name="General" Amount="0.25" />
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</Fee>
</Fee>
<Fee Name="ATMMiniStatementFee" >
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<Fee Name="InternationalPOSATMTransactionFee" >
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</Fee>
</Fee>
<Fee Name="CopyofCheckOrStatementFee" >
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  </FeeTypes>
</Fee>
</Fee>
<Fee Name="CopyofCheckImagesMailedWithMonthlyStatementFee" >
  <FeeTypes>
    <FeeType Name="General" Amount="0.25" />
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<Fee Name="CheckFee" >
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</Fee>
</Fee>
<Fee Name="ReturnedCheckFee" >
  <FeeTypes>
    <FeeType Name="General" Amount="0.25" />
  </FeeTypes>
<FeeName="CheckingAccountOptionFee" />

<FeeName="ReissueofDisbursementChecksFee" />

<FeeName="StopPaymentFee" />

<FeeName="DebitCardFee" />

<FeeName="DebitCardReplacementFee" />

<FeeName="OutgoingWireFee" />

<FeeName="ExpeditedDebitCardRushDeliveryFee" />

<FeeName="PaperFee" />

<FeeName="MiscellaneousFees" />

<InvestmentOptions

<InvestmentTypes>

</InvestmentTypes>

</InvestmentOptions>

<Option InvestmentOptionExternalID="123456789" Name="Age-Based 0-6 Years Portfolio" InceptionDate="2012-05-20" InvestmentType="AgeBasedOrYearOfEnrollment" TotalAssets="5000000" TotalContributions="5000000" TotalDistributions="5000000" ClosedToCurrentInvestorsFlag="Yes" ClosedToNewInvestorsFlag="No">

<AssetClassAllocation>

<Allocation AssetClass="DomesticEquities" AllocationPercent="12.5"/>

<Allocation AssetClass="InternationalEquities" AllocationPercent="12.5"/>

</AssetClassAllocation>

</Option>

</PlanServiceAndTransactionFees>

<PlanServiceAndTransactionFees>

</PlanServiceAndTransactionFees>
<Allocation AssetClass="FixedIncomeProducts" AllocationPercent="12.5"/>
<Allocation AssetClass="Commodities" AllocationPercent="12.5"/>
<Allocation AssetClass="InsuranceProducts" AllocationPercent="12.5"/>
<Allocation AssetClass="BankProducts" AllocationPercent="12.5"/>
<Allocation AssetClass="CashOrCashEquivalents" AllocationPercent="12.5"/>
<Allocation AssetClass="OtherProductTypes" AllocationPercent="12.5"/>
</AssetClassAllocation>
<UnderlyingInvestments>
  <Investment Name="T. Rowe Price Large-Cap Growth Fund" AllocationPercent="17" />
  <Investment Name="Artisan Value Fund Institutional Class" AllocationPercent="17" />
  <Investment Name="William Blair Growth Fund Class I" AllocationPercent="13" />
  <Investment Name="Dodge &amp; Cox International Stock Fund" AllocationPercent="25" />
  <Investment Name="DFA U.S. Small Cap Portfolio International Class" AllocationPercent="13" />
  <Investment Name="Dreyfus Bond Market Index Fund BASIC Class" AllocationPercent="10" />
  <Investment Name="DFA Inflation-Protected Securities Portfolio Institutional Class" AllocationPercent="0" />
  <Investment Name="Invesco Liquid Assets Portfolio Institutional Class" AllocationPercent="0" />
</UnderlyingInvestments>
<InvestmentPerformance Note="Investment performance note.">
  <IncludingSalesCharges
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    AnnualReturnPercent_1Year="28.81"
    AnnualReturnPercent_3Year="14.31"
    AnnualReturnPercent_5Year="18.81"
    AnnualReturnPercent_10Year="7.95"
    AnnualReturnPercent_SinceInception="3.93" />
  <ExcludingSalesCharges
    AnnualReturnPercent_YearToDate="24.15"
    AnnualReturnPercent_1Year="28.31"
    AnnualReturnPercent_3Year="14.26"
    AnnualReturnPercent_5Year="18.26"
    AnnualReturnPercent_10Year="7.45"
    AnnualReturnPercent_SinceInception="3.53" />
</InvestmentPerformance>
<BenchmarkPerformance
  Benchmark BenchmarkName="Russell 1000 Growth Index"
  BenchmarkAnnualReturnPercent_YearToDate="3.5" BenchmarkAnnualReturnPercent_1Year="4.5"
  BenchmarkAnnualReturnPercent_SinceInception="4.5" />
  <Benchmark BenchmarkName="Russell 1000 Value Index"
    BenchmarkAnnualReturnPercent_YearToDate="3.5" BenchmarkAnnualReturnPercent_1Year="4.5"
    BenchmarkAnnualReturnPercent_SinceInception="4.5" />
  <Benchmark BenchmarkName="Jones U.S. Total Stock Market Index"
    BenchmarkAnnualReturnPercent_YearToDate="3.5" BenchmarkAnnualReturnPercent_1Year="4.5"
    BenchmarkAnnualReturnPercent_SinceInception="4.5" />
  <Benchmark BenchmarkName="Russell 2000 Index"
    BenchmarkAnnualReturnPercent_YearToDate="3.5" BenchmarkAnnualReturnPercent_1Year="4.5"
    BenchmarkAnnualReturnPercent_SinceInception="4.5" />
  <Benchmark BenchmarkName="MSCI All Country World ex-U.S. Index"
    BenchmarkAnnualReturnPercent_YearToDate="3.5" BenchmarkAnnualReturnPercent_1Year="4.5"
    BenchmarkAnnualReturnPercent_SinceInception="4.5" />
  <Benchmark BenchmarkName="MSCI EAFE Index"
    BenchmarkAnnualReturnPercent_YearToDate="3.5" BenchmarkAnnualReturnPercent_1Year="4.5"
    BenchmarkAnnualReturnPercent_SinceInception="4.5" />
<Benchmark BenchmarkName="S&amp;P 500 Index"
BenchmarkAnnualReturnPercent_YearToDate="3.5" BenchmarkAnnualReturnPercent_1Year="4.5"
BenchmarkAnnualReturnPercent_SinceInception="4.5" />

<Benchmark BenchmarkName="All Country World ex-U.S. Index"
BenchmarkAnnualReturnPercent_YearToDate="3.5" BenchmarkAnnualReturnPercent_1Year="4.5"
BenchmarkAnnualReturnPercent_SinceInception="4.5" />

<Benchmark BenchmarkName="Barclays U.S. Aggregate Bond"
BenchmarkAnnualReturnPercent_YearToDate="3.5" BenchmarkAnnualReturnPercent_1Year="4.5"
BenchmarkAnnualReturnPercent_SinceInception="4.5" />

<Benchmark BenchmarkName="Barclays U.S. TIPS"
BenchmarkAnnualReturnPercent_YearToDate="3.5" BenchmarkAnnualReturnPercent_1Year="4.5"
BenchmarkAnnualReturnPercent_SinceInception="4.5" />

<Benchmark BenchmarkName="Citigroup 1-Month Treasury Bill Index"
BenchmarkAnnualReturnPercent_YearToDate="3.5" BenchmarkAnnualReturnPercent_1Year="4.5"
BenchmarkAnnualReturnPercent_SinceInception="4.5" />
</BenchmarkPerformance>

<FeesAndExpenses Note="Enter notes pertaining to Investment Option Fees and Expenses.">

<Fees>

<Fee Name="EstimatedUnderlyingFundExpenses">
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  </FeeTypes>
</Fee>

<Fee Name="ProgramManagementFee">
  <FeeTypes>
    <FeeType Name="General" Amount="0.25" />
  </FeeTypes>
</Fee>

<Fee Name="StateFee">
  <FeeTypes>
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  </FeeTypes>
</Fee>

<Fee Name="OtherMiscFees">
  <FeeTypes>
    <FeeType Name="General" Amount="0.25" />
  </FeeTypes>
</Fee>

<Fee Name="AnnualDistributionServiceSalesFee">
  <FeeTypes>
    <FeeType Name="General" Amount="0.25" />
  </FeeTypes>
</Fee>

<Fee Name="TotalAnnualAssetBasedFee">
  <FeeTypes>
    <FeeType Name="General" Amount="0.259" />
  </FeeTypes>
</Fee>

<Fee Name="MaximumInitialSalesCharge">
  <FeeTypes>
    <FeeType Name="General" Amount="0.25" />
  </FeeTypes>
</Fee>

<Fee Name="MaximumDeferredSalesCharge">
  <FeeTypes>
    <FeeType Name="General" Amount="0.25" />
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</Fee>

</Fees>
</FeesAndExpenses>
<Fee Name="AuditFee">
    <FeeTypes>
        <FeeType Name="General" Amount="0.25"/>
    </FeeTypes>
</Fee>

<Fee Name="AnnualAccountMaintenanceFee">
    <FeeTypes>
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        <FeeType Name="OutOfState" Amount="10"/>
    </FeeTypes>
</Fee>

<Fee Name="BankAdministrationFee">
    <FeeTypes>
        <FeeType Name="General" Amount="10"/>
    </FeeTypes>
</Fee>

</Fees>
</FeesAndExpenses>
</Option>
</InvestmentOptions>

<Plan>
    <Submitter ManagingMSRBID="X0999999"/>
</G45Message>
# Appendix – 529 Savings Plans/ABLE Programs

Form G-45 consists of a collection of data elements provided in electronic format to the MSRB’s EMMA system regarding 529 savings plans and ABLE programs pursuant to MSRB Rule G-45. Below is a complete listing of all data elements and their descriptions.

<table>
<thead>
<tr>
<th>Data Elements</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underwriter Organization Name and MSRB ID</td>
<td>Submitting underwriter organization name and MSRB-issued registration number.</td>
</tr>
<tr>
<td>State</td>
<td>The state that offers the 529 savings plans or ABLE programs.</td>
</tr>
<tr>
<td>Program ID</td>
<td>The MSRB issued and published Program ID. <a href="#">Click here for a list of Program IDs</a>.</td>
</tr>
<tr>
<td>Reporting Year</td>
<td>The calendar year for which the submission applies.</td>
</tr>
</tbody>
</table>
| Reporting Period | The reporting period associated with the submission:  
- Semi-annual, ending June 30  
- Annual, ending December 31. |
<p>| Program Website Address | A 529 savings plan or an ABLE program website address. See <a href="#">College Savings Plan Network Disclosure Principles Statement No.6</a>. |
| Marketing Channel | The manner by which municipal fund securities that are not local government investment pools are sold to the public, such as through a broker, dealer or municipal securities dealer that has a selling agreement with an underwriter (commonly known as “advisor-sold”) or through a website, toll-free telephone number or other direct means (commonly known as “direct-sold”). |
| Organization Name | Legal name of program manager. A program manager is an entity that enters into a contract directly with the trustee of the Program to provide, directly or indirectly through service providers, investment advisory and management services, administration and accounting functions, and/or marketing and other services related to the day-to-day operation of the Program. |
| Primary Contact First Name | First name of the primary contact of the program manager. |
| Primary Contact Last Name | Last name of the primary contact of the program manager. |
| Address | Street address or post office box of the program manager. |
| City | Address city of the program manager. |
| State | Address state of the program manager. |
| Zip Code | Address zip code of the program manager. |
| Phone Number | Phone number of the primary contact of the program manager. |
| Phone Extension | Phone number of the primary contact of the program manager. |
| Email Address | Email address of the primary contact of the program manager. |
| Organization Name | Legal name of the underwriter(s). “Underwriter” shall mean a broker, dealer or municipal securities dealer that is an underwriter, as defined in Securities Exchange Act Rule 15c2-12(f)(8), of municipal fund securities that are not local government investment pools. |
| Primary Contact First Name | First name of the primary contact of the underwriter(s). |
| Primary Contact Last Name | Last name of the primary contact of the underwriter(s). |</p>
<table>
<thead>
<tr>
<th>Data Elements</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underwriter(s) Information</td>
<td></td>
</tr>
<tr>
<td>Address</td>
<td>Street address or post office box of the underwriter(s).</td>
</tr>
<tr>
<td>City</td>
<td>Address city of the underwriter(s).</td>
</tr>
<tr>
<td>State</td>
<td>Address state of the underwriter(s).</td>
</tr>
<tr>
<td>Zip Code</td>
<td>Address zip code of the underwriter(s).</td>
</tr>
<tr>
<td>Phone Number</td>
<td>Phone number of the primary contact of the underwriter(s).</td>
</tr>
<tr>
<td>Phone Extension</td>
<td>Phone number extension of the primary contact of the underwriter(s).</td>
</tr>
<tr>
<td>Email Address</td>
<td>Email address of the primary contact of the underwriter(s).</td>
</tr>
<tr>
<td>Aggregate Program Information</td>
<td></td>
</tr>
<tr>
<td>Total Aggregate Assets</td>
<td>Total Program assets, as of the end of the most recent semi-annual reporting period.</td>
</tr>
<tr>
<td>Total Aggregate Contributions</td>
<td>Total aggregate of all deposits into the Program for the most recent semi-annual reporting period, but shall not include reallocations*.</td>
</tr>
<tr>
<td>Total Aggregate Distributions</td>
<td>Total aggregate of all withdrawals of funds from the Program for the most recent semi-annual reporting period, but shall not include reallocations*.</td>
</tr>
<tr>
<td>Plan Transaction and Service Fees</td>
<td></td>
</tr>
<tr>
<td>Account Opening Fee</td>
<td>The account opening fee in effect as of the most recent semi-annual reporting period.</td>
</tr>
<tr>
<td>Investment Administration Fee</td>
<td>The investment administration fee in effect as of the most recent semi-annual reporting period.</td>
</tr>
<tr>
<td>Cancellation/Withdrawal Fee</td>
<td>The cancellation or withdrawal fee in effect as of the most recent semi-annual reporting period.</td>
</tr>
<tr>
<td>Change in Account Owner Fee</td>
<td>The change in account owner fee in effect as of the most recent semi-annual reporting period.</td>
</tr>
<tr>
<td>Change in Investment Option/Transfer Fee</td>
<td>The change in investment option or transfer fee in effect as of the most recent semi-annual reporting period.</td>
</tr>
<tr>
<td>Rollover Fee</td>
<td>The rollover fee in effect as of the most recent semi-annual reporting period.</td>
</tr>
<tr>
<td>Returned Excess Aggregate Contributions Fee</td>
<td>The returned excess aggregate contribution fee in effect as of the most recent semi-annual reporting period.</td>
</tr>
<tr>
<td>Rejected ACH or EFT Fee</td>
<td>The rejected ACH (automated clearing house) or EFT (Electronic funds transfer) transaction fee in effect as of the most recent semi-annual reporting period.</td>
</tr>
<tr>
<td>Overnight Delivery Fee</td>
<td>The overnight delivery fee in effect as of the most recent semi-annual reporting period.</td>
</tr>
<tr>
<td>In-Network ATM Fees</td>
<td>The in-network ATM fee in effect as of the most recent semi-annual reporting period.</td>
</tr>
<tr>
<td>Out-of-Network ATM Fees</td>
<td>The out-of-network ATM fee in effect as of the most recent semi-annual reporting period.</td>
</tr>
<tr>
<td>Plan Transaction and Service Fees</td>
<td>Data Elements</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>ATM Mini Statement Fee</td>
</tr>
<tr>
<td></td>
<td>International POS/ATM Transaction Fee</td>
</tr>
<tr>
<td></td>
<td>Foreign Transaction Fee</td>
</tr>
<tr>
<td></td>
<td>Overdraft Fee</td>
</tr>
<tr>
<td></td>
<td>Copy of Check or Statement Fee (per request)</td>
</tr>
<tr>
<td></td>
<td>Copy of Check Images Mailed with Monthly Statement Fee</td>
</tr>
<tr>
<td></td>
<td>Check Fee</td>
</tr>
<tr>
<td></td>
<td>Returned Check Fee</td>
</tr>
<tr>
<td></td>
<td>Checking Account Option Fee</td>
</tr>
<tr>
<td></td>
<td>Re-Issue of Disbursement Checks Fee</td>
</tr>
<tr>
<td></td>
<td>Stop Payment Fee</td>
</tr>
<tr>
<td></td>
<td>Debit Card Fee</td>
</tr>
<tr>
<td></td>
<td>Debit Card Replacement Fee</td>
</tr>
<tr>
<td></td>
<td>Outgoing Wire Fee</td>
</tr>
<tr>
<td></td>
<td>Expedited Debit Card Rush Delivery Fee</td>
</tr>
<tr>
<td></td>
<td>Paper Fee</td>
</tr>
<tr>
<td></td>
<td>Miscellaneous Fee</td>
</tr>
</tbody>
</table>
### Investment Option Information

<table>
<thead>
<tr>
<th>Data Elements</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note</td>
<td>As noted in <a href="https://example.com">College Savings Plan Network Disclosure Principles Statement No.6</a>, submitters are also encouraged to add exProgramatory footnotes to the fee and cost tables in order to make such tables clear and understandable.</td>
</tr>
<tr>
<td>Investment Option ID</td>
<td>Unique, alphanumeric investment option identifier assigned by the submitter.</td>
</tr>
<tr>
<td>Investment Option Name</td>
<td>Indicates the name of the investment option as described in a Program disclosure document or supplement thereto, available to account owners in a Program to which funds may be allocated.</td>
</tr>
<tr>
<td>Investment Option Inception Date</td>
<td>Inception date of investment option.</td>
</tr>
<tr>
<td>Investment Option Type</td>
<td>Investment option types are: age based or year of enrollment/static or fixed/ individual or standalone (as noted in College Savings Plan Network Disclosure Principles Statement No.6).</td>
</tr>
<tr>
<td>Total Assets</td>
<td>Total assets in each investment option as of the end of the most recent semi-annual period.</td>
</tr>
<tr>
<td>Total Contributions</td>
<td>Total of all deposits into each investment option for the most recent semi-annual reporting period, but shall not include reallocations*.</td>
</tr>
<tr>
<td>Total Distributions</td>
<td>Total of all withdrawals of funds from each investment option for the most recent semi-annual reporting period, but shall not include reallocations*.</td>
</tr>
<tr>
<td>Closed to New Investors</td>
<td></td>
</tr>
<tr>
<td>Closed to Current Investors</td>
<td></td>
</tr>
</tbody>
</table>

### Asset Class(es)

<table>
<thead>
<tr>
<th>Data Elements</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asset Class</td>
<td>Asset classes in each investment option, including domestic equities, international equities, fixed income products, commodities, insurance products, bank products, cash or cash equivalents or other product types.</td>
</tr>
<tr>
<td>Allocation Percentage</td>
<td>Actual asset class allocation of each investment option as of the end of the most recent semi-annual period.</td>
</tr>
</tbody>
</table>

### Underlying Investment(s)

<table>
<thead>
<tr>
<th>Data Elements</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underlying Investment Name</td>
<td>The name of a registered investment company, unit investment trust, or other investment product in which an investment option invests.</td>
</tr>
<tr>
<td>Allocation Percentage</td>
<td>The percentage allocation of each underlying investment in each investment option as of the end of the most recent semi-annual period.</td>
</tr>
</tbody>
</table>

### Investment Performance

> **Required for annual reporting period ending December 31.**

<table>
<thead>
<tr>
<th>Data Elements</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Returns Including Sales Charges</td>
<td>Total returns of the investment option expressed as a percentage, net of all generally applicable fees and costs, including sales charges, for the most recent calendar year. Specified periods include: year-to-date, one-year, annualized five-year, annualized ten-year and annualized since inception.</td>
</tr>
<tr>
<td>Data Elements</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Investment Option Information</td>
<td><strong>Total Returns Excluding Sales Charges</strong>&lt;br&gt;Total returns of the investment option expressed as a percentage, net of all generally applicable fees and costs, excluding sales charges, for the most recent calendar year. Specified periods include: year-to-date, one-year, annualized five-year, annualized ten-year, annualized since inception. <strong>Note</strong>&lt;br&gt;As noted in College Savings Plan Network Disclosure Principles Statement No.6, in order to make the table clear and understandable, submitters are encouraged to add exProgramatory text or footnotes to each performance table, explaining principles followed and assumptions made by the State Issuer in preparing the table. Finally, submitters are encouraged to add additional information that, in their judgment, enhances a user's understanding of the direct-sold or advisor-sold savings Program performance, as applicable.</td>
</tr>
<tr>
<td><strong>Benchmark Performance (If any)</strong></td>
<td>Required for annual reporting period ending December 31.</td>
</tr>
<tr>
<td><strong>Benchmark Name</strong></td>
<td>The name of the established index or a blended index that combines the benchmarks for each of the underlying mutual funds or other investments held by an investment option during the relevant time period weighted according to the allocations of those underlying mutual funds or other investments and adjusted to reflect any changes in the allocations and the benchmarks during the relevant time period.</td>
</tr>
<tr>
<td><strong>Benchmark Return Percent</strong></td>
<td>Total returns of the benchmark for each investment option for the most recent calendar year. Specified periods include: year-to-date, one-year, annualized since inception.</td>
</tr>
<tr>
<td>Fees and Expenses</td>
<td><strong>Estimated Underlying Fund Expenses</strong>&lt;br&gt;Estimated underlying fund expenses for registered mutual funds, in the absence of a change that would materially affect information, is based on the most recent fiscal year reported upon in the applicable fund’s most recent prospectus. For investment options invested in multiple registered mutual funds, estimated underlying fund expenses is based on a weighted average of each fund’s expense ratio, in accordance with the investment option’s asset allocation among the applicable funds as of the reporting period.</td>
</tr>
<tr>
<td><strong>Program Management Fee</strong></td>
<td>Program management fee in effect as of the most recent semi-annual reporting period. Ascribe as noted in College Savings Plan Network Disclosure Principles Statement No.6, Form G-45, under the Investment Option information subsection “Program Management Fee”, requires that an underwriter report the amount of the program management fee assessed by the 529 savings plan.</td>
</tr>
<tr>
<td><strong>State Fee</strong></td>
<td>State fee in effect as of the most recent semi-annual reporting period. Ascribe as noted in College Savings Plan Network Disclosure Principles Statement No.6.</td>
</tr>
<tr>
<td><strong>Miscellaneous Fees</strong></td>
<td>Miscellaneous fee in effect as of the most recent semi-annual reporting period. Ascribe as noted in College Savings Plan Network Disclosure Principles Statement No.6.</td>
</tr>
<tr>
<td>Data Elements</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Annual Distribution/Service/Sales Fee</td>
<td>Annual distribution and/or service and/or sales fee in effect as of the most recent semi-annual reporting period. Ascribe as noted in College Savings Plan Network Disclosure Principles Statement No.6.</td>
</tr>
<tr>
<td>Total Annual Asset Based Fees</td>
<td>This total is assessed against assets over the course of the year and does not include sales charges or account maintenance fees in effect as of the most recent semi-annual reporting period. Ascribe as noted in College Savings Plan Network Disclosure Principles Statement No.6.</td>
</tr>
<tr>
<td>Maximum Deferred Sales Charge</td>
<td>Maximum deferred sales charge in effect as of the most recent semi-annual reporting period. Ascribe as noted in College Savings Plan Network Disclosure Principles Statement No.6.</td>
</tr>
<tr>
<td>Maximum Initial Sales Charge</td>
<td>Maximum initial sales charge in effect as of the most recent semi-annual reporting period. Ascribe as noted in College Savings Plan Network Disclosure Principles Statement No.6.</td>
</tr>
<tr>
<td>Audit Fee</td>
<td>Audit fee in effect as of the most recent semi-annual reporting period.</td>
</tr>
<tr>
<td>Annual Account Maintenance Fee</td>
<td>Annual account maintenance fee that is separately imposed on investors in connection with the maintenance of their accounts in effect as of the most recent semi-annual reporting period, as noted in College Savings Plan Network Disclosure Principles Statement No.6.</td>
</tr>
<tr>
<td>Bank Administration Fee</td>
<td>Bank administration fee in effect as of the most recent semi-annual reporting period.</td>
</tr>
<tr>
<td>Note</td>
<td>As noted in College Savings Plan Network Disclosure Principles Statement No.6, submitters are also encouraged to add exProgramatory footnotes to the fee and cost tables in order to make such tables clear and understandable.</td>
</tr>
</tbody>
</table>

* The term “reallocation” shall mean the withdrawal of funds from one investment option in a Program and deposit of the same funds into one or more investment options in the same Program, such as where an account owner selects a different investment option or funds are moved from one age-band to another as beneficiary’s approach college age.