

# MOODY'S SYNDICATION SERVICE

## SYNDICATION SERVICES USER MANUAL

*May 2004*

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## **About Moody's Syndication Services**

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### **What Are Moody's Syndication Services?**

Moody's Syndication Services is a suite of tools that allow users to retrieve research documents from Moody's web site in computer-readable form. This is done via a push/pull syndication mechanism that provides real-time access to the documents.

Clients visit the Moody's site to browse content and request subscriptions. They can elect to have regularly updated information automatically republished on their Web sites

Users can view Moody's documents in their web browsers, but this new method of retrieving documents maximizes the value of research by making it more manageable and efficient.

Users will be able to take advantage of the system's powerful sorting and filtering functions as they retrieve and save only those research documents that are needed at the time.

### **Benefits Of Using Syndication Services**

Syndication Service does not require a client module to be installed for each subscriber.

Scheduled delivery allows users to get the documents automatically.

On demand syndication enables subscribers to get information updates more quickly and also re-instate information they may have lost due to system crashes or other problems.

## Features In Summary

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- Full permissioning based on Moody's services structure
- Binary and text documents wrapped into a common industry standard XML file format
- Push via SMTP Email
- Push via FTP
- Pull via HTTP using Web Services or SOAP
- E-mail Notification for pull customers
- Documents can exist on Moody's server
- Full Text Searching through SOAP or Web Services and Web interface

## Getting Started With Syndication Services

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If you have an account with Moodys.com you can start using Syndication Services just by requesting to subscribe to Syndication Services.

### How To Use Syndication Services

The following Services will be available for subscribing:

- FTP Push
- E-mail Push
- Web Services Pull

Above delivery options can be combined or changed depending on your needs.

- **FTP Push:** If you are a subscriber to this service, the new documents will be delivered to you using the FTP protocol. Also, an email message will be sent to notify you about the delivery.
- **SMTP Push:** You will be notified by e-mail if a new research document is available. The document will be attached to the e-mail that can be downloaded.
- **Web-Services Pull:** This service will allow you to pull documents using any of the three methods - SOAP, HTTP Get or HTTP Post.

Sample code [See Document Services] is provided to the user for all the three methods. This delivery method is proved to have the best performance among the other services and is preferred by Moody's as this service can be supported better.

## Document Types And Formats

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The various document types that will be available on Moody's web site exist in one of the following file formats:

- PDF
- ASP (.htm)
- CSV
- XLS

[See Appendix I for the full list]

Moody's Syndication Services delivers the documents as RiXML packages from which users can extract the original document format. RiXML is an industry standard document format based on XML that allows for the packaging of different document types in a common envelope. More information about RiXML is available at <http://www.rixml.org>. Please register at this site to get more information on SOAP and to download RiXML manuals.

### How To View The Documents

Once the XML package containing the document is delivered to you, it is up to you how you want to extract the original document out of the package.

You have to develop your own application to decode the document. Documents are base64-encoded within the RiXML.

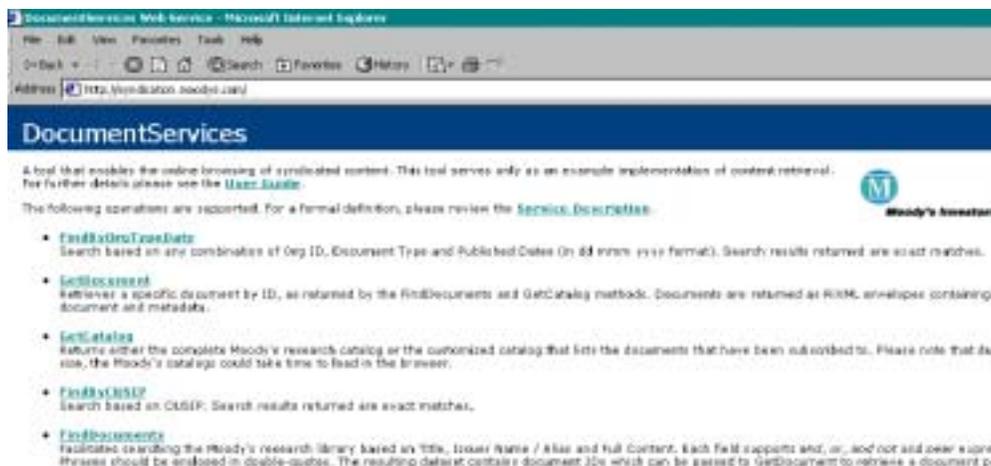
## Document Services

---

Users will be provided with the “**Document Services**” tool that enables the online browsing of syndicated content. This tool serves only as an example implementation of content retrieval. The Document Services Tool has these functions:

- FindByOrgTypeDate
- Get Document
- Get Catalog
- FindByCUSIP
- Find Documents

## Moody's Document Services: Home Page



Step	Action
1	Open Internet Explorer. Type the URL address ( <a href="http://syndication.moody.com/MoodysDocumentService.aspx">http://syndication.moody.com/MoodysDocumentService.aspx</a> ) in the address bar of Internet Explorer. Press Enter and you will be taken to Moody's Document Services Home Page.

### Receiving A Document Through Web Services

Provides the sample code for the following methods

- SOAP
- HTTP Get
- HTTP Post

It also provides an interface for the users to get a document using HTTP GET protocol.

## Document Services: FindByOrgTypeDate

Users can search based on any combination of Moody's Org ID, Document Type and Published Dates (in dd mmm yyyy format). Search results returned are exact matches.

DocumentServices

Click [here](#) for a complete list of operators.

### FindByOrgTypeDate

Search based on any combination of Org ID, Document Type and Published Dates (in dd mmm yyyy format). Search results returned are exact matches.

**Test**

To test the operation using the HTTP GET protocol, click the 'Invoke' button.

Parameter	Value
Moody'sOrgId:	<input type="text"/>
Moody'sDocType:	<input type="text"/>
PublishedAfter:	<input type="text"/>
PublishedBefore:	<input type="text"/>
userName:	<input type="text"/>
password:	<input type="text"/>

Step	Action														
1	From Moody's Document Services Homepage, click on <b>FindByOrgTypeDate</b> . Page for <b>FindByOrgTypeDate</b> will be opened.														
2	In the Test section, enter the following values: <table border="1" style="width: 100%; margin-top: 10px;"> <thead> <tr> <th>Parameter</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Moody'sOrgId</td> <td></td> </tr> <tr> <td>Moody'sDocType</td> <td></td> </tr> <tr> <td>PublishedAfter</td> <td></td> </tr> <tr> <td>PublishedBefore</td> <td></td> </tr> <tr> <td>userName</td> <td>Your Moody's userid</td> </tr> <tr> <td>password</td> <td>Your Moody's password</td> </tr> </tbody> </table> <p>Note: A list of Moody's document types is provided in Appendix I.</p>	Parameter	Value	Moody'sOrgId		Moody'sDocType		PublishedAfter		PublishedBefore		userName	Your Moody's userid	password	Your Moody's password
Parameter	Value														
Moody'sOrgId															
Moody'sDocType															
PublishedAfter															
PublishedBefore															
userName	Your Moody's userid														
password	Your Moody's password														
3	Click on <b>Invoke</b> button. Another copy of browser will open with the matched document details in XML package format.														

# DocumentServices

Click [here](#) for a complete list of operations.

---

## GetDocument

### Test

To test the operation using the HTTP GET protocol, click the 'Invoke' button.

Parameter	Value
docId:	<input type="text"/>
userName:	<input type="text"/>
password:	<input type="text"/>

Step	Action
1	From Moody's Document Services Homepage, click on <b>Get Document</b> . Page for <b>Get Document</b> will be opened.
2	Enter the following values: docId = The id of the document you wish to receive. userName = Your Moody's userid. password = Your Moody's password. Note: You can get the id of the document from the Catalog.
3	Click on <b>Invoke</b> button. XML package will be displayed which has the document in encoded form.

## Moody's Document Services: Get Catalog

### Receiving the document catalog

Users can browse through the general Moody's catalog or they can get their customized catalog that lists only the documents they have access to, based on their service arrangements.

## DocumentServices

Click [here](#) for a complete list of operations.

---

### GetCatalog

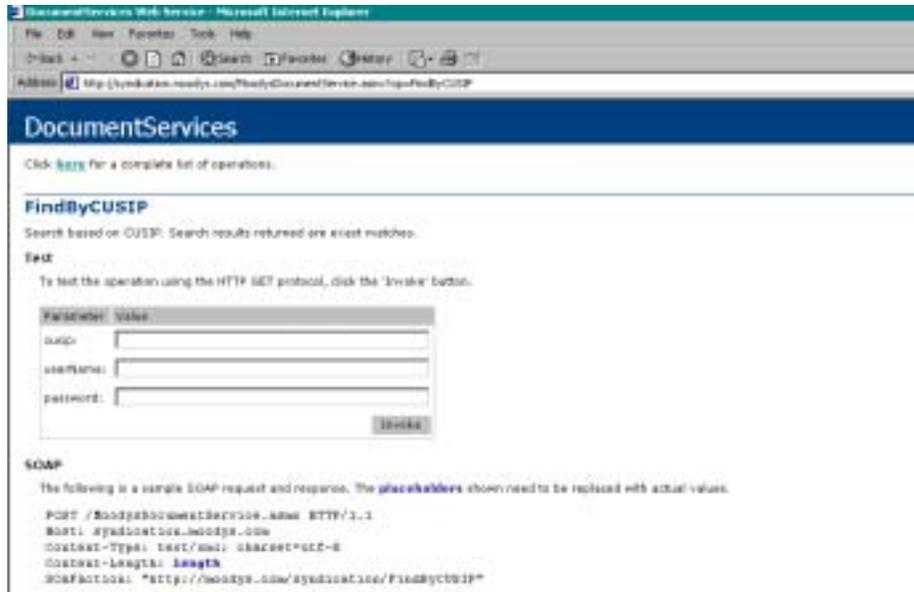
**Test**

To test the operation using the HTTP GET protocol, click the 'Invoke' button.

Parameter	Value
userName:	<input type="text"/>
password:	<input type="text"/>
fullCatalog:	<input type="text"/>

Step	Action
1	From Moody's Document Services Homepage, click on <b>Get Catalog</b> . Page for <b>Get Catalog</b> will be opened.
2	Enter the following values: userName = Your Moody's userid. password = Your Moody's password. fullCatalog = true/false Note: For receiving the Full Catalog enter true in <b>fullCatalog</b> box. Enter false if you want to see your own catalog only.
3	Click on <b>Invoke</b> button.

## Document Services: FindByCUSIP



**Find by CUSIP** is a search based on 6, 8 and 9 digit CUSIPs. Search results returned are exact matches of all documents related to a searched CUSIP.

Step	Action								
1	From Moody's Document Services Homepage, click on <b>FindByCUSIP</b> . Page for <b>FindByCUSIP</b> will be opened.								
2	In the Test section, enter the following values: <table border="1"><thead><tr><th>Parameter</th><th>Value</th></tr></thead><tbody><tr><td>cusip</td><td></td></tr><tr><td>userName</td><td>Your Moody's userid</td></tr><tr><td>password</td><td>Your Moody's password</td></tr></tbody></table>	Parameter	Value	cusip		userName	Your Moody's userid	password	Your Moody's password
Parameter	Value								
cusip									
userName	Your Moody's userid								
password	Your Moody's password								
3	Click on <b>Invoke</b> button. Another copy of browser will open with the matched document details in XML package format.								

## Moody's Document Services: Find Documents

### Searching For A Particular Document

Users can search for a document based on title, issuer or full content. Facilities will be provided for full-text searching. In this way a use can further narrow down the number of documents they will receive.

## DocumentServices

Click [here](#) for a complete list of operations.

---

### FindDocuments

**Test**

To test the operation using the HTTP GET protocol, click the 'Invoke' button.

Parameter	Value
TitleContains:	<input type="text"/>
IssuerContains:	<input type="text"/>
FullTextContains:	<input type="text"/>
userName:	<input type="text"/>
password:	<input type="text"/>

Step	Action												
1	From Moody's Document Services Homepage, click on <b>Find Documents</b> . Page for <b>Find Documents</b> will be opened.												
2	In the Test section, enter the following values: <table border="1"><thead><tr><th>Parameter</th><th>Value</th></tr></thead><tbody><tr><td>TitleContains</td><td></td></tr><tr><td>IssuerContains</td><td></td></tr><tr><td>FullTextContains</td><td></td></tr><tr><td>userName</td><td>Your Moody's userid</td></tr><tr><td>password</td><td>Your Moody's password</td></tr></tbody></table>	Parameter	Value	TitleContains		IssuerContains		FullTextContains		userName	Your Moody's userid	password	Your Moody's password
Parameter	Value												
TitleContains													
IssuerContains													
FullTextContains													
userName	Your Moody's userid												
password	Your Moody's password												
3	Click on the <b>Invoke</b> button. Another copy of browser will open with the matched document details in XML package format.												

### Document Services

**Document Services** can be viewed using the following link <http://syndication.moody.com/MoodysDocumentService.asmx>

**Document Services** also provides WSDL(Web Services Description Language) that defines Web services and describes how to access them. <http://syndication.moody.com/MoodysDocumentService.asmx?WSDL>

## Rating Services

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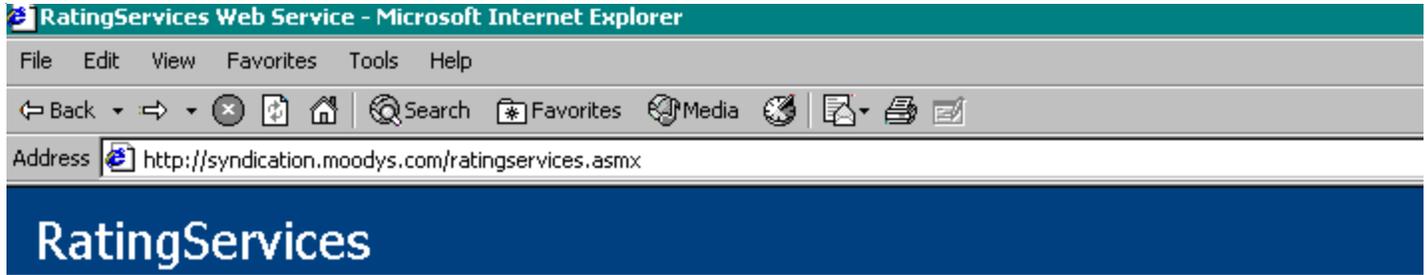
Rating Services can be viewed using the following link <http://syndication.moodys.com/RatingServices.aspx>.

The Rating Services Tool has the following function:

- FindOrgs

## Rating Services:Home Page

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Welcome to Moody's ratings web services. This product offers Issuer and Debt level ratings as defined by our schema.

The following operations are supported. For a formal definition, please review the [Service Description](#).

- [FindOrgs](#)  
Search for Org names; returns org IDs for use with the query methods.  
Also indicates frames of reference.  
orgName field supports *and*, *or*, *and not* and *near* expressions.  
Phrases should be enclosed in double-quotes.

Step	Action
1	Open Internet Explorer. Type the URL address ( <a href="http://syndication.moodys.com/RatingServices.aspx">http://syndication.moodys.com/RatingServices.aspx</a> ) in the address bar of Internet Explorer. Press Enter and you will be taken to Rating Services Home Page.

### Receiving A Document Through Rating Services

Provides an interface for the users to get a document using

- SOAP

## Rating Services: FindOrgs

---

Users can search for Moody's Org Names. The search result returns Org Id which can be use for other query methods.

This method also indicates frames of reference as below :

- C Corporate, Bank Sovereign and Insurance
- S Structured Finance
- M US Municipal Finance



Click [here](#) for a complete list of operations.

---

### FindOrgs

Search for Org names; returns org IDs for use with the query methods. Also indicates frames of reference.  
orgName field supports *and*, *or*, *and not* and *near* expressions.  
Phrases should be enclosed in double-quotes.

#### Test

To test the operation using the HTTP GET protocol, click the 'Invoke' button.

Parameter	Value
orgName:	<input type="text"/>

FindOrgs method supports SOAP requests and WS-Security for authentication.

Please refer to details of WS-Security procedure at:

<http://msdn.microsoft.com/webservices/building/wse/default.aspx?pull=/library/en-us/dnwssecur/html/wssecauthwse.asp>

## **MFRA WebService**

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MFRA WebService can be viewed using the following link  
<<http://syndication.moodys.com/mfra.asmx>>.

The MFRA Web Service tool has the following function:

GetAllIssuerDataPoints

### mfraWebService

The Municipal Financial Ratio Analysis web service (MFRA) provides access to Moody's comprehensive database of financial and operating credit statistics. To test client access via a sample query, please use the [Test Query](#) tool. For further details please see the [User Guide](#).

The following operations are supported. For a formal definition, please review the [Service Description](#).

- [GetAllIssuerDataPoints](#)  
Query Moody's MFRA data. Submit an array of OrgIds and get back the DataPoints for each Issuer.

Step	Action
1	Open Internet Explorer. Type the URL address (< <a href="http://syndication.moodys.com/mfra.asmx">http://syndication.moodys.com/mfra.asmx</a> >) in the address bar of Internet Explorer. Press Enter and you will be taken to MFRA Web Service Home Page.

## MFRA WebService: GetAllIssuerDataPoints

Users search by entering Moody's Org Ids. The search retrieves entity attributes such as state, sector and rating information along with financial and other data points.

To test client access via a sample query, please use the [Test Query](#) tool.

The screenshot shows the 'Test Query' tool interface for the MFRA WebService. The interface is set against a blue background with the 'Moody's.com' logo in the top left. It features several input fields and buttons:

- WSDL:** A text box containing the URL `http://syndication.moody's.com/mfra/asmx?wsdl` and a 'Get WSDL' button.
- Class Name:** An empty text box.
- Method Name:** A dropdown menu.
- WSE Security:** A checked checkbox.
- User Name:** An empty text box.
- Password:** An empty text box.
- Buttons:** 'Get Parameter', 'Call Method', and 'View XML' buttons are positioned to the right of the input fields.
- Feedback:** A large text area with the placeholder text 'Match this window for feedback.'
- Xml View:** A large text area for displaying the results.
- Number of Parameters:** A label showing '1'.
- Parameter Name:** A label 'P1' followed by a text box containing '[ENTER A VALUE]' and a 'Data Type String' dropdown menu.

Step	Action
1	Change WSDL to <a href="http://syndication.moody's.com/mfra/asmx?wsdl">http://syndication.moody's.com/mfra/asmx?wsdl</a>
2	Click on Get WSDL button
3	Select the GetAllIssuerDataPoints method from the Method Name drop down box .
4	Click on the Get Parameter button
5	Enter a comma-separated list of org ids you would like returned into the text field labeled Parameter Name: [ENTER A VALUE]
6	Check the WSE Security check box
7	Enter your User name and Password
8	Click Call Method button
9	Scroll down to view the results
10	To view repeating items click on the View XML button

## **MFRA WebService: Definitions for Entity Data Points**

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Definitions for Entity Data Points for MFRA WebService

- [Airport Financial Ratio Definitions](#)
- [Health Care Financial Ratio Definitions](#)
- [Higher Education Ratio Definitions](#)
- [Local Government Financial Ratio Definitions](#)

## Appendix I

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### List Of Moodys.com Document Types

#### Corporate, Banking , Sovereign And Insurance

Analysis: PDF	Insurance Statistics: HTML
Banking Statistics: HTML	Issuer Comment: PDF
Banking Statistical Supplement: PDF	Monthly Commentary - LFS: PDF
Banking System Outlook: PDF	Pre-Sale Report: PDF
Corp. Credit Perspectives: PDF	Rating Action: HTML
Country Statistics: HTML	Rating Methodology: PDF
Global Fund Risk Perspectives: HTML	Special Report: PDF
Industry Outlook: PDF	Summary Opinion: HTML
Insurance Statistical Suppl: PDF	

#### Structured Finance

ABCP Market Review: PDF	Deal Research: Pre-Sale Report: PDF
ABCP Market Summary: PDF	Deal Research: Performance Report: HTML
ABCP Program Index: EXCEL	Deal Research: Rating Action: HTML
ABCP Weekly Actions: PDF	Credit Index: PDF
Deal Research: Market Trust Report: PDF	Rating Methodology: PDF
Deal Research: New Issue Report: PDF	Special Report: PDF

#### Municipal Finance

Analysis: PDF	Rating Methodology: PDF
Municipal Credit Perspective: PDF	Rating Update: HTML
New Issue: HTML	Special Report: PDF

## Appendix II

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### Error Conditions

Users can encounter the following types of errors. Based on the type of error message received, users should report the error message to their Moody's Investors Service representative.

- User gets an "Access Denied" message

This means that the Username or Password user has entered is not valid. The following message will appear in the browser.

```
<?xml version="1.0" encoding="utf-8" ?>
<string xmlns="http://moodys.com/syndication/">Access Denied</string>
```

- User gets a "SyndicationErrorMessage=Access Denied" message

User is not entitled to do / receive what was requested

(This may vary based on whether it's a document, a search type, or a catalog)

If the user has not been granted appropriate permissions to a document, Search, view Own or Full Catalog, the following type of error message will appear in the browser.

```
<xs:element name="NewDataSet" msdata:IsDataSet="true" msprop:MoodySyndicationErrorMes-
sage="Access Denied">
```

- User performed a search but got no results

If the user performed a search that did not match any research content, there will be no result set obtained. However, if the user does not have access to the document, an error message as shown on the previous page will appear in the browser, and the user should contact Moody's representative.

- User requested a catalog but is not entitled to any documents

If the user has not been granted permissions to view any documents, the following type of error message will appear in the browser. User should contact their Moody's Investors Service representative to get the appropriate access.

In all cases, the user will get some XML in the browser and it would be best to provide a sample of the error to your Moody's representative to help resolve the issue.

- User gets a "SyndicationErrorMessage=SystemError" message

In rare cases if the user encounters a System Error as shown below, there could be an application or system type error that occurred.

```
<xs:element name="NewDataSet" msdata:IsDataSet="true" msprop:MoodySyndicationErrorMes-
sage="SystemError">
```