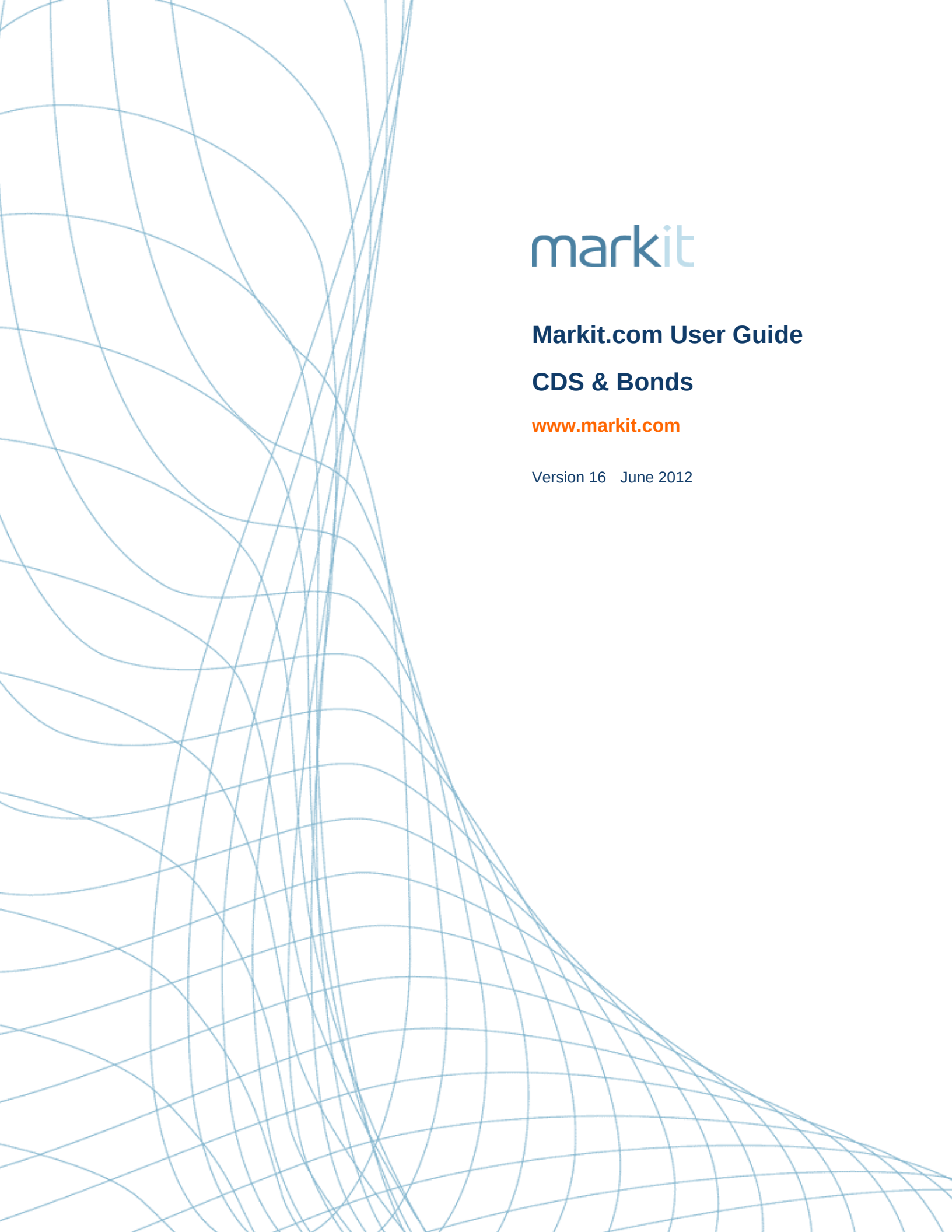

Markit.com User Guide

CDS & Bonds

www.markit.com

Version 16 June 2012

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Chapter 1 Introduction

Welcome to the Markit website, Markit.com, a powerful and easy-to-use site designed for you to use to access our proprietary global pricing database and relevant analytical applications. The site is accessible via the Internet using your personal secure username and password, 24 hours a day, seven days a week. This introductory section provides a brief overview of Markit as company, the Markit.com website, and this user guide. It also provides important information about our security measures and those we expect of our clients.

1.1 What is Markit?

Markit Group Limited was founded in 2001 by a team of experienced credit market professionals with a vision to create a tool for credit pricing and to assist clients to better understand and manage their credit risk exposure. To reach this goal, we have assembled a network of partner banks each of which contributes credit data on global investment grade/sub-investment grade bonds, as well as global credit default swaps. This pooled database of daily credit data, supplemented by Markit proprietary data and analytics, is the heart of the products and services offered by Markit.

The flexibility of the Markit data offering allows customers to create and access the combination of products and services that best meets their needs. For more information about Markit's products and services, please contact your account manager or email support@markit.com.

1.2 Who Uses the Markit Website?

Finance industry professionals who need to view and extract various forms of credit spread data and analytics use the Markit website. Users include risk managers, product control managers, trading room managers, traders, salespeople, portfolio managers, research analysts, and collateral managers. They typically work for financial institutions such as large commercial banks, insurance companies, asset managers, and credit arbitrage funds. In addition, auditors/regulators and third party applications may use the website to obtain data, in part, to drive their own valuation or modeling systems, whether it be via one-off downloads or live application interfaces.

Use of Markit credit services varies based on user roles within client firms and can include the following:

- ☑ Traders need reliable and independent data to help quickly price potential trades. Portfolio managers use the same data to help verify that they are getting fair prices.
- ☑ Traders, portfolio managers, product control managers, and risk managers have a source of pricing data that can be integrated into other trading, portfolio management, and risk management systems.
- ☑ Financial users across a firm may access an alternate source of credit spread curves and sector curves.
- ☑ Risk managers and product control managers can monitor potential sources of price discrepancy and act with a greater degree of certainty.
- ☑ Risk managers and senior management can assess risk across both cash and derivative instruments because Markit provides mark-to-market across multiple instrument types.
- ☑ Auditors can get access to an independent source of data for the valuation of credit risk for their capital measurement requirements.
- ☑ Financial users across a firm may access Markit reference entity mappings to help reduce the degree of uncertainty surrounding the matching of a reference entity with its associated benchmark bond or reference obligation.

1.3 Security

Markit takes security very seriously and we expect our customers to take it seriously, as well.

1.3.1 Application Security

Typically, the most likely area where security may be compromised is within an application itself. Markit tests its software before its release to help mitigate this risk. In addition, Markit regularly has its applications independently audited and tested to prevent unauthorized access.

The Markit server is housed in a high availability data center with 24/7 professional support. The web server is protected from unauthorized access behind a fully managed firewall; and the database server sits behind an additional firewall.

Customer passwords are encrypted when stored in our database and known only to the user. Three password attempts are allowed before the password is suspended for five minutes to help protect against brute force attacks over the Internet. Customer passwords must be changed every two months and it is not possible to reuse a password.

1.3.2 Internet Security

Customer information is transmitted across the public Internet in the following three ways: when transmitting customer price and position files to Markit, viewing reports presented on the website, and downloading information in spreadsheets.

A connection using the industry standard secure socket layer (SSL) is exposed to a “man in the middle” attack. Customers must transmit position information over a secure Internet connection.

If a transmission consists solely of price information, the connection between the customer’s browser and the Markit server is encrypted using SSL. We do not permit a connection without SSL and require a minimum of 128-bit encryption.

1.3.3 Cookies

Markit makes use of cookies for the storage of session information. Cookies are not used beyond our website; they are used only on a temporary basis while in our website and are thereafter deleted (known as RAM cookies or per-session cookies).

These cookies exist only within memory and are not stored on users’ hard disk.

1.4 Overview of this Document

This document provides the necessary user-oriented information for you to use the Markit.com system on the web. It is not an exhaustive guide to the system or the data presented on Markit.com. Other user and technical documentation is available and information on how to find or obtain this documentation is provided where applicable throughout this guide. Online support is available through the Markit.com **Help** option and via email to support@markit.com. See section 12.1 Contact Us on page 62 and section 12.2 Online Help on page 62 for more information.

The following Getting Started section provides the information you need to get started using the system. It includes a site map that will help orient you to where to find most options on the site.

Chapter 2 Getting Started

This section assists you with logging in, accessing your personal profile, and becoming familiar with the overall layout of data available on the Markit website.

2.1 Log In

- ☑ Enter http://www.markit.com in your Internet Explorer web browser. The Markit.com home page displays.
- ☑ The Login box (pictured below) is located on the upper right hand side of the home page.
- ☑ Enter your unique username and password in the **Username** and **Password** fields, respectively. If you have forgotten your password, select the **Forgot Password** option and answer your security question. If you do not know your username or cannot remember the answer to your security question, you can request this information from your internal system administrator or by contacting support@markit.com.
- ☑ Select **Markit CDS & Bonds** from the **Choose a Markit Service** drop-down menu.
- ☑ Click the **Login** button.

2.2 Edit Profile

In your Profile, you can change your password, change your secret question, and edit your personal contact details.

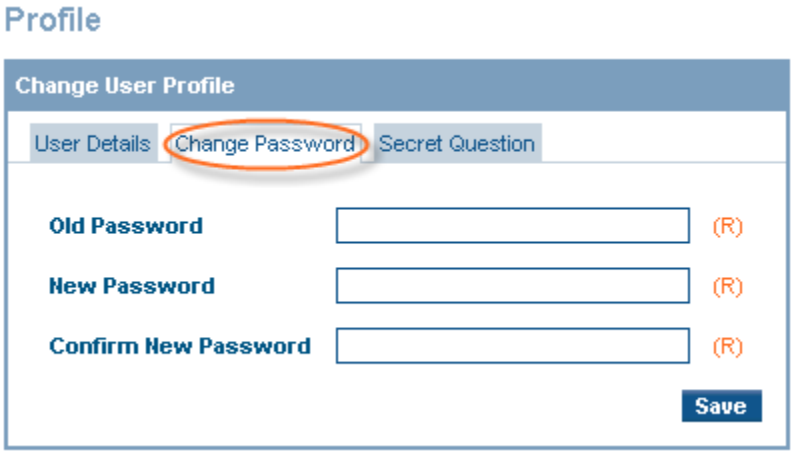
- ☑ Click **Edit Profile** in the top right corner of your screen, as shown in the graphic below.

2.2.1 Change Your Password

To change your password:

- ☑ Select the **Password** tab, as shown in the following graphic.
- ☑ Enter your current password in the **Current Password** box.
- ☑ Enter your new password in the **New Password** and **Retype New Password** boxes.
- ☑ Click **Save**.

➲ **NOTE:** Your new password must be at least eight (8) characters long and contain at least one (1) number.



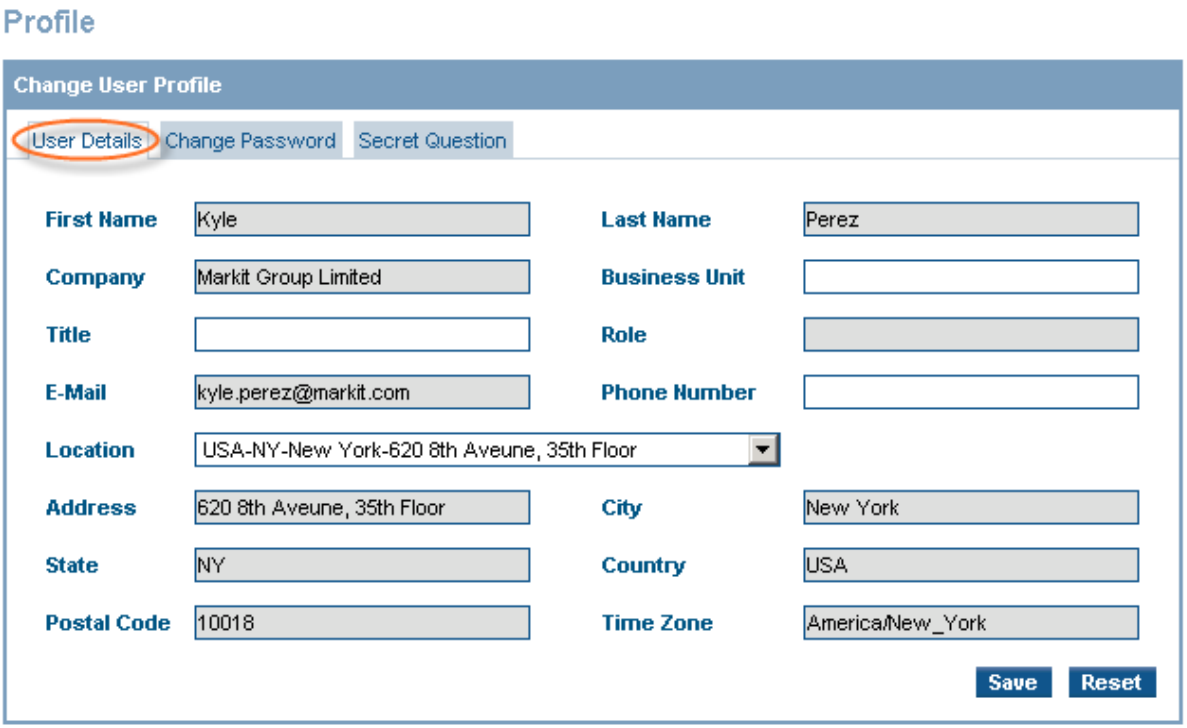
2.2.2 Update Your Personal Details

To update your personal contact information:

☑ Click **User Details**, as shown in the following graphic.

☑ Update your name, email address, telephone number, department, job title, and location (city).

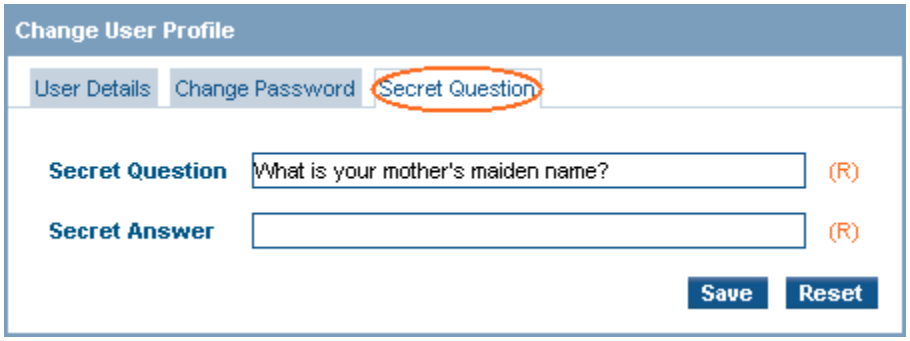
☑ Click **Save**.



2.2.3 Set Your Secret Question

Your secret question is used to retrieve your password in the event that you have forgotten what is. To set or change your secret question:

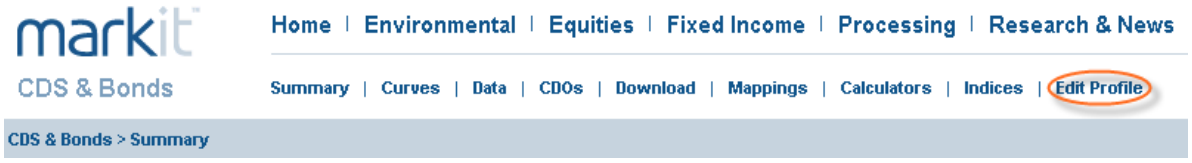
- ☑ Select the **Secret Question** option as shown below.
- ☑ Type both the question you wished to be asked in the event that you forget your password as well as the answer you must provide for that question.
- ☑ Click **Save** to put your changes into effect.

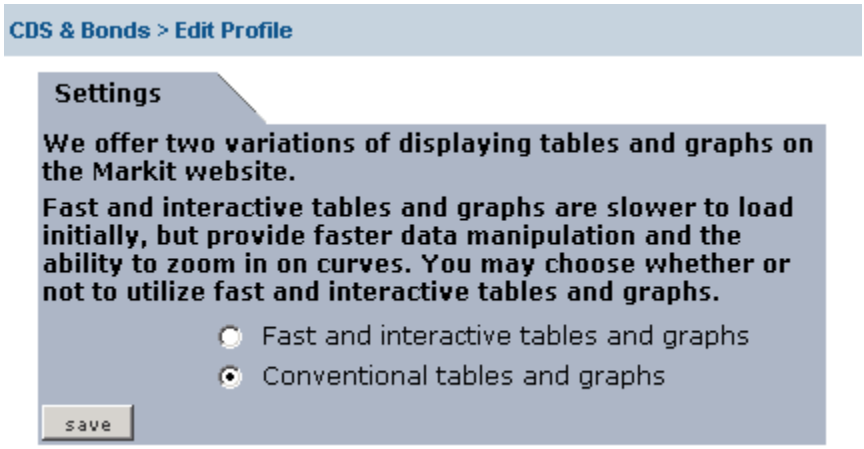


2.2.4 Adjust Your Display Settings for Data and Curves

To adjust the display settings for data and curves:

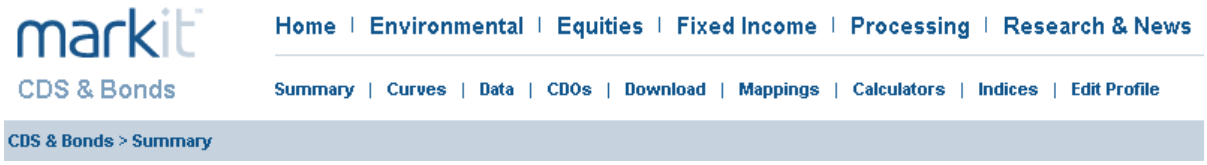
- ☑ Select the **Edit Profile** option as shown below.
- ☑ The **Settings** tab should automatically appear as shown in the following graphic.
- ☑ You can choose between 'Fast and interactive tables and graphs' and 'Conventional tables and graphs', their descriptions are provided.
- ☑ Make your selection and click the **Save** button to make the change.
- ☑ Note, if your system does not support 'Fast and interactive tables and graphs' then you will not be able to view any tables or graphs. If this is the case, please switch to 'Conventional tables and graphs' to avoid such issues.





2.3 Main Menu

The main menu shown below allows you to browse the Markit website based on your needs. Once you select a menu option the relevant data will be displayed below the pictured menu.

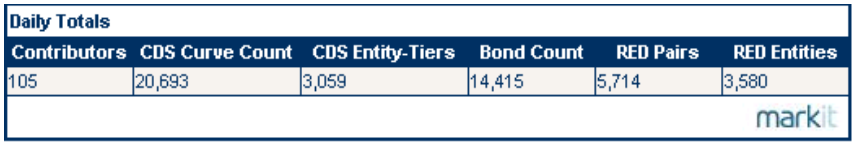


➲ **NOTE**: Throughout the website, **blue** indicates hyperlinked text. Click on a hyperlink to display additional information for the selected item (based on permissions).

Chapter 3 Summary

Markit Summary provides a daily statistical analysis across asset classes of the data available in the Markit database. The Summary page also provides a graphical representation of the distribution of Markit CDS Data across region and rating.

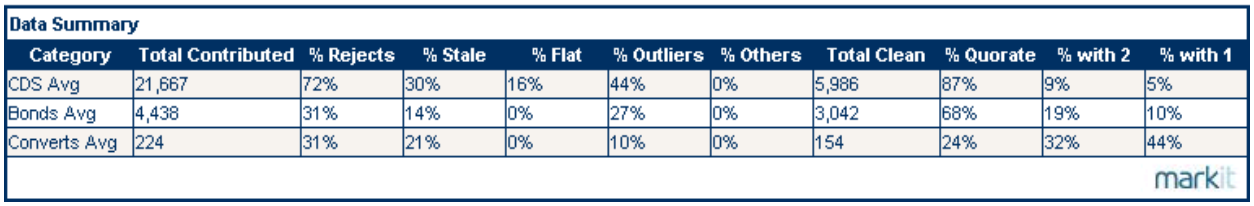
The Summary page is the default Markit.com page that displays first when you log in. You can access this data at any time by selecting **Summary** from the main menu. A sample of the Summary page is shown below.



Daily Totals

Contributors	CDS Curve Count	CDS Entity-Tiers	Bond Count	RED Pairs	RED Entities
105	20,693	3,059	14,415	5,714	3,580

markit



Data Summary

Category	Total Contributed	% Rejects	% Stale	% Flat	% Outliers	% Others	Total Clean	% Quorate	% with 2	% with 1
CDS Avg	21,667	72%	30%	16%	44%	0%	5,986	87%	9%	5%
Bonds Avg	4,438	31%	14%	0%	27%	0%	3,042	68%	19%	10%
Converts Avg	224	31%	21%	0%	10%	0%	154	24%	32%	44%

markit

3.1 Daily Totals

The Daily Totals table, as shown in the above graphic, displays the total number of distributable data sets across asset classes.

Field	Description
Contributors	The total number of institutions contributing pricing data on a daily basis.
CDS Curve Count	The total number of distributable curves.
CDS Entity Tiers	The total number of entities for which Markit receives distributable data.
Bond Count	The total number of distributable bonds.
RED Pairs	The total number of scrubbed reference obligor and reference entity pairs.
RED Entities	The total number of scrubbed reference entities from the Markit Reference Entity Database (RED).

3.2 Data Summary

The Data Summary table, as shown in the above graphic, displays the data totals across asset classes.

Field	Description
Total Contributed	The total number of data points contributed.
% Rejects	The proportion of data points contributed that have been rejected because they have failed data quality test, expressed as a percentage.
% Stale	The proportion of data points that have been rejected because they have failed the stale data test, expressed as a percentage.

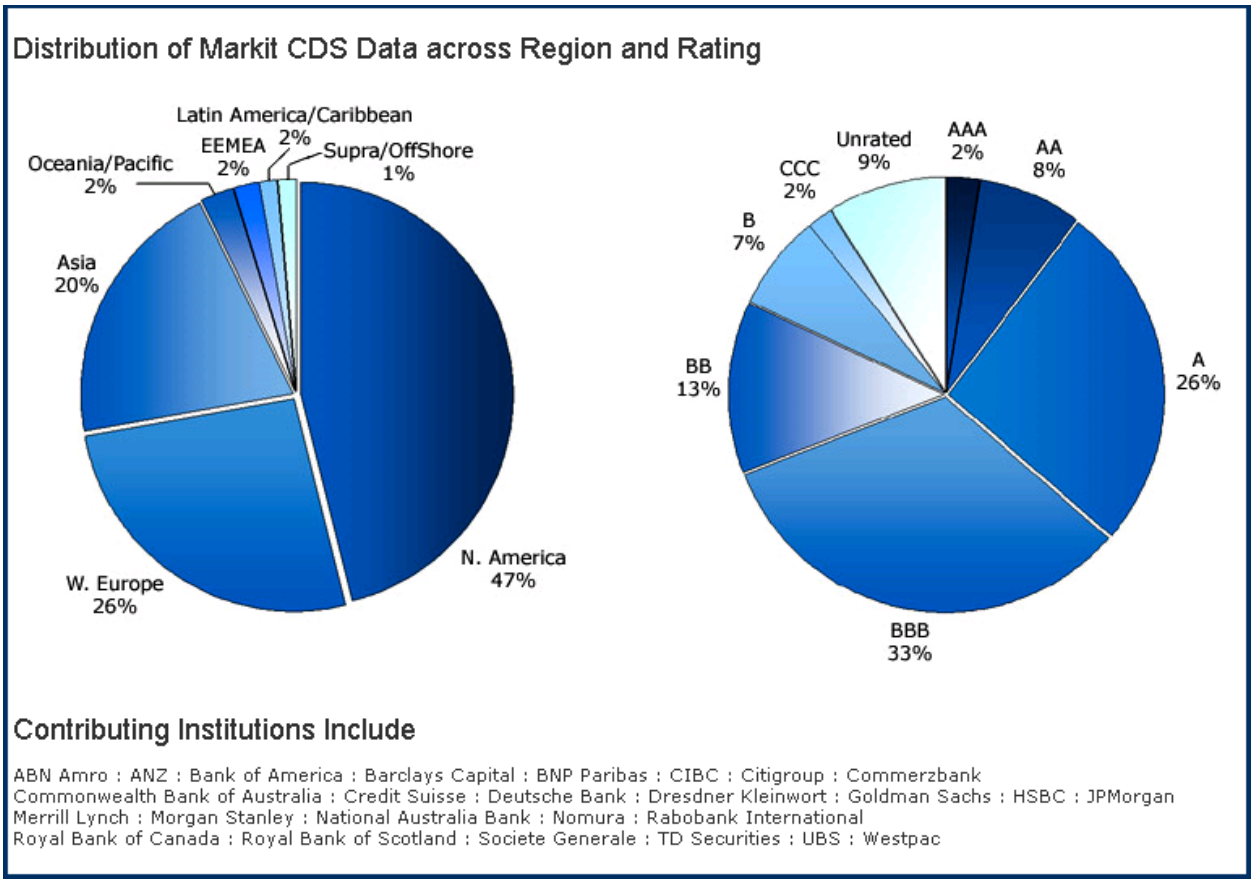
Field	Description
% Flat	The proportion of data points that have been rejected because they have failed the flat curve test, expressed as a percentage.
% Outliers	The proportion of data points that have been rejected because they have failed the outlier test, expressed as a percentage.
% Others	The proportion of data points that have been rejected for other reasons, including implausible restructuring basis or backwardation, or implausible currency basis; expressed as a percentage.
Total Clean	The total count of distributable values.
% Quorate	The proportion of total spreads that are quorate, expressed as a percentage.
% with 2	The proportion of total spreads with only two valid contributions, expressed as a percentage.
% with 1	The proportion of total spreads with only one valid contribution, expressed as a percentage.

3.3 Distribution of Markit CDS Data across Region and Rating

The Summary page, as shown in the graphic below, displays two pie charts:

- The pie chart on the left shows how CDS data is distributed by region, and
- The pie chart on the right shows how CDS data is distributed by rating.

The institutions contributing spreads to Markit.com CDS data are shown in a list below the charts.



Chapter 4 Curves

➲ **NOTE**: Markit is using ICB Industry codes (i.e., Industry is the ICB first level term) all Industry / Sector reports and to graph curves. See section 11.6.9 on page 57 for more information about curves and the ICB classification system.

The Markit Curves analysis tool allows you to graph individual entity credit curves or sector curves (ICB Industry) by plotting the current term structure or by charting an instrument time-series. You may also want to compare two credits against one another, a credit against a sector, or two sectors against one another.

➲ **NOTE**: Ensure that in Internet Explorer, the **Tools** > **Internet Options** > **Advanced > Security** > **Do not save encrypted pages to disk** option is unchecked.

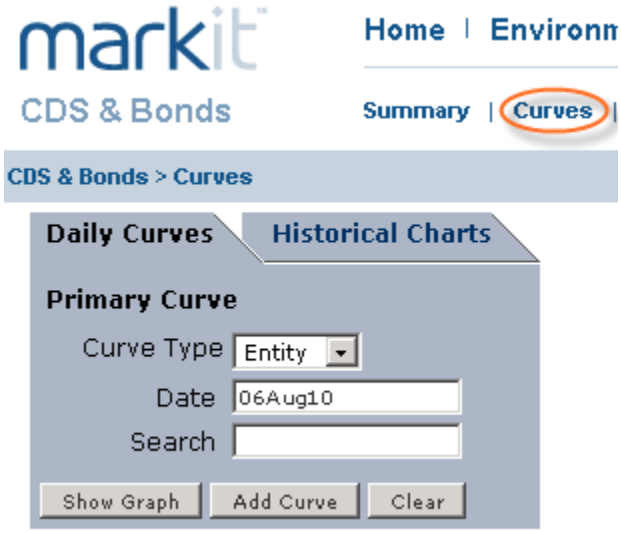
☑ Curves are constructed for a given entity, tier, maturity, currency, and doc clause.

☑ Using pooled data, we populate a graph and draw a regression curve through it, creating a default-swap-based spread curve for each credit.

☑ Data points can be viewed subject to the rules governing the distribution of and display of data. See section 11.6.9 on page 57.

To display credit or ICB Industry curves or history curves on Markit.com:

☑ Choose the **Curves** option on the main menu, as shown in the example below.



☑ Click the **Daily Curves** tab or **Historical Charts** tab, respectively.

☑ Use the instructions in the remainder of this section to construct your curves.

4.1 View Daily Curves

This section describes how to use the Daily Curves tab. You can plot curves for:

- One issuer / entity, sector (ICB Industry), or
- Any two of the above types to compare two curves of the same type or different types (e.g. for two issuers, curves for two sectors, an issuer curve to a sector curve, and so on), or
- The same sector across multiple regions.

To start:

☑ Select the **Daily Curves** tab at the top of the Curves page.

4.1.1 Create a Primary Curve: View an Individual Issuer Credit Curve

☑ Select **Entity** as the **Curve Type** under **Primary Curves**.

☑ Enter nothing and accept the default of yesterday's date that displays in the **Date** field, or enter a new date using the format DDMMMYY.

☑ Enter the issuer name, partial name, or ticker in the **Search** text box, and press **Enter** on your keyboard.

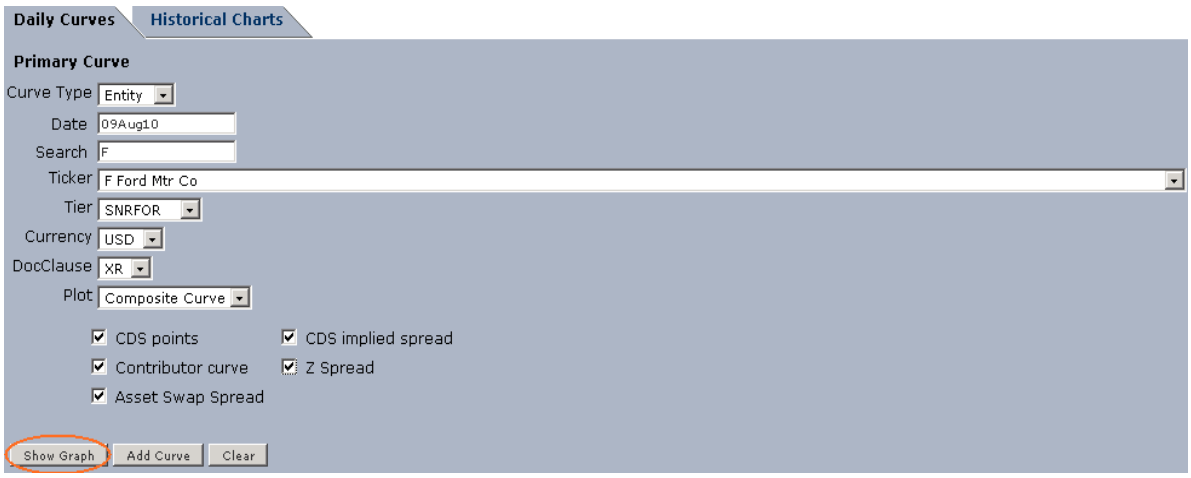
☑ Accept the default issuer that displays in the **Ticker** field or click on the **down arrow** and select the desired issuer from the list.

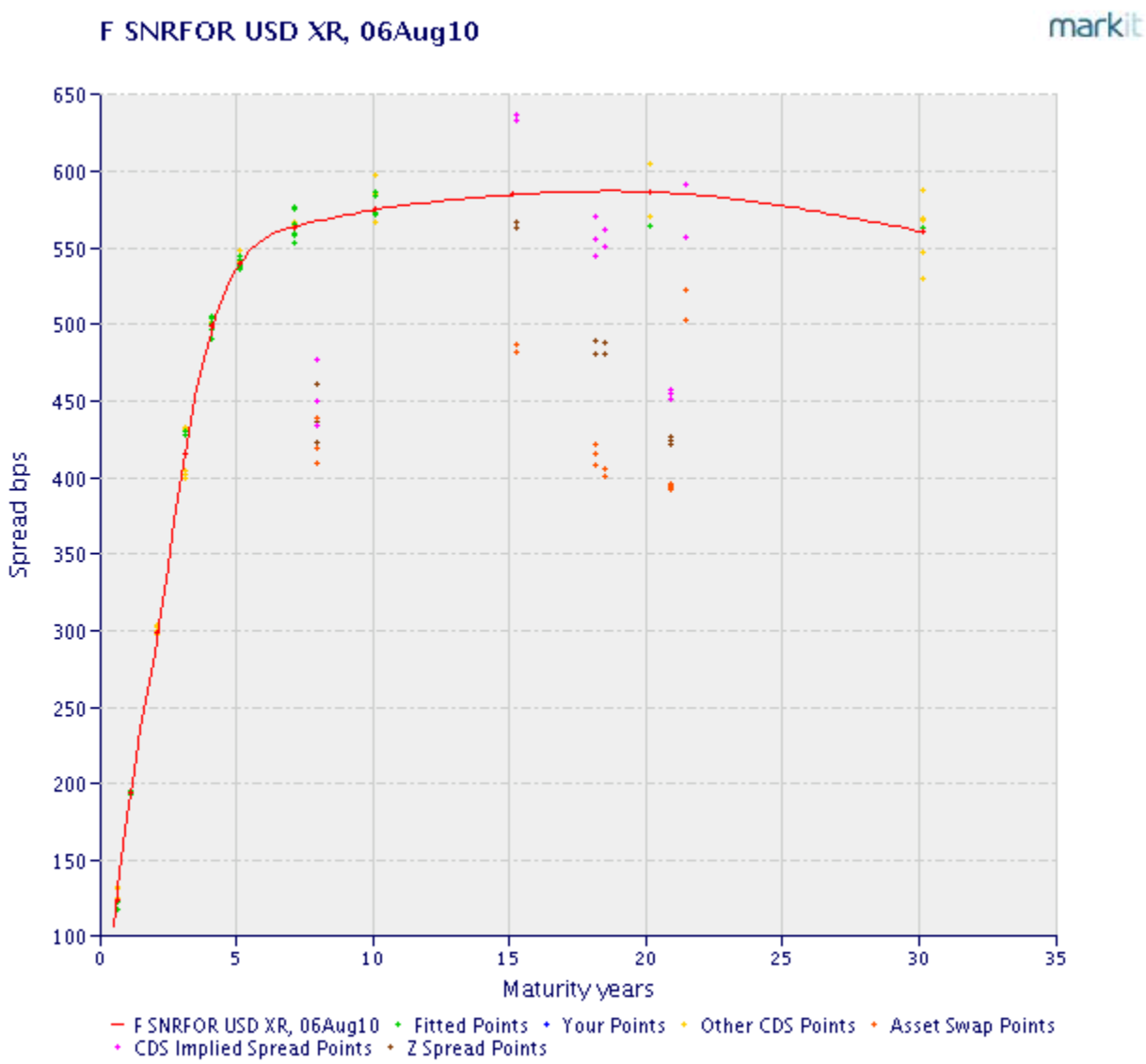
☑ The default **Tier**, **Currency**, and **Doc Clause** display in their respective fields. Select other values for these fields by clicking on the down arrows in the list boxes and clicking on a value.

☑ Under **Plot**, choose **Composite Curve** or **Best Fit Curve** (commonly referred to as a **Theoretical Curve**). Composite displays a cubic splines regression curve through the composite values. Best Fit displays a Nelson Siegel parametric form through all clean contributor CDS points.

☑ The **CDS Points** box is selected by default. Check the **Contributor Curve**, **Asset Swap Spread**, **CDS Implied Spread**, and **Z Spread** boxes to include any or all of these features on the graph.

☑ Click **Show Graph** (as shown at the bottom of the graphic below) to display the credit curve. The graph displays as shown on the next page and the **Download** button is added to the tab.



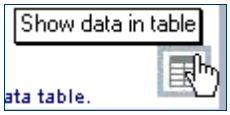


Click icon to show data table.

- ☑ Place the mouse pointer over any **data point** to display the description of the underlying securities and spread for the selected point. Data visibility is governed by rules as described in section 11.6.9 on page 57.
- ☑ Click and drag to select an area of the graph to enlarge (zoom in), and right click anywhere on the graph to restore the graph to its original state (zoom out).
- ☑ Click **Download** to download a file with all of the data points for the curves plotted.
- ☑ Click **Clear** to clear all curves and start over.

4.1.1.1 Show and Use Data Table

☑ Click the **data table** icon in the lower right corner of the graph area, as shown below.



The data table displays below the graph, as shown in the following graphic. By default, the data table lists all assets contributing to this curve.

Details of displayed points Download: csv tab xml

Name	Type	Spread
F SNRFOR USD XR 6M Default	Composite	124.07
F SNRFOR USD XR 1Y Default	Composite	193.56
F SNRFOR USD XR 2Y Default	Composite	298.88
F SNRFOR USD XR 3Y Default	Composite	415.56
F SNRFOR USD XR 4Y Default	Composite	498.95
F SNRFOR USD XR 5Y Default	Composite	539.67
F SNRFOR USD XR 7Y Default	Composite	563.76

1 - 7 of 102

☑ Use the arrows on the bottom right hand corner to view all of the values in the list.

☑ Click on a blue hyperlinked **name** to view the spread or prices (if available) contributing to that data point. The data table displays Contributors to the selected asset.

Contributors to: F SNRFOR USD XR 5Y Default, 06Aug10 Download: csv tab xml

Spread	Price
537	
537	
538	
538	
540	
543	
545	

Back To All Points

1 - 7 of 8

☑ Click on a **data point** on the primary curve to display the underlying Markit data for that point in the data table. The data table displays Recent Detail similar to the following example.

Recent detail for CDS: F SNRFOR EUR MR 30Y Default Download: csv tab xml

Date	Composite Spread Bid	Composite Spread Mid	Composite Spread Ask	Composite Recovery
06AUG10		568		33%
05AUG10		567		33%
04AUG10		570		33%
03AUG10		570		33%
02AUG10		584		33%
30JUL10		590		33%
29JUL10		586		34%

Back To All Points

1 - 7 of 2424

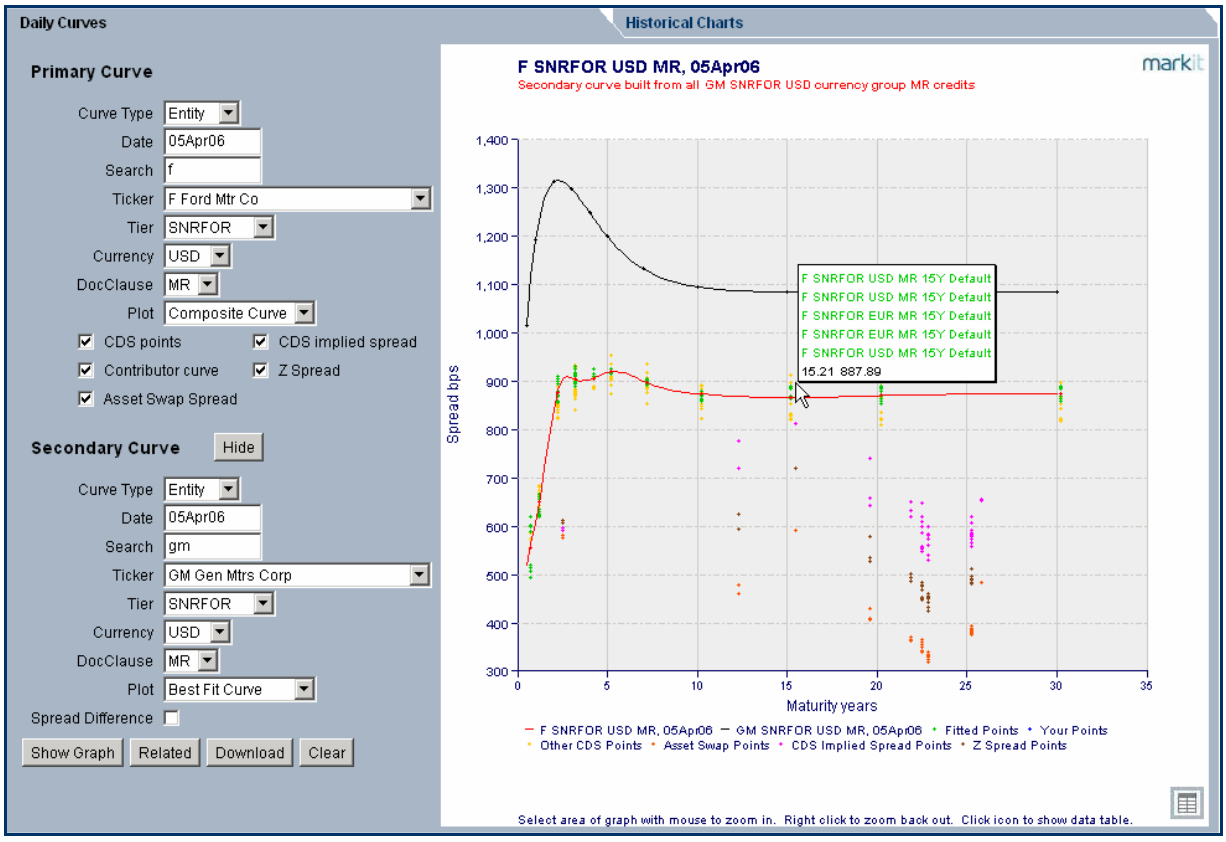
- ☑ Click **csv**, **tab**, or **xml** to download the data in the any of data table views in the selected format. See section 5.4 Download Data from Data Tables on page 35 for details.
- ☑ Click **Back to all points** to redisplay the original list of assets in the data table.

4.1.2 Add a Secondary Curve: Compare Two Issuer Credit Curves

Once you have created a primary curve using the previous set of instructions, you can add another curve to the same graph for comparison purposes.

- ☑ Click the **Add Curve** button.
- ☑ Select **Entity** as the **Curve Type** under **Secondary Curve**.
- ☑ Update the default date of yesterday in the **Date** field, if desired.
- ☑ Enter the issuer name, partial name, or ticker in **Search** text box and press **Enter**, or click **Related** to display a list of related entities and select an entity from that list.
- ☑ Click on the **down arrow** and select the desired issuer from the drop-down list if it does not already display in the **Ticker** field.
- ☑ The default **Tier**, **Currency**, and **Doc Clause** are selected automatically. Select other values for these fields by clicking on the **down arrows** and choosing the desired value from the list boxes.
- ☑ Under **Plot**, choose **Composite Curve** or **Best Fit Curve**. Composite displays a cubic splines regression curve through the composite values. Best Fit displays a Nelson Siegel parametric form through all clean contributor CDS points.
- ☑ Click **Show Graph** to display the second credit curve. The curve is plotted on the graph and is denoted by a black line.

➲ **NOTE**: Before selecting **Show Graph**, you can check the **Spread Difference** box to display an additional graph of the variance between the two curves.



☑ **Red Line** – Denotes the primary curve.

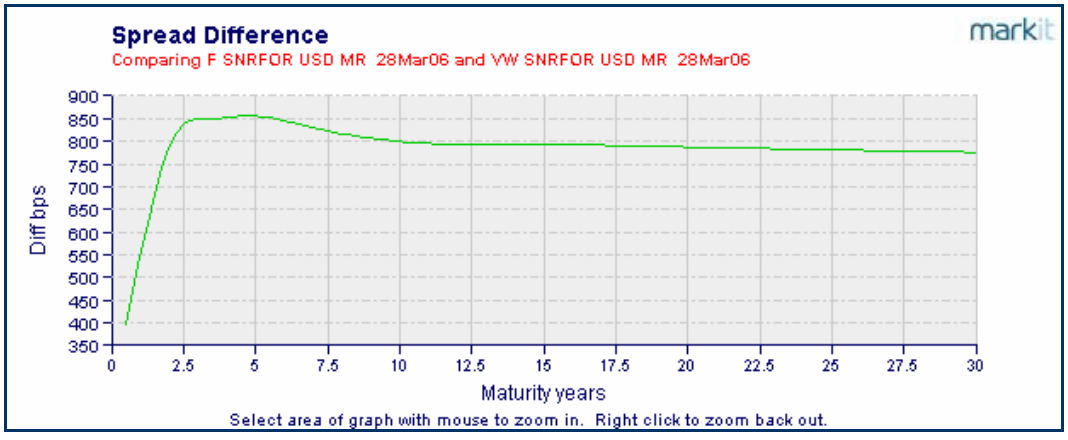
➲ **NOTE**: Individual data points are shown only around the primary curve.

☑ **Black Line** – Denotes the secondary curve.

☑ Check the **Spread Difference** box and then click **Show Graph** again to display an additional graph of the variance between the two curves as shown in the graphic below.

☑ Click **Hide** to remove the secondary curve and close the spread difference if it displays.

☑ Click **Related** to display all entities related to this primary curve.



4.1.3 Compare Any Two Curves: Entity (Issuer – CDS / Bond), or Industry

Markit uses ICB Industry (the ICB first level term) codes in all sector reports, to graph curves, and for the Nelson Siegel function form. For more information on ICB classification and Industry codes, see section 11.6.9 on page 57.

Markit calculates sector curves using the Nelson Seigel functional form. Documentation is available from Markit describing the analytics behind this formula for those interested; see the Contact Us section on page 62 for details.

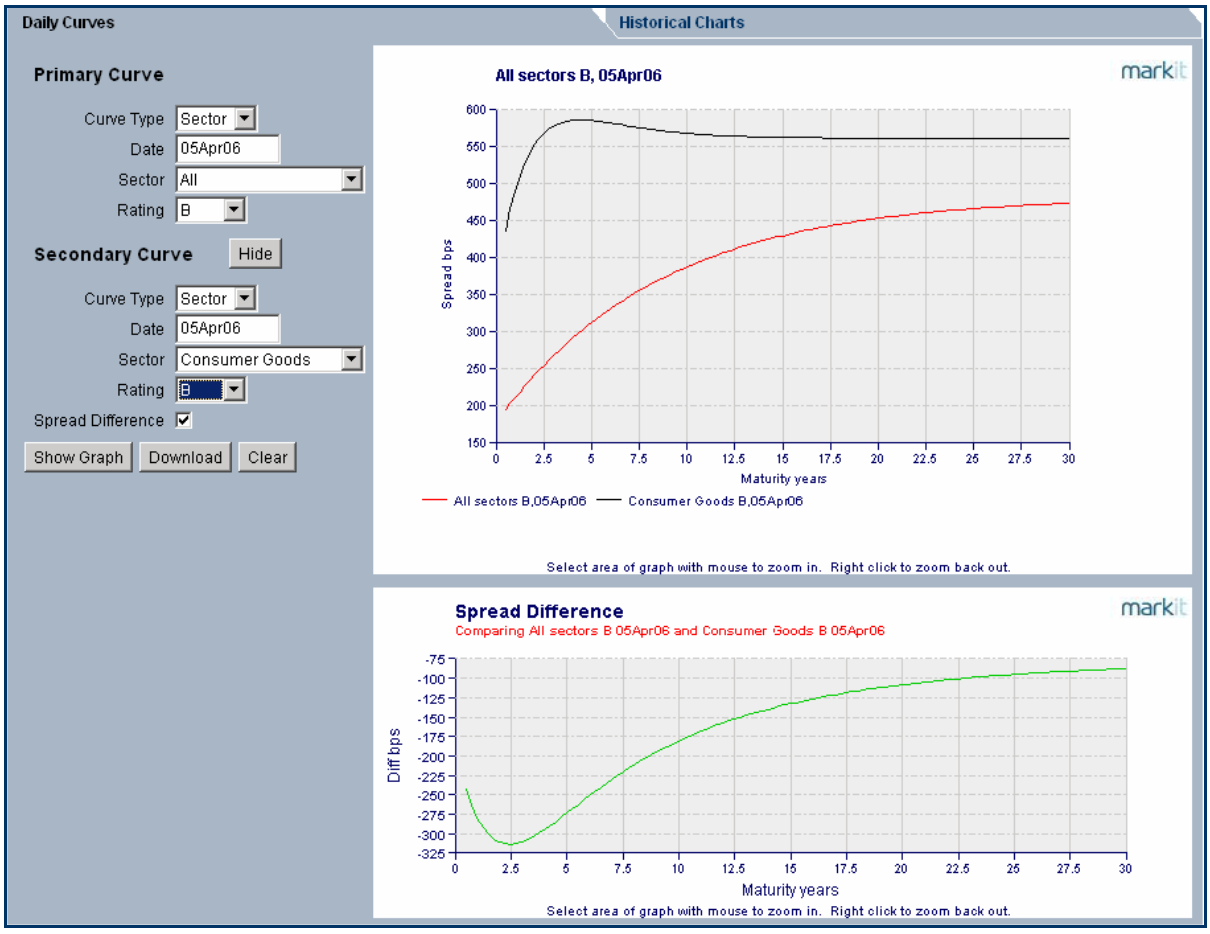
Specify the **Primary Curve**:

- ☑ If you are comparing an issuer to another curve of the same or different type, select **Entity** as the **Curve Type**. Next, enter the issuer name, partial name, or ticker in **Search** text box and press **Enter**. Click on the **down arrow** and select the desired issuer from the list if it does not already display in the **Ticker** field. The default **Tier**, **Currency**, and **Doc Clause** are selected automatically. Select other values for these fields by clicking on the **down arrows** in the list boxes. Choose the type of **Plot** (**Composite** or **Best Fit**) and choose any additional data you want to display on the graph.
- ☑ If you are comparing a Sector (Industry) to another curve of the same or a different type, select **Sector** as the **Curve Type.** Then, select a **Sector** and **Rating Category**.

Specify the **Secondary Curve**:

- ☑ If you are comparing the primary curve to an Entity (issuer) curve, select **Entity** as the **Curve Type**. Next, enter the issuer name, partial name, or ticker in **Search** text box and press **Enter**. Click on the **down arrow** and select the desired issuer from the list if it does not already display in the **Ticker** field. The default **Tier**, **Currency**, and **Doc Clause** are selected automatically. Select other values for these fields by clicking on the **down arrows** in the list boxes. Choose the type of **Plot** (**Composite** or **Best Fit**).
- ☑ If you are comparing the primary curve to a Sector (Industry), select **Sector** as the **Curve Type**. Then, select a **Sector** and **Rating Category**.
- ☑ Click **Show Graph** to display the second credit curve. The graph displays with two curves; see the graph at the top in the following graphic.
- ☑ If desired, check the **Spread Difference** box to display a second graph showing the difference in spread of the two curves, as shown at the bottom of the following example graphic.

The following is an example of a comparison of two Sector (ICB Industry) curves with the spread difference displayed on a separate graph below.

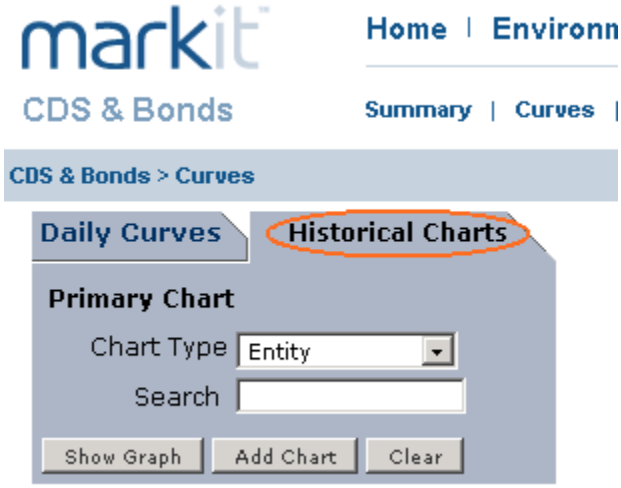


4.2 View Historical Charts

This section describes how to use the Historical Charts tab. You can plot historical charts for:

- One instrument for an issuer (i.e. Entity), one Sector, one Index, one Index Tranche, or
- Any two of the above types to compare two curves of the same type or different types (e.g. two issuers, two sectors, an issuer and a sector, etc.).

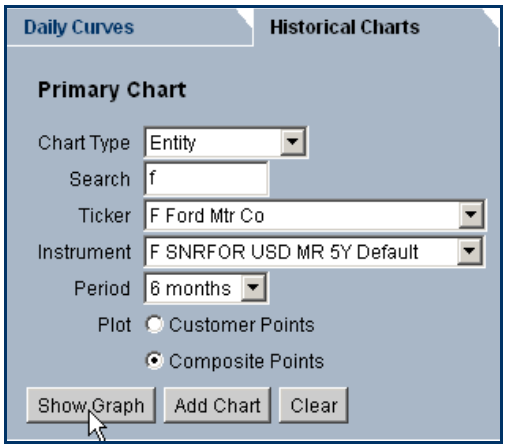
To start, click on the **Historical Charts** tab at the top of the Curves page, as shown below.



4.2.1 Compare Two Historical Curves

This section describes how to compare two historical curves; however, note that you can compare two curves of any type, including the following: **Entity**, **Sector**, **Index**, **Index Tranche**, or **ABS**

☑ Under **Primary Chart**, specify the **Chart Type**, in this case, **Entity**. The appropriate data options for the selected Chart Type display on the tab as shown in the following example.



☑ If necessary, **Search** for the instrument by clicking in the **Search** field and typing either the entire name/ticker or a portion of the name/ticker. Press **Enter** and a list of matching names/tickers displays in the **Ticker** drop-down field as shown in the previous graphic.

☑ Ensure that you have selected the correct **Ticker** for the instrument type, if applicable (i.e. for Entity).

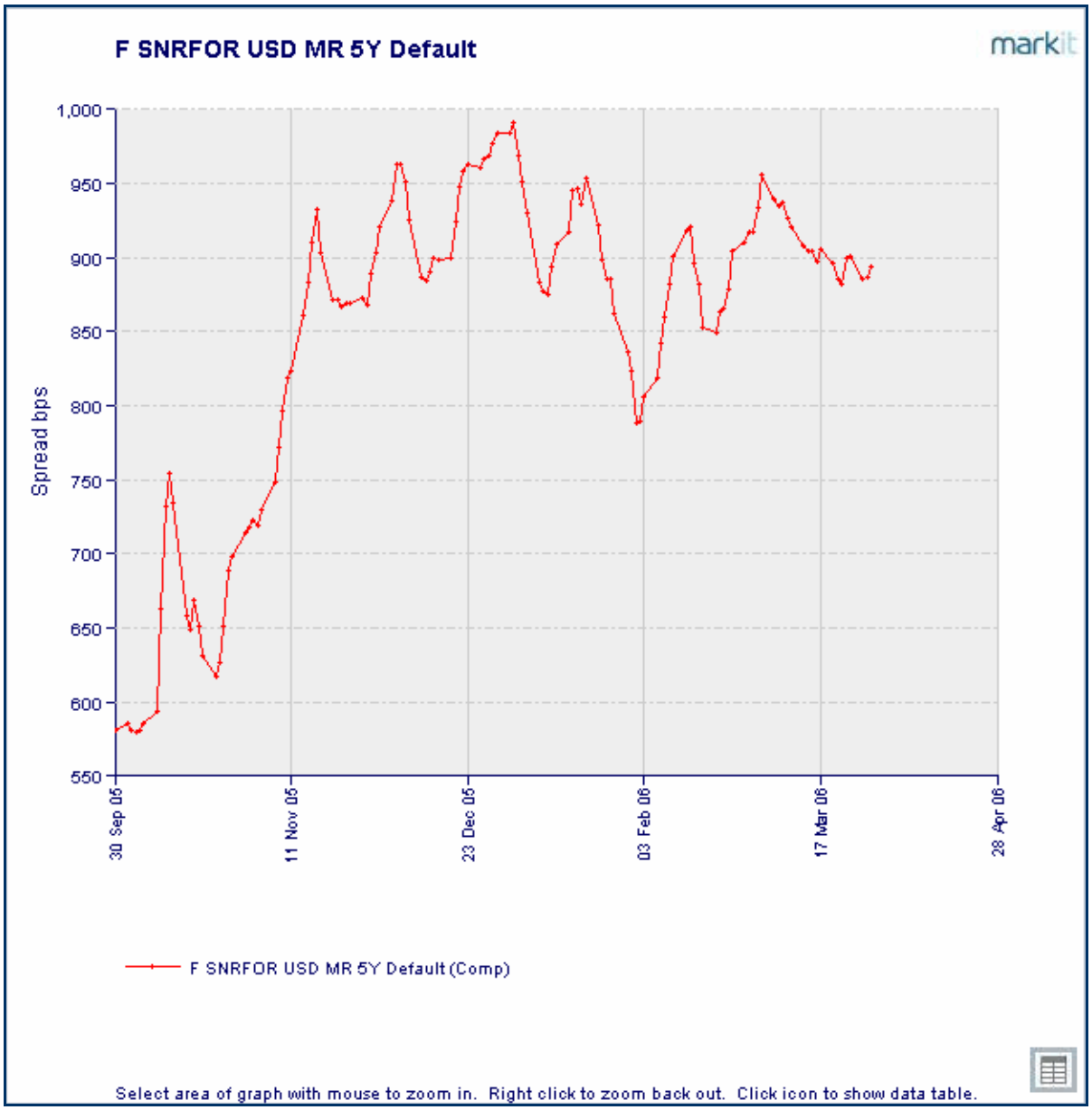
☑ The default **Instrument** (or **Sector**) is selected automatically. Select a different Instrument (or **Sector**) if desired, and select any additional information provided for the instrument (or **Sector**).

☑ Choose the desired **Period** (e.g. 5 year).

☑ **Composite Points** is the default **Plot** selection, displayed on the graphic below. Alternately, you can select **Customer Points**.

➲ **NOTE**: While you can display graphs for specific index series and versions (on the Daily Curves tab), you can also display a graph for any selected index that spans all series—the graph displays all series as [they] roll over. Where multiple versions of an index are priced simultaneously, the latest version is used for graphing purposes.

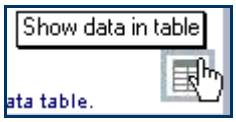
☑ Click **Show Graph**. The graph displays, as shown in the following example.



☑ **Red Line** – Denotes the primary curve historical time series.

☑ Move the mouse over any **data point** to display the security description, date, and spread information.

- ☑ To display the data table below the graph, click the **data table icon** in the lower right corner of the graph area, as shown below. See section 4.1.1.1 on page 16 for details about displaying and using the data tables.



- ☑ To add a secondary curve, click **Add Chart**, and then use the instructions in the Daily Curves procedures on page 18 to finish adding the secondary curve. The graph redisplays with the second curve shown on the same graph.
- ☑ **Red Dashed Line** – Denotes the secondary curve historical time series.
- ☑ **Spread Difference** – After clicking **Show Graph**, there is a graph showing the variance between the two curves. Spread difference is shown only if you check the box **Spread Difference**. Once you select **Spread Difference**, additional types of spreads may be displayed for you to choose.

4.3 Zoom In and Out on Graphs

- ☑ To zoom in on a section of any graph, click and drag a box around the area you want to display in more detail and then release. The graph repositions and enlarges the selected area.
- ☑ To zoom out to the default view, right-click anywhere in the graph box.

4.4 Curves Data Fields

The data fields displayed on the Curves tabs are described in detail in the table below.

Field	Description
Date	The date stamp for each day's contributed data.
Tier	Indicates Seniority Level. See Section 12.5 for list.

Chapter 5 Markit Data

Markit Data generates a tabular display of contributor pricing and computes composite pricing and theoretical curve pricing for a given entity. This data may also be used as a measure of relative value of an instrument relative to the asset-swap curve. The data can be printed or downloaded in the form of an Excel spreadsheet, CSV, or XML file, subject to applicable restrictions.

- ☑ The data shown depends on the type of asset, e.g., bond, convertible, or credit default swap.
- ☑ The number of contributors that can be viewed for an asset type is pre-determined by the rules governing the distribution of and display of data. See section 11.2 on page 53 for more detail.
- ☑ The methodology for computing composite pricing and composite spreads does not change across these asset types. See section 11.4 on page 54 for more detail.
- ☑ Credit default swaps (CDS) always take the parameters of Seniority and Doc Clause. For values and descriptions, see section 12.7 on page 63.
- ☑ CDS data are based on IMM roll dates as of the 20th of March, June, September, and December (with the exception of Latin American and Eastern European, Middle Eastern, and African Emerging Market credits, which are based on a monthly roll as per market convention).
- ☑ Bond, Convertibles, and CDS data include comprehensive current and historical data for all available assets (subject to buy-side and sell-side restrictions). Clients who subscribe to the Markit History Product are able to view all available historical data; other clients can view only three months of historical data.

Markit Data is accessed via the **Data** option on the main menu, as shown below. This section describes how to use each of the tabs found under the Data option.

➲ **NOTE**: If you view downloaded data in Excel, see section 12.3 on page 62 for details about how to filter data.

5.1 View CDS Data on the CDS Matrix Tab

Use the CDS Matrix tab to view today's spread data for issuers' credit default swaps at various maturities. On this single page, you can easily access our database of credit derivative spreads. Scroll through the list or use the **Filter** options to find CDS data for specific Issuers.

➲ **NOTE:** This tab is best viewed in Interactive Mode. To change your viewing mode, or see section 2.2 Edit Profile on page 7.

➲ **NOTE**: You can download the data in the CDS Matrix data tables to CSV, Tab, or XML format for use in Excel spreadsheets or downloading to databases, subject to applicable restrictions. See section 5.4 Download Data from Data Tables on page 35 for instructions.

- ☑ Select **Data** on the main menu.
- ☑ Select the **CDS Matrix** tab. As shown in the following graphic, the CDS Matrix data table displays with all CDS data (based on user permissions).

☑ Type the full or partial ticker or name of the entity for which you would like to search in the **Ticker** or **ShortName** field. Press **Enter** or click **Filter** to view the results.

CDS Matrix | Asset Explorer | Convertibles

Filter | Clear

CDS Matrix for 06-Aug-10 Download: csv tab xml

Ticker	ShortName	Tier	Ccy	DocClause	Region	AvRating	Sector	6m	1y	2y	3y	4y	5y	7y	10y	15y	20y	30y	Recovery	Depth	Heat
					(Show all)	(Show all)	(Show all)														
A	Agilent Tech Inc	SNRFOR	USD	XR	N.Amer	BBB	Industrials						116	126	137				40%	3	0.00
A2A	A2A S.p.A.	SNRFOR	EUR	MM	Europe	BBB	Utilities			68	81	89	93	98	103				40%	3	0.09
AA	Alcoa Inc.	SNRFOR	USD	XR	N.Amer	BBB	Basic Materials	145	156	200	237	280	317	332	352	363	349	351	40%	7	1.09
AAGM-AGD	AngloGold Ashanti Ltd	SNRFOR	USD	CR	Africa	Unrated	Basic Materials			177	212	227							40%		
AALH	Asia Alum Hldgs Ltd	SNRFOR	USD	CR	N.Amer	CCC	Basic Materials												9%		
AAUK	Anglo Amern plc	SNRFOR	EUR	MM	Europe	BBB	Basic Materials	87	96	120	142	165	181	185	192	203			40%	9	0.20
ABB	ABB Ltd	SNRFOR	EUR	MM	Europe	A	Industrials	32		54	60	67	70	75	80				40%	3	0.02
ABB-IntFinLtd	ABB Intl Fin Ltd	SNRFOR	EUR	MM	OffShore	A	Financials	33	34	48	60	67	72	76	79			91	40%	8	0.00
ABC	AmerisourceBergen Corp	SNRFOR	USD	XR	N.Amer	BBB	Consumer Services	50	61	78	97	113	128	136	146				40%	9	0.12
ABE	Abertis Infraestructuras SA	SNRFOR	EUR	MM	Europe	A	Industrials		166	215	246	274	295	296	297			290	40%	3	0.00
ABHLTD	Alliance Boots Hldgs Ltd	SNRFOR	EUR	MM	Europe	BB	Consumer Services		99	135	182	218	253	268	285	288	290	288	38%	6	0.14
ABK	Ambac Finl Gp Inc	SNRFOR	USD	XR	N.Amer	CCC	Financials	12,223	10,883	8,475	7,238	6,581	6,172	5,581	4,982	4,570	4,391	3,844	24%	7	0.21
ABK-AssurCorp	Ambac Assurn Corp	SNRFOR	USD	XR	N.Amer	CCC	Financials												16%		
ABOFF	Aban Offshore Ltd	SNRFOR	USD	CR	India	Unrated	Oil & Gas					1,603		1,552	1,552	1,549	1,549	1,548	20%		
ABT	Abbott Labs	SNRFOR	USD	XR	N.Amer	AA	Health Care	13	16	24	29	37	42	47	52				40%	8	0.05
ABX	Barrick Gold Corp	SNRFOR	USD	XR	N.Amer	BBB	Basic Materials		25	40	52	65	75	85	97	96	104		40%	7	0.20
ABX-FinCo	Barrick Gold Fin Co	SNRFOR	USD	XR	N.Amer	Unrated	Basic Materials		28	38	50	63	73	83	100				40%	4	0.10
ABX-FinInc	Barrick Gold Fin Inc	SNRFOR	USD	MR	N.Amer	A	Basic Materials												40%		
AC-FinGuaranty	ACA Finl Gty Corp	SNRFOR	USD	MR	N.Amer	B	Financials												45%		
ACAFP	Cr Agricole SA	SNRFOR	EUR	MM	Europe	AA	Financials		77	86	96	107	116	119	123				40%	7	0.23

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☑ To filter by **Region**, **AvRating**, or **Sector** (ICB Industry—formerly Markit Sector), select the desired option from the appropriate drop-down list, and then click **Filter**. The filter is cumulative, so it displays results meeting all criteria selected, not just a single criterion.

☑ Click **Clear** to remove any search criteria or filters and restore the original list.

☑ **Jump down** the list by placing the cursor in the data table, and then pressing a keyboard letter to jump to the first ticker in the list that begins with the letter you typed.

☑ Click on a blue hyperlinked **Ticker** to view all contributed data for that ticker / shortname in a pop-up window, as shown below.

F Ford Mtr Co SNRFOR 06-Aug-10 Download: csv tab xml

Tier	Ccy	DocClause	6m	1y	2y	3y	4y	5y	7y	10y	15y	20y	30y	Recovery	Owner
SNRFOR	USD	CR												35%	External
SNRFOR	EUR	MR	133	195	302	432	501	541	564	572		570	569		External
SNRFOR	EUR	MR									585		588		External
SNRFOR	EUR	MR												35%	External
SNRFOR	USD	MR												35%	External
SNRFOR	USD	MR	133	195	302	433	502	542	565	573		571	569		External
SNRFOR	USD	MR											547		External
SNRFOR	USD	MR	125		304		500	548		598					External
SNRFOR	USD	MR			299	428	501	538	567	585					External
SNRFOR	USD	MR												35%	External
SNRFOR	EUR	XR		195		430	504	540	553	572				35%	External
SNRFOR	USD	XR		193		403	505	543	558	573					External
SNRFOR	USD	XR	118											35%	External
SNRFOR	USD	XR	131	193	299	428	497	537	559	567		565	564		External
SNRFOR	USD	XR											531		External
SNRFOR	USD	XR		194	300	399	491	537	559	567					External
SNRFOR	USD	XR	123		298		490	538	576	587					External
SNRFOR	USD	XR				405	505	545	575			605			External
SNRFOR	USD	XR												30%	External
SNRFOR	USD	XR			299	428	500	538	566	585					External
SNRFOR	USD	XR												30%	External
SNRFOR	USD	XR									585		588		External
SNRFOR	USD	XR		195		430	504	540	553	572				35%	External
SNRFOR	USD	XR									585			35%	External

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☑ Click **Back** to close this pop-up window and return to the CDS Matrix tab.

5.2 View CDS, Bond, and Convertible Data on the Asset Explorer Tab

The Asset Explorer tab provides quick and easy access to the Markit database of prices for CDS & Bonds. Initially, the tab displays a list of company tickers with a column for each asset class containing the number of assets in the Markit database for that ticker and asset class.

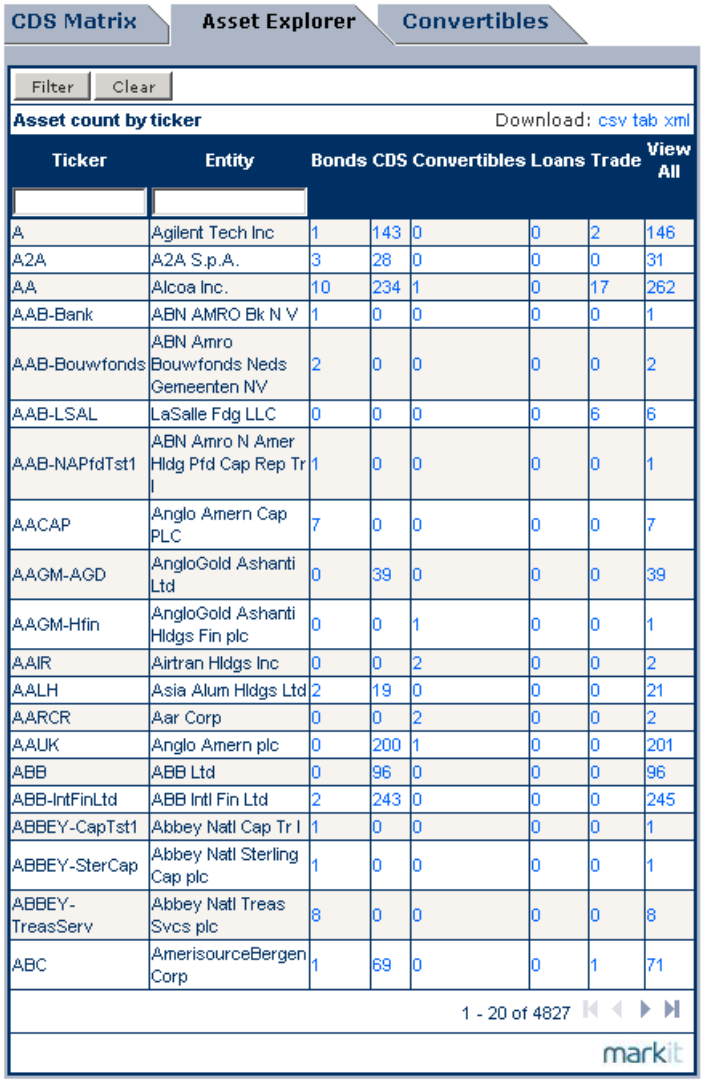
This section describes how to use the Asset Explorer tab to view CDS, bond, and convertible bond data.

➲ **NOTE**: You can download the data in the Asset Explorer data tables to CSV, Tab, or XML format for use in Excel spreadsheets or downloading to databases, subject to applicable restrictions. See section 5.4 Download Data from Data Tables on page 35 for instructions.

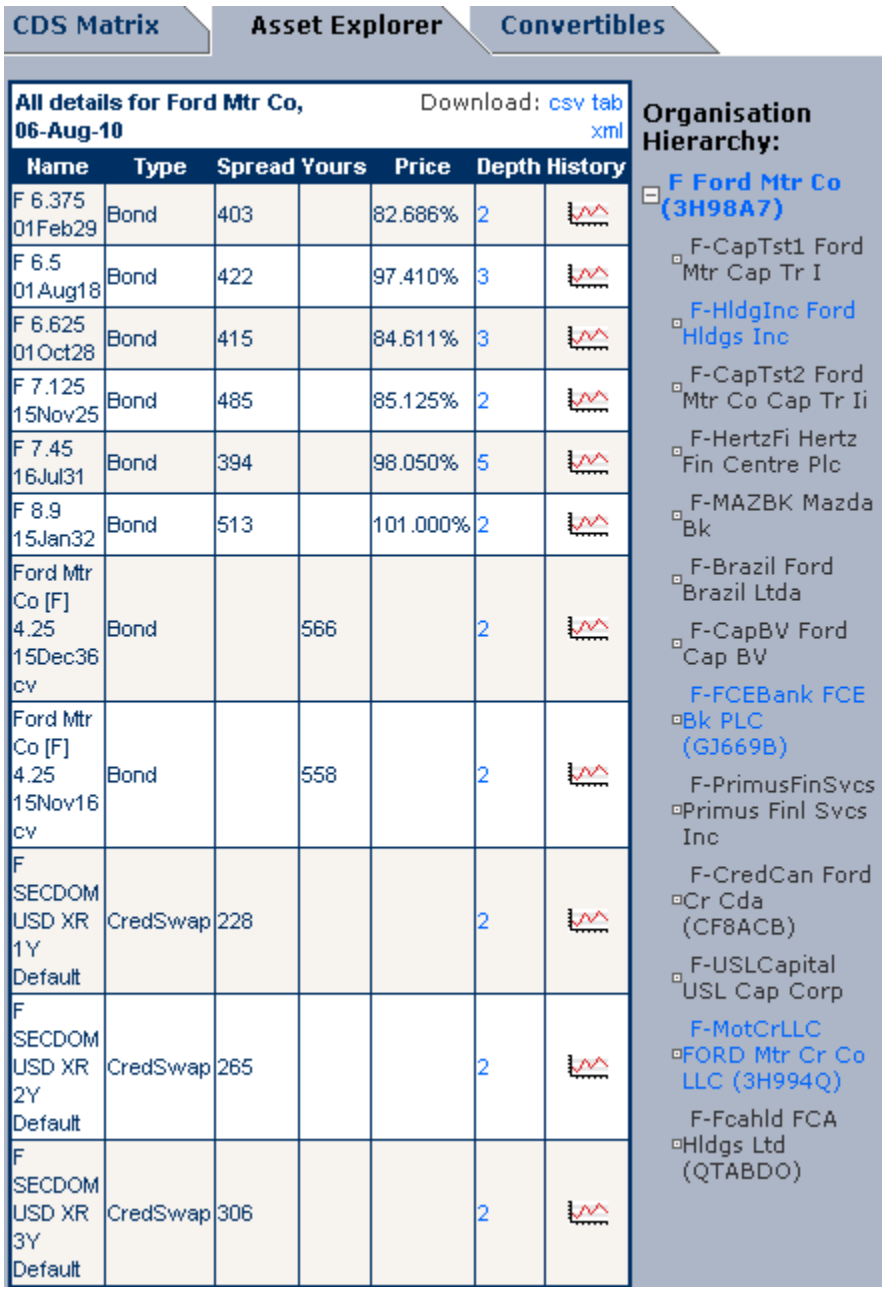
☑ Select **Data** on the main menu. The Data page displays with the default tab of **CDS Matrix** open.

☑ Click the **Asset Explorer** tab. The Asset Explorer tab displays with the **Asset Count by Ticker** table as shown in the following example. The **Ticker** and **Entity** name are shown in the two leftmost columns; the number of assets per asset class per ticker is shown in the asset columns at right (**Bonds**, **CDS**, **Convertibles**); and the total number of assets per ticker is shown in the rightmost column, **View All**.

➲ **NOTE**: Columns for the **Trade** asset class also displays. For information about Trade or TRACE data, see section 5.2.1 Find Spread from TRACE Data on page 32.



- ☑ Type the full or partial ticker or name of the entity for which you would like to search in the **Ticker** or **Entity Filter** field, respectively. Press **Enter** or click **Filter**. The data matching your filter criteria display in the table. Each new individual or set of filter criteria used re-searches the entire list.
- ☑ Click **Clear** to remove any search criteria or filters and restore the list.
- ☑ Click on a blue hyperlinked number in any of the asset class columns, such as **Bonds**, **CDS**, or **Convertibles**, to display the **Details** table and the **Organization Hierarchy** for the selected asset type (on the Asset Explorer tab), as shown below. Only data for the selected asset class and entity display.
- ☑ Click on a blue hyperlinked number in the **View All** column to display the **All Details** table for all assets for an entity and the **Organization Hierarchy** (on the Asset Explorer tab), as shown below. Data for all asset types for the selected entity display.

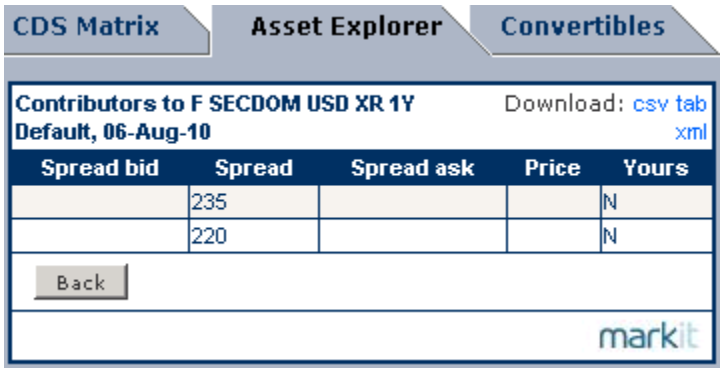


➲ **NOTE**: Convertibles are listed with the **Type** of “Bond”. Note that convertible names include the word “Convert” at the end of the names.

The fields for the Details view are the same for all options: **Name**, **Type**, **Spread**, **Yours**, **Price**, **Depth**, and **History**, as shown in the previous graphic. Exception: For Converts, the **Spread** field is changed to **CDS Spread** and is moved to after the **Yours** field (instead of before it).

➲ **NOTE**: The corporate hierarchy structure (or visual corporate tree) is useful as bonds are often issued by a different entity to the one against which default swaps are traded.

☑ Spreads and prices shown in the Asset Explorer Details table are composite. To view underlying contributor prices for an asset, click a blue hyperlinked number in the **Depth** column. Contributor prices for the selected asset displays on the Asset Explorer tab, as shown in the following graphic.



The Contributor fields are the same for all asset classes (**Spread bid**, **Spread**, **Spread ask**, **Price**, and **Yours**), except that CDS includes **Price** between **Spread Ask** and **Yours**.

➲ **NOTE**: **Yours** indicates whether this contribution belongs to the customer (Y = Yes; N = No).

☑ Click **Back** to return to the Asset Explorer Details view.

☑ Click the **History** icon for the desired asset on the Asset Explorer Details table to view the historical composite spreads or prices for the selected asset, as shown in the following graphic.

CDS Matrix | Asset Explorer | Convertibles

F SECDOM USD XR 5Y Default 01Jul10-06Aug10 Download: csv tab xml

Date	Type	Spread bid	Spread	Spread ask	Your spread	Xcomposite	Upfront	Depth
06-AUG-10	CredSwap		432					2
05-AUG-10	CredSwap		438					2
04-AUG-10	CredSwap		438					2
03-AUG-10	CredSwap		445					2
02-AUG-10	CredSwap		445					2
30-JUL-10	CredSwap		448					2
29-JUL-10	CredSwap		460					2
28-JUL-10	CredSwap		460					2
27-JUL-10	CredSwap		452					2
26-JUL-10	CredSwap		460					2
23-JUL-10	CredSwap		462					2
22-JUL-10	CredSwap		462					2
21-JUL-10	CredSwap		480					2
20-JUL-10	CredSwap		482					2
19-JUL-10	CredSwap		490					2
16-JUL-10	CredSwap		490					2
15-JUL-10	CredSwap		490					2
14-JUL-10	CredSwap		488					2
13-JUL-10	CredSwap		478					2
12-JUL-10	CredSwap		488					2
09-JUL-10	CredSwap		488					2
08-JUL-10	CredSwap		490					2
07-JUL-10	CredSwap		490					2
06-JUL-10	CredSwap		490					2
05-JUL-10	CredSwap		490					2
02-JUL-10	CredSwap		490					2
01-JUL-10	CredSwap		490					2

Previous month | Back

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➲ **NOTE**: **Xcomposite** is for CDS only, and **Your Spread** displays the client spread if it exists.

☑ Click on a blue hyperlinked date to display the Contributors panel that shows the underlying contributions to the historical composite (as shown in the graphic on the previous page).

☑ Click **Previous month** to display data for past months; click **Next month** to redisplay months forward in time. If the **Previous month** and/or **Next month** button(s) do not display, that information is not available or you have reached the end of the available information in either direction. Note that you must subscribe to the History service to view more than three months of history.

☑ Click **Back** to return to the Asset Explorer Details page.

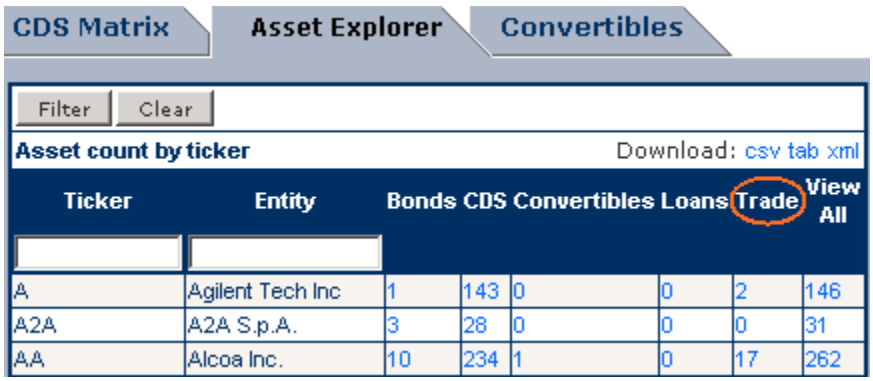
☑ Click **Back** on the Asset Explorer Details page to return to the main Asset Explorer Asset Count by Ticker view.

5.2.1 Find Spread from TRACE Data

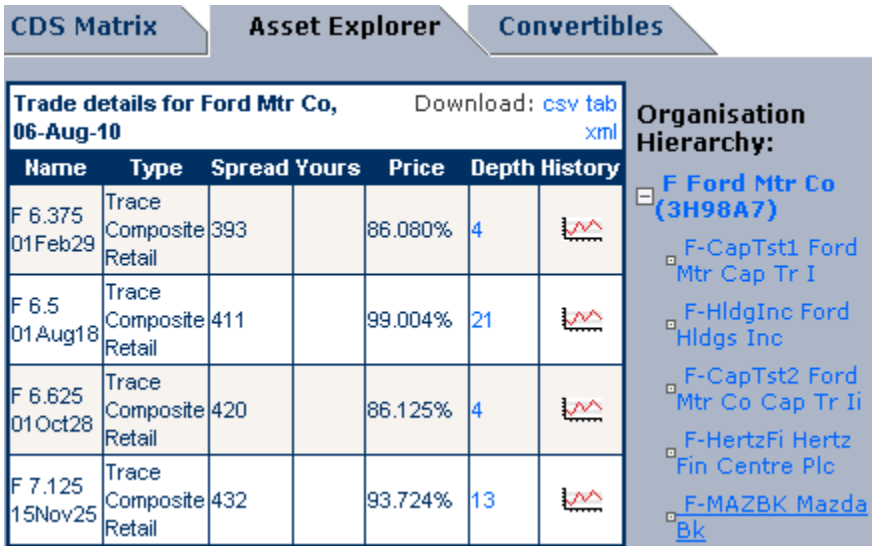
The FINRA TRACE bond feed is integrated into the Markit website and relevant reports. The Trade Reporting and Compliance Engine (TRACE) is the FINRA-developed vehicle that facilitates the mandatory reporting of over-the-counter secondary market transactions in eligible fixed income securities. More detail about TRACE-eligible data is available at FINRA or through your Markit sales representative (see the Contact Us section on page 62 for contact information).

When a price is delivered from the TRACE network, we calculate an asset swap spread built from our live yield curve cache.

TRACE data is available either on the **Download**, **Current Reports**, **Bond Contributor** and **Composite** and **Convertible Composites** reports, or on the **Data** > **Asset Explorer** tab via the **Trade** column, as shown in the following example graphic.



☑ Click a blue hyperlinked value in the **Trade** column to display the **Trade Details** for the selected entity.



➲ **NOTE**: You can download the data in the Trade Details data tables to CSV, Tab, or XML format for use in Excel spreadsheets or downloading to databases, subject to applicable restrictions. See section 5.4 Download Data from Data Tables on page 35 for instructions.

- ☑ Spreads and prices shown are composite. Click on the blue hyperlinked number in the **Depth** column to view underlying contributor prices for an asset. Contributor prices for the selected asset display. Click **Back** to return to the Trade Details table.
- ☑ Click the **History** icon for an asset to view the historical composite spreads or prices for the selected asset. Use the **Previous** and **Next Month** buttons to move back and forward in time through the available data. Click **Back** to return to the Trade Details table.
- ☑ Click **Back** on the Asset Explorer Trade Details view to return to the main Asset Explorer Asset Count by Ticker view.

5.2.1.1 TRACE Data Identifiers

TRACE data is identified on-screen (see example above) and in reports as follows:

	TRACE Identifier (displayed on-screen or in report)		
Bond Rating	**For trades: less than $1m**	**For trades: $1m - $5m**	**For trades: over $5m**
Investment Grade (IG)	Trace Composite Retail	Trace Composite Small	Trace Composite Large
High Yield (HY)	Trace Composite Retail	Trace Composite Small	Trace Composite Large

5.3 View Convertible Bond Data on the Convertibles Tab

Convertible bond data is available for viewing on-screen and for downloading as a report on the Markit website.

➲ **NOTE**: You can also download the convertible bond data in the Convertible data tables to CSV, Tab, or XML format for use in Excel spreadsheets or downloading to databases, subject to applicable restrictions. See section 5.4 Download Data from Data Tables on page 35 for details.

This section describes how to view convertible bond data on-screen on the Convertibles tab. For information about downloading this data as a report, see section 7.1 Current Reports on page 43.

☑ Select **Data** on the main menu.

☑ Select **Convertibles**. The Convertibles tab displays, as shown in the example graphic below. The tab shows the ISIN coupled with the name to easily identify the Convertible's issuer and underlying equity component.

CDS Matrix | Asset Explorer | Convertibles

Date 06Aug10

Filter Clear

Convertibles list for 06-Aug-2010 Download: csv tab xml

Date	ISIN	Name	Tier	Ccy	Region	AvRating	Sector	Bid	Ask	Equity Mid	Delta	Depth
				(Show all)	(Show all)	(Show all)	(Show all)					
06AUG10	XS0298070359	1st Cap Corp Ltd [FCCSP-FirstCap] (2) 0 07May12 cv	SNRFOR	SGD	Asia		Financials	102.25	103	2.21		1
06AUG10	US32055RAP29	1st Indl LP [FR] 4.625 15Sep11 cv	SNRFOR	USD	N.Amer	BB	Financials	98.19	98.48	5.18		1
06AUG10	US88579YAB74	3M Co [MMM] (2) 0 21Nov32 cv	SNRFOR	USD	N.Amer	AA	Industrials	87.55				1
06AUG10	XS0364710425	3i Gp plc [III] 3.625 29May11 cv	SNRFOR	GBP	Europe	BBB	Financials	100.63	101	2.83		2
06AUG10	XS0424806734	AAUK 4 07May14 Struc	SNRFOR	USD	Europe	BBB	Basic Materials	158.58	158.99	25.30		3
06AUG10	CH0022686841	ABILIT Corp [ABILIT] 0 24Sep10 cv	SNRFOR	JPY	Asia		Consumer Services	93.7	93.98	80.00		1
06AUG10	XS0245787808	ABOFF 0 15Apr11 Struc	SNRFOR	JPY	India		Oil & Gas	103	104.5	1,487.00		1
06AUG10	US004239AA78	ACADIA Rlty Tr [AKR] 3.75 15Dec26 cv	SNRFOR	USD	N.Amer		Financials	95.75	96.75	18.41		1
06AUG10	US000886AB71	ADC Telecom Inc [ADCTEL] (2) Frn 15Jun13 cv	SUBLT2	USD	N.Amer		Technology	90.86	91.13	12.71		1
06AUG10	US000886AE11	ADC Telecom Inc [ADCTEL] 3.5 15Jul15 cv	SUBLT2	USD	N.Amer		Technology	98.71	99.3	12.71		3
06AUG10	US000886AF85	ADC Telecom Inc [ADCTEL] 3.5 15Jul17 cv	SUBLT2	USD	N.Amer		Technology	98.44	99.19	12.71		2
06AUG10	DE0009038968	ADSG-IntFin 2.5 08Oct18 Struc	SNRFOR	EUR	Europe		Consumer Goods	167.12	168.12	43.13		1
06AUG10	US549463AG24	ALCLCT-US 2.75 15Jun23 Struc	SNRFOR	USD	N.Amer	BB	Technology	100.01	100.31	2.97		1
06AUG10	US549463AH07	ALCLCT-US 2.75 15Jun25 Struc	SNRFOR	USD	N.Amer	BB	Technology	88.94	89.81	2.97		2
06AUG10	US007903AL16	AMD 6 01May15 Struc	SNRFOR	USD	N.Amer	B	Technology	99.45	99.85	7.45		2
06AUG10	US03073TAB89	AMERIGROUP Corp [AMEGP] 2 15May12 cv	SNRFOR	USD	N.Amer	BB	Health Care	107.95	108.36	38.28		2
06AUG10	US001765BC99	AMR Corp [AMR] 6.25 15Oct14 cv	SNRFOR	USD	N.Amer	CCC	Consumer Services	102.89	103.17	7.18		2
06AUG10	XS0175920502	ANRITS 0 21Sep10 Struc	SNRFOR	JPY	Asia		Technology	99.83	100.13	557.00		1
06AUG10	XS0364004555	ASABRE 0 26May23 Struc	SNRFOR	JPY	Asia	A	Consumer Goods	101.13	101.46	1,619.00		2
06AUG10	US00207DAF96	ASM Intl N V [ASMIF] (2) 4.25 06Dec11 cv	SUBLT2	USD	Europe	B	Technology	125.75	126.75	25.62		1
06AUG10	USN07045AC63	ASM Intl N V [ASMIF] 4.25 06Dec11 cv	SUBLT2	USD	Europe	B	Technology	129.31	131.06	19.15		2
06AUG10	US00207DAG79	ASMIF 4.25 06Dec11 Struc	SUBLT2	USD	Europe	B	Technology	127.37	128.07	25.62		2
06AUG10	US018804AH76	ATK 2.75 15Feb24 Struc	SUBLT2	USD	N.Amer	BB	Industrials	99.38	99.89	68.69		3
06AUG10	CH0025148179	AXA [AXAF] 2 08May14 cv	SNRFOR	CHF	Europe	A	Financials	107.5	108.25	1,234.00		1
06AUG10	FR0000492076	AXA [AXAF] 2.5 01Jan14 cv	SUBLT2	EUR	Europe	A	Financials	131.24	131.89	14.24		2
06AUG10	FR0000180994	AXA [AXAF] 3.75 01Jan17 cv	SUBLT2	EUR	Europe	A	Financials	141.88	142.54	14.24		2
06AUG10	US000361AH87	Aar Corp [AARCR] (3) 1.75 01Feb26 cv	SNRFOR	USD	N.Amer	BB	Industrials	90.72	91.86	16.83		2
06AUG10	US000361AG05	Aar Corp [AARCR] 1.75 01Feb26 cv	SNRFOR	USD	N.Amer	BB	Industrials	92.44	93.19	16.83		1
06AUG10	XS0481758307	Abengoa SA [ABNG] 4.5 03Feb17 cv	SNRFOR	EUR	Europe		Industrials	94.11	94.63	20.06		2
06AUG10	XS0437092322	Abengoa SA [ABNG] 6.875 24Jul14 cv	SNRFOR	EUR	Europe		Industrials	113.64	114.17	20.07		3
06AUG10	XS0267243417	Acergy S.A. [ACGY] 2.25 11Oct13 cv	SNRFOR	USD	Europe		Oil & Gas	104.99	105.88	106.20		4
06AUG10	CH0027818514	Actelion Fin Sca Luxembourg [ACTL] 0 22Nov11 cv	SNRFOR	CHF	Europe		Health Care	102.59	103.11	45.83		3

☑ Select a date from the drop-down **Date** menu. You can view pricing by date for the past five (5) business days and the previous three (3) month ends.

☑ Enter the full or partial name of an issuer you want to find in the **Name** Filter field, and press **Enter** or click **Filter**.

☑ To filter by **Ccy**, **Region**, **AvRating**, or **Sector** (ICB Industry, formerly Markit Sector), select the desired option from the appropriate drop-down list, and click **Filter**. The filter is cumulative, so it displays results that meet all selected criteria, not only a single criterion.

☑ Click **Clear** to remove any search criteria or filters and restore the list.

☑ Sort the data in the table in ascending or descending order by any of the column headings by clicking on the desired heading.

☑ Jump down the list by placing the cursor in the data table, and then pressing a **keyboard letter** to jump to the first convertible bond in the list that begins with the letter you typed.

➲ **NOTE**: The convertibles download reports the interpolated credit spreads at the convertible maturity. Convertible prices for U.S. credits obtained from the TRACE feed are included in the Convertible Composites download report.

☑ Click on a blue hyperlinked convertible **Name** to display the Convertible Detail pop-up window with **Bid**, **Ask**, **Equity Mid**, **Credit Spread**, and **Equity Implied Volatility** data for the selected convertible, as shown below.

Convertible Detail for 06-Aug-2010 (There is no correlation between dealers and dealer numbers)

Ford Mtr Co [F] 4.25 15Dec36 cv Download: csv tab xml

ASOF	Owner	Bid	Ask	Equity Mid	Credit Spread	Equity Implied Volatility
06AUG10	Dealer 1	155.77	156.24	13.04	660	37.474%
06AUG10	Dealer 2	154.06	154.37	13.04	640	22.000%

Back

markit

☑ Click **Back** to return to the Convertibles tab.

5.4 Download Data from Data Tables

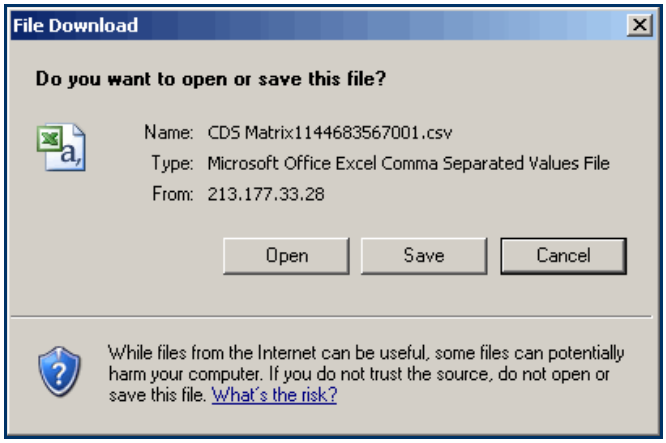
Based on user permissions, many data tables in Markit.com, particularly under the **Data** option, include the option to download the data contained within the tables into easy-to-use file formats. The downloaded data files can be manipulated in spreadsheet applications, such as Microsoft Excel, or imported into a database at your location, subject to applicable restrictions. The **Download** options include three possible file formats: **CSV**, **TAB**, or **XML**, and are located above the top right corner of data tables, where available.

To download data from a data table:

☑ Navigate to the table for which you want to download data.

☑ Click one of the three **Download** file format blue hyperlinked options, **csv**, **tab**, or **xml**, located in the top right corner of many data tables in Markit.com, as shown in the graphic below.

The following File Download dialog box displays.



- ☑ Click **Open** to open the file in the associated application, e.g. Excel, and then **Save** from that application if desired. Note that if you do not save the file after opening it, you must re-download it to access the data locally and view / use the data in your selected format.
- ☑ Click **Save** to save the downloaded data file to your local drive without opening it first. You can then access the data locally anytime.
- ☑ Click **Cancel** to close the dialog box and perform no file download action.

➲ **NOTE**: If you view downloaded data in Excel, see section 12.3 on page 62 for information about how to filter data.

The three Download file format types are described in the table below.

File Format	Description
CSV	Comma-Separated Values. A standard table format that can be opened with a spreadsheet application, such as Excel, or imported into a database. Uses commas as separators between data elements.
TAB	TAB-delimited format. Uses tabs as separators between data elements; can be imported into a database or spreadsheet.
XML	eXtensible Mark-up Language. An internet protocol that creates a data file using customized code that can be imported into a database (or spreadsheet if desired).

Chapter 6 Mappings

Markit Mappings allows you to view the current mappings of the internal tickers in your upload/download file to tickers in the Markit database. If you are responsible for checking that issuer tickers sent to Markit by your organization are mapped correctly in our database, you can verify them on this page once the upload is complete. The page also allows you to add new tickers, map them, and edit existing mappings in the event of any discrepancies. The edit features are available on an ongoing basis.

Note the following:

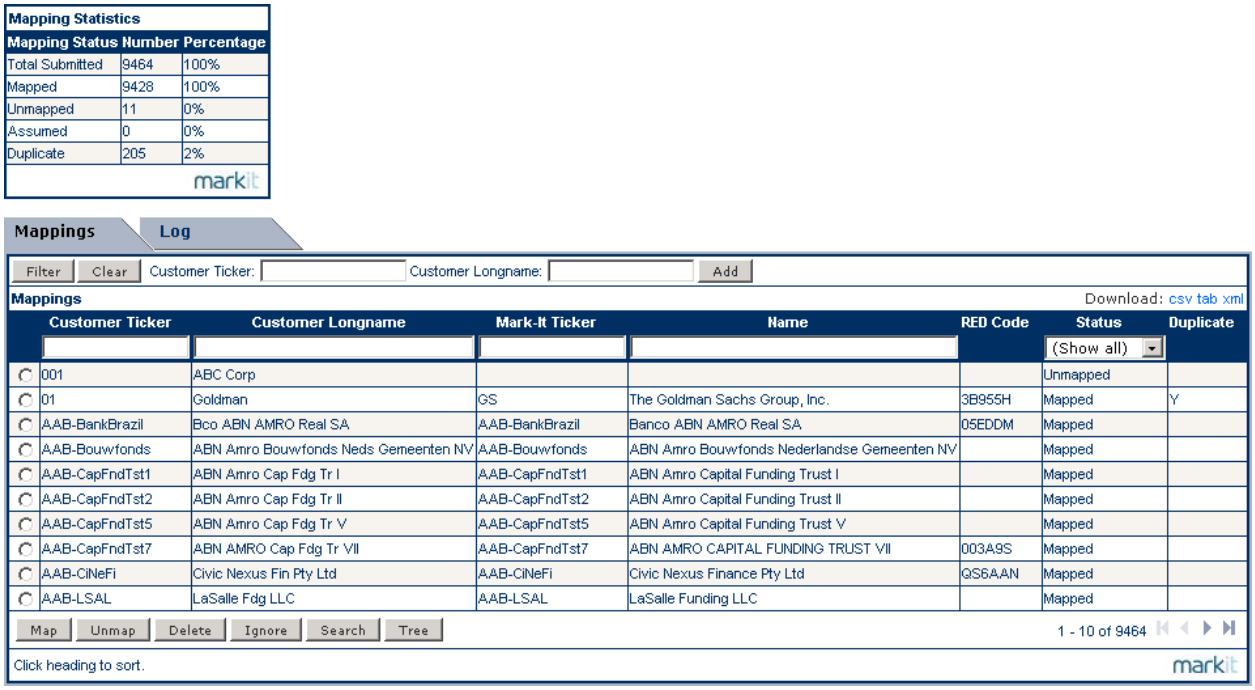
- ☑ When a client file is uploaded into the Markit database, the client's short ID or ticker is cross-referenced to short IDs contained in the Markit database. For clients to be able to upload data to Markit, they must map each of their short tickers to the appropriate Markit tickers.
- ☑ If, during upload, tickers without mappings are received, Markit attempts to match them. Where matches are found or assumed, they display on-screen for confirmation. Spread data cannot be uploaded for a Customer Ticker until the customer changes the status for that ticker to **Mapped**.
- ☑ Where no matches are found, the client must use the Mappings features to search the Markit database for a match and map their tickers.
- ☑ The Mappings page shows client short and long IDs, Markit short and long IDs (where known or assumed), and mapping status.

6.1 Access the Mappings Page

To access the Mappings page:

- ☑ Click **Mappings** on the main menu, as shown below.

- ☑ The Mappings page displays with the Mapping Statistics box and Mappings panel, as shown in the following example graphic.



Mapping Statistics		
Mapping Status	**Number**	**Percentage**
Total Submitted	9464	100%
Mapped	9428	100%
Unmapped	11	0%
Assumed	0	0%
Duplicate	205	2%

Mappings | Log

Filter | Clear | Customer Ticker: | Customer Longname: | Add

Mappings — Download: csv tab xml

	Customer Ticker	Customer Longname	Mark-It Ticker	Name	RED Code	Status	Duplicate
						(Show all)	
○	001	ABC Corp				Unmapped	
○	01	Goldman	GS	The Goldman Sachs Group, Inc.	3B955H	Mapped	Y
○	AAB-BankBrazil	Bco ABN AMRO Real SA	AAB-BankBrazil	Banco ABN AMRO Real SA	05EDDM	Mapped	
○	AAB-Bouwfonds	ABN Amro Bouwfonds Neds Gemeenten NV	AAB-Bouwfonds	ABN Amro Bouwfonds Nederlandse Gemeenten NV		Mapped	
○	AAB-CapFndTst1	ABN Amro Cap Fdg Tr I	AAB-CapFndTst1	ABN Amro Capital Funding Trust I		Mapped	
○	AAB-CapFndTst2	ABN Amro Cap Fdg Tr II	AAB-CapFndTst2	ABN Amro Capital Funding Trust II		Mapped	
○	AAB-CapFndTst5	ABN Amro Cap Fdg Tr V	AAB-CapFndTst5	ABN Amro Capital Funding Trust V		Mapped	
○	AAB-CapFndTst7	ABN AMRO Cap Fdg Tr VII	AAB-CapFndTst7	ABN AMRO CAPITAL FUNDING TRUST VII	003A9S	Mapped	
○	AAB-CiNeFi	Civic Nexus Fin Pty Ltd	AAB-CiNeFi	Civic Nexus Finance Pty Ltd	QS6AAN	Mapped	
○	AAB-LSAL	LaSalle Fdg LLC	AAB-LSAL	LaSalle Funding LLC		Mapped	

Map | Unmap | Delete | Ignore | Search | Tree — 1 - 10 of 9464

Click heading to sort.

The remainder of this chapter describes how to use the Mappings page.

6.2 Mapping Statistics

When you access the Mappings page, a Mapping Statistics table with six (static) rows displays the status of your customer ticker mappings at a glance.

Mapping Statistics		
Mapping Status	**Number**	**Percentage**
Total Submitted	9464	100%
Mapped	9428	100%
Unmapped	11	0%
Assumed	0	0%
Duplicate	205	2%

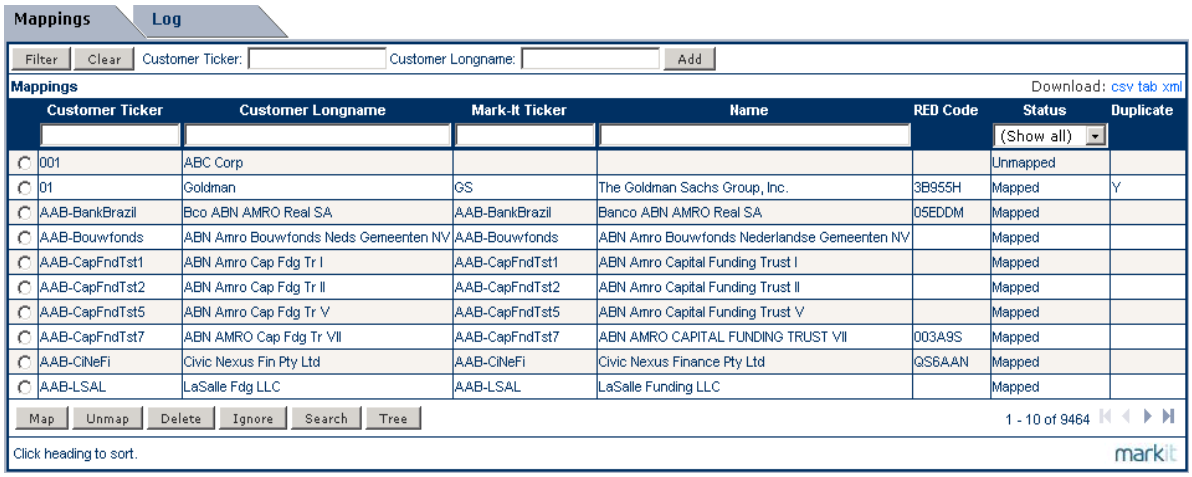
The table includes the number and percentage of the following statistics for mapping records:

- Total submitted
- Mapped
- Unmapped
- Assumed
- Duplicate (more than one mapping to the same entity)
- Available (i.e. difference between the allocation limit for this client and total number of submitted mappings)

See the table on page 42 for a description of each mapping status.

6.3 Filter and Download Mappings Data

☑ Choose **Mappings** on the main menu. As shown below, the Mappings panel—with a list of your tickers, mappings, and status—displays below the Mapping Statistics box.



☑ Click **csv**, **tab**, or **xml** to download your Ticker Mappings data in the selected format. See section 5.4 Download Data from Data Tables on page 35 for details.

☑ To search for data in the Mappings list, type your search criteria in the **Customer Ticker**, **Customer Longname**, **Markit Ticker**, and/or **Longname** fields, and then press **Enter**.

☑ Select the desired **Status** (see the Mappings Status table on page 42), and then click **Filter**. Note that the filter is cumulative and any criteria entered in the **Customer Ticker**, **Customer Longname**, **Markit Ticker**, and/or **Longname** fields are also considered. The data that matches your search criteria displays in the list. Adjust your criteria and Filter again until the data you want displays.

☑ Click **Clear** to remove all criteria and restore the list.

6.4 Mappings Function Buttons

The Mappings page provides functions via the row of buttons at the bottom of the page, as shown in the graphic above. Each function / button is described below.

☑ Select a mapping and click **Map** to remap an Ignored mapping or to confirm a Matched or Assumed mapping and change the status to Mapped. To display all mapped tickers, filter using the status of Mapped.

☑ Select a mapping and click **Unmap** to remove the Markit Ticker to which your ticker is mapped and change the status of this ticker to Unmapped. To display all unmapped tickers, filter using the status of Unmapped.

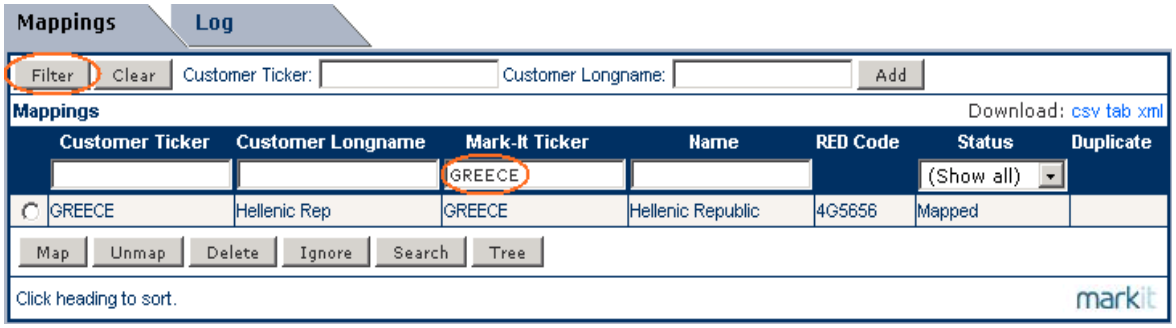
☑ Select a ticker and click **Delete** to delete your (mapped or unmapped) ticker from the mappings list. This option permanently removes your ticker and any mapping from the database. A message displays confirming the removal.

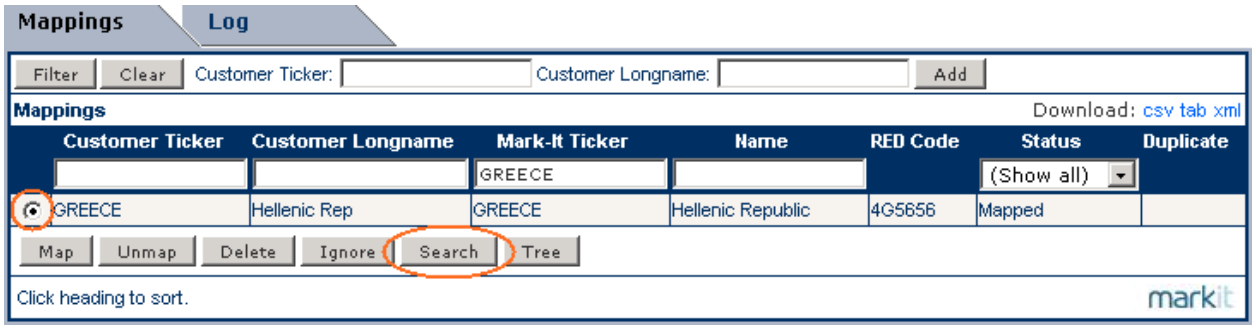
☑ Select a ticker and click **Ignore** to ignore that entity's ticker temporarily. The ticker no longer displays in the list to be mapped but any mapping information is retained. To display all ignored tickers, filter using the status of Ignored. (To remove Ignore status, remap the ticker using the Map button or set the ticker to any other valid status.)

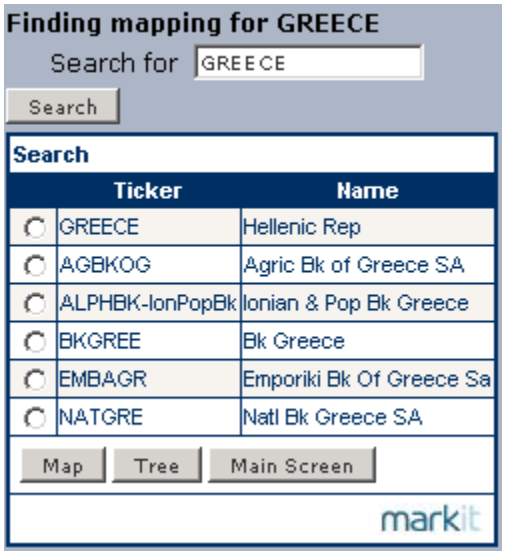
To search for matches and map your ticker to the desired Markit ticker

☑ To view potential matches in the Markit database for a customer ticker, select the ticker you want to map and click **Search**. The system searches for the list of available potential matching entities

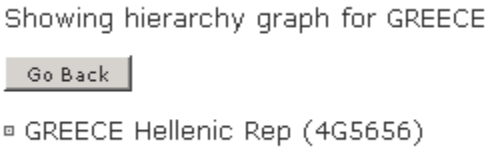
in the Markit database and displays them on the **Finding mapping** panel, as shown in the following graphic. Click **Main Screen** to return to the Mappings panel.







☑ To research an entity to determine if it is the entity to which you want to map your ticker, view its organizational hierarchy. Select the **entity** you want to research from the list, and then click **Tree** (as shown above). The hierarchy displays for the selected entity (as shown in the graphic below). The **Tree** option is also available on the main **Mappings** tab. (Click **Go Back** on the hierarchy box to return to the originating panel or tab.)



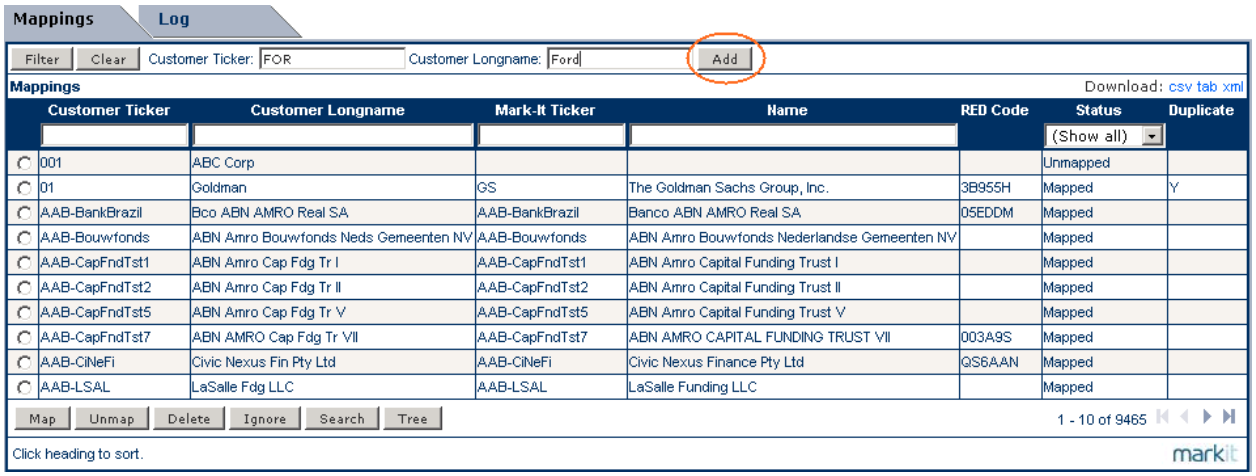
➲ **NOTE:** The organizational hierarchies displayed have been assembled using data from multiple sources and should not be relied upon for any purpose other than for identifying the proper mapping for data upload.

➲ **NOTE:** If you still do not find the entity to which you want to map, contact Markit support. See contact details in the Contact Us section on page 62.

☑ On the Finding Mappings window (as shown at the top of the page), select the **Markit ticker** to which you want to map your ticker, and click **Map**.

☑ Click **Main Screen** to return to the Mappings page.

To add a new ticker to be mapped



☑ Enter a new **Customer Ticker** and **Customer Longname**, and then click **Add** to add a new entity to the mapping list (to map it). A message displays informing you that "A mapping for 'CustTicker' has been created" and the new ticker is displayed in the Mappings data table with the initial Markit status.

☑ Click **Clear** to clear the information you entered and start over.

6.5 Mapping Status Codes

The mapping status codes are listed and described in the following table. Where the status can also be used as a filter on the Mappings page, it is noted with an asterisk (*).

Mapping Status Code	Description
Mapped*	Clients set the status of a Customer ticker mapping to Mapped to remap an ignored or confirm a matched or assumed customer ticker mapping, so data can be uploaded into the system for the customer ticker.
Matched	Markit sets the status of a Customer ticker mapping to Matched if Markit finds the client's short ID in the Markit database, and there is no suggestion of ambiguity as Markit only has one entity in this corporate family. The customer should check that its long name corresponds to Markit long name, and then either confirm the mapping (by changing the status to Mapped) or search for and map to another entity.
Assumed*	Markit sets the status of a Customer ticker mapping to Assumed if Markit finds the client's short ID in the Markit database, but there is a suggestion of ambiguity as Markit has several entities in this corporate family. For customers using Bloomberg tickers, which do not uniquely define entities, it is particularly important to check that their longnames correspond to the Markit longnames, and then either confirm the mapping if it is correct, or if it is incorrect, search for and map to the correct entity.
Not Found*	Markit sets the status of a Customer ticker to Not Found if Markit is not able to match the client's short ID with a Markit short ID (i.e. ticker). In this case, the client should manually search the Markit database and map to the correct entity.
Ignore*	Clients set the status of a ticker to Ignore so the ticker is not included in the Markit database, possibly because the entity is a duplicate, out of date, or relates to a basket, synthetic, or other structured trade that is not part of the Markit service. When a Customer ticker that is mapped to a Markit ticker is Ignored, the mapping pair information is retained (until the customer modifies it or deletes the mapping). Where status is set to Ignore, client tickers that are not mapped do not generate errors on upload.
Unmapped*	Clients set the status of a ticker mapping to Unmapped to deliberately not map the entity, possibly because the correct ticker does not appear to be in the Markit database, or no clear mapping exists. When a Customer ticker is Unmapped, the Markit ticker information is removed from the pair. Where status is set to Unmapped, client tickers generate errors on upload to remind the client and Markit of the mapping issue that needs to be resolved. The client eventually must decide how to map this entity.
Merged De-merged Bankrupt	Markit sets the status of a ticker to Merged, De-merged, or bankrupt when an entity no longer exists under the Markit ticker and/or longname in the Markit database.

Chapter 7 Download

Access Download report options by selecting **Download** from the main menu. The Download page includes the following tabs:

- ☑ Current Reports
- ☑ Sector
- ☑ Markit Sameday

All reports are available in XML, CSV, or TAB format.

The following sections describe the Markit report features, and how to access, select, and download the available reports from each of the four Download tabs.

➲ **NOTE**: If you view downloaded report data in Excel, see section 12.3 on page 62 for information about how to filter data.

7.1 Current Reports

This section provides instructions for how to quickly obtain the Current Reports.

➲ **NOTE**: When you select a new report **Type** (except for Credit Indices and Convertibles types), the Description of Report(s) table at right displays the field descriptions for the selected report type. (If necessary, use the scroll bar to view the entire length of the table.) Reports without an on-screen description table are either described in section 12.7 of this guide on page 63.

☑ Specify the parameters for your report, as described in the following table.

Report Criteria	Description
Date	The date for which you want the data. Click on the down arrow to view and select a date from the list of available dates; Markit includes the previous six days as well as the past three Months-End. For any additional report dates please contact please contact us using the information on page 62 of this guide.
Type	The type of data to be included in the report, i.e. Default Swap and Recovery (CDS), Bonds, Credit Indices, or Convertibles.
Report	The type of report available for download. The values change based on the type of report you choose.
Composites by Trading Convention	Returns a representative data set for the issuer based on default currency and restructuring clause.
[All] Composites	Returns composite data (for CDS: across all currencies and DocClauses and includes industry classification).
Fixed Coupon	Returns Upfront and Conventional (Quoted) spread data for the issuer based on default currency and restructuring clause. For more information please refer to the following document: Fixed Coupon Overview
Liquidity Metrics	Returns Liquidity data for the issuer based on default currency and restructuring clause on a scale of 1 – 5 (1 being most liquid and 5 being least liquid). For more information please refer to the following document: Liquidity User Guide
Theoreticals	Returns theoretical composite data (for CDS: across all currencies and DocClauses and includes industry classification).
Contributions	Returns all contributed data for the given entities across all currencies and DocClauses.
Investment Grade Contributions	Returns data provided only from contributors in the Investment Grade sector.
Sub-Investment Grade Contributions	Returns data provided only from contributors in the Sub-Investment Grade sector.
Data Quality	For contributed data only, returns a detailed report on the results of the data quality tests as applied on a daily basis for the submitted universe.
Upfronts	Returns the upfront payments when the 5Y spread > 1000bp.
Index Composites	Returns the Index composites for the specified family of credit or structured finance indices.
Index Constituent Composites	Returns the index constituent composites for all on-the-run credit indices (iTraxx and CDX).
Tranche Composites	Returns composite prices for credit index tranches. For more information please refer to the following document: Index Tranche User Guide

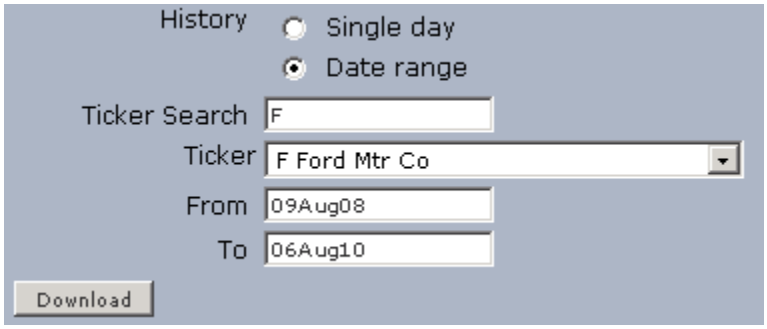
Report Criteria	Description
Format	Select the desired download file format type: csv, tab, or xml. See page 35 for a description of the three download file formats.
History	Using the two History options: **Single day** and **Date range**, to download data for: **Today** - Select the default date of today's date (in the **Date** field at the top of the tab) and the **Single day** option. **A historical single day** - Select the date from the drop-down list of available dates and then choose the **Single day** option (the default). **A historical date range** - Select the **Date range** option and enter the **From** and **To** dates. A ticker search may be performed when selecting a date range as specified in 7.1.1 below.

☑ Once you have selected all desired report parameters, click **Download** to retrieve your report. A Zip file window opens listing your report file. Extract (save) or open the report file, and then close the Zip window.

7.1.1 Historic Data for Backfilling New Mappings

For CDS and Bonds, you can download historic data for a specified date range. Once you have selected all report parameters on the Current Reports tab:

☑ Under **History** (at the bottom of the tab), choose the **Date range** option. Several new fields display below the History Date Range field, as shown in the following example graphic.



➲ **NOTE**: These reports are designed to allow you to backfill history when adding a new mapping, so the number of reports allowed per day is limited. If you exceed the limit but still need history for another ticker, please contact us using the information on page 62 of this guide.

☑ Type a ticker or Issuer name in the **Ticker Search** box, and then press **Enter** on your keyboard. A drop-down list of tickers that match your ticker search criteria displays in the **Ticker** field.

☑ Select the ticker / entity name from the **Ticker** list box.

☑ Enter **From** and **To** dates for the date range for which you want to download the report.

➲ **NOTE**: Historical data is available for CDS from July 2001 forward for over 500 reference entities. From January to June 2001, fewer CDS are available. For Bonds, history is available beginning 1 February 2003. Historical data is available only in CSV format.

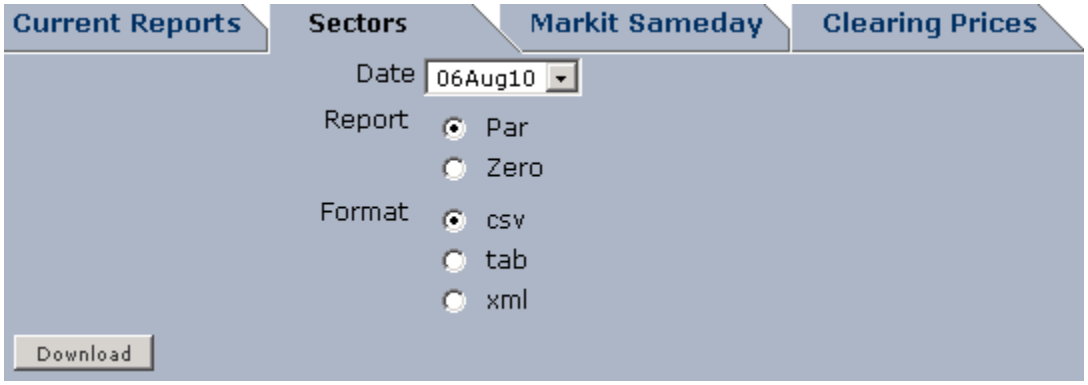
➲ **NOTE**: You can download two years of data for up to 10 securities.

☑ Click **Download** to retrieve your report. A Zip file window displays listing the download report file. Extract (save) or open the file, and then close the Zip window.

7.2 Sectors

☑ Choose **Download** from the main menu.

☑ Click the **Sectors** tab. The Sectors tab displays, as shown in the graphic below.



☑ Specify the parameters for your report, as described in the Report Criteria table below.

Report Criteria	Description
Date	The date for which you want data. Click the down arrow to display the available dates and select a date.
Type	Choose to display the data as: - Levels - the values of the sector curves for selected day, or - Changes - the difference between the selected day's level and the previous day's level.
Report	Choose the method you want to be used to construct the sector curve: Par or Zero.
Format	Select the desired download file format type of csv, tab, or xml. See page 35 for a description of the three download file formats.

☑ Click **Download** to retrieve the report based on the selected criteria. A Zip window displays listing the download report file. Extract (save) or open as desired, and then close the Zip window.

☑ For more information regarding our Sector Report please refer to our CDS Sector Curves User-Guide at Sector Curve User Guide.

7.3 Markit Sameday

Markit provides intra-day CDS data available via the Markit Sameday report. The data on this report is available in four time zones that correspond to market closing times in Tokyo, Europe, London, and New York. The Markit Sameday service and access to the Markit Sameday tab is separately permissioned. Sameday reports are also available to credit index subscribers.

7.3.1 Markit Sameday Single-Name Timings

The service is delivered through four reports – Sameday Tokyo, Sameday Europe, Sameday London and Sameday New York – downloadable at a time corresponding to the end of the business day in each region. The following table shows the cut off timings for each report, after which no later inputs are used, as well as the time each report is available for download:

Report	Local Cut Off Time: London (New York)	Available Time: London (New York)
Tokyo	12:00 (07:00)	12:30 (07:30)
Europe	14:30 (09:30)	15:00 (10:00)
London	15:30 (10:30)	16:00 (11:00)
New York	20:30 (15:30)	21:00 (16:00)

7.3.2 Markit Sameday Index Timings

The service will provide three downloadable reports (one each for iTraxx Asia, iTraxx Europe and CDX) that will build over the course of the day as additional index snaps are made. The Sameday Indices reports are tied to the current publish times for official index pricing (as available on the Markit website), complemented by additional snaps. Timings are shown in the table below:

Report	Snap / Cut-off Time	Report Publish Time	Comments
iTraxx Asia	16:00 Tokyo	09:30 London	
iTraxx Europe	11:00 London	12:15 London	
	16:00 London	17:15 London	
	18:00 London	18:15 London	Additional pricing snap available via this Sameday Indices report only
CDX	16:00 London	17:15 London	Additional pricing snap available via this Sameday Indices report only
	15:30 New York (20:30 London)	16:00 New York (21:00 London)	Additional pricing snap available via this Sameday Indices report only
	18:30 New York (23:30 London)	19:00 New York (24:00 London)	

*As an example, users downloading the iTraxx Europe report at 17:30 will receive both the 11:00 and 16:00 prices in the same report.

7.3.3 Downloading Markit Sameday

The report format is similar to the existing CDS Composites report.

☑ Choose **Download** from the main menu.

☑ Click the **Markit Sameday** tab. The Markit Sameday tab displays as shown in the graphic below.

☑ Specify the parameters for your report, as described in the Report Criteria table below.

Report Criteria	Description
Date	The date for which you want data. Click the down arrow to display the available dates and select a date.
Type	Choose to the type of data: - Default Swap and Recovery Note that, currently, only one type of data (CDS) is available for this report.
Report	Choose the market close as of which you want the data: • New York same day composites • London same day composites • Tokyo same day composites
Format	Select the desired download file format type of csv, tab, or xml. See page 35 for a description of the three download file formats.

☑ Click **Download** to retrieve the report based on the selected criteria. A Zip window displays listing the download report file. Extract (save) or open as desired, and then close the Zip window.

☑ For additional information on Markit's Sameday service please refer to the following User Guide links:

- Sameday Single-Name User Guide
- Sameday Index User Guide

Chapter 8 Markit RED

Markit RED is a subscription-based product that is the market standard for reference data in the credit markets. RED provides the scrubbed long legal name for more than 2,800 reference entities each with a unique six-digit identifier. RED also establishes a link between the scrubbed reference entities and reference obligations that the entities may have issued or guaranteed. Each pair of reference entities and reference obligations has its own unique nine-digit identifier or CLIP. RED is available via an XML download, or from a powerful and easy-to-use page on the Markit website, which is accessible using your own secure username and password, 24 hours a day, seven days a week.

For more information on Markit RED products and services or to subscribe, contact your Markit sales representative.

8.1 RED Data and Downloads

This section further describes RED data and how to download the data.

8.1.1 Entity and Obligation Data

Markit RED has Entity and Obligation XML Markit RED By-Mappings downloads and a RED Corporate Actions XML download. Markit RED By-Mappings customers can download the Entity and Obligation data in an automated XML file using the data from existing mappings table. Client institutions must migrate to effective implementation of the Entities and Obligations XML downloads. Markit RED sent information and instructions for this download to all By-Mappings customers on Monday, August 21, 2007.

8.1.2 Corporate Actions XML Download Automation

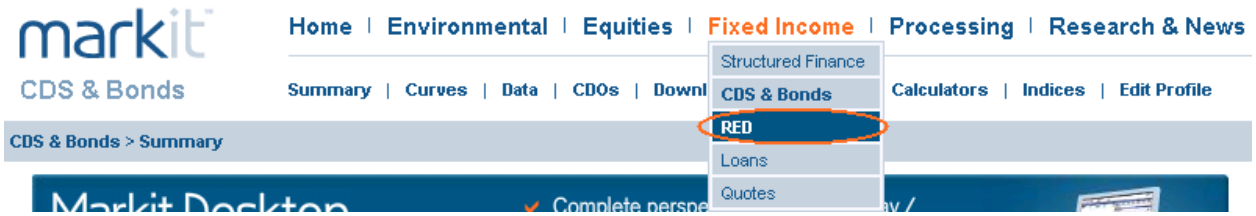
All RED clients with full access to the complete RED Entities universe can automate corporate actions as implemented by Markit by downloading a Corporate Actions XML feed available solely from RED. The feed is updated weekly following advance email notification.

➲ **NOTE:** For authorized CDS users, the link from RED Pairs to the Curve page defaults the curve to the tier of the scrubbed pair.

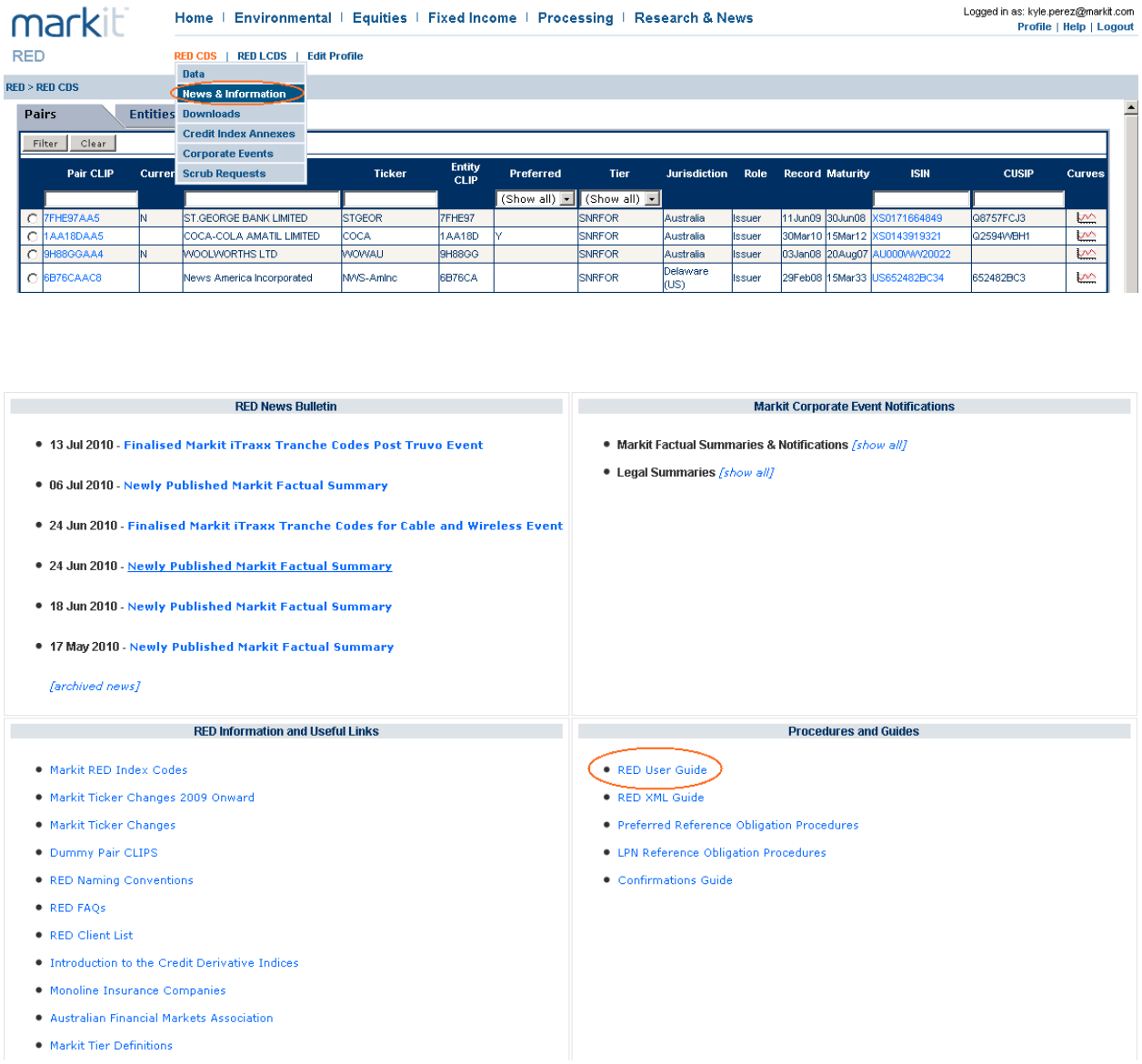
➲ **NOTE:** The current coupon in the RED Obligations XML file formats to the coupon convention used in the CDS and Bonds XML files. The Obligations XML current coupon is formatted as a decimal.

8.2 RED User and Technical Documentation

If you subscribe to the Markit RED product, see the *Markit RED User Guide* and the *Markit RED XML Technical Guide* for detailed information on how to use Markit RED. These guides are both available under the **RED** option on the main menu, as shown below.



When you select the **RED** option on the main menu, the RED Data page displays by default. Links to the RED guides and other information are available on the upper right of the RED Data page, as shown in the following graphic.



The hand icon in the example graphic above points to the **RED User Guide** link. As you can see, there is plenty of additional documentation available to assist you with Markit RED. Below are direct links to the **RED User Guide** and the **RED XML Guide**:

- RED User Guide
- RED XML Guide

Chapter 9 Calculators

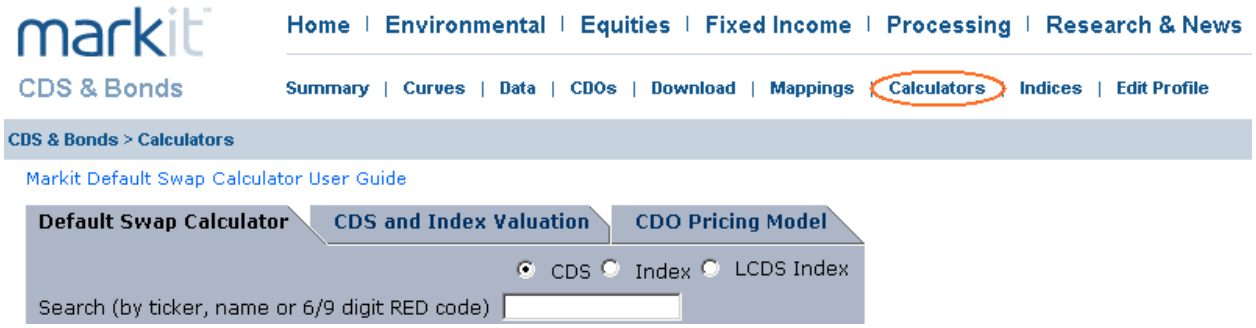
Currently, the following calculators are available through the Markit website based on your subscription:

- Markit Default Swap Calculator
- CDX and Index Valuation
- CDO Pricing Model

For more information on any of the above calculators or to subscribe, contact your Markit sales representative. Support is available for any of the calculators by contacting Markit support. See section 12.1 Contact Us on page 62 of this guide for sales and support contact details.

9.1 Access the Calculators

To access the Calculators, choose the **Calculators** option on the main menu, as shown below.



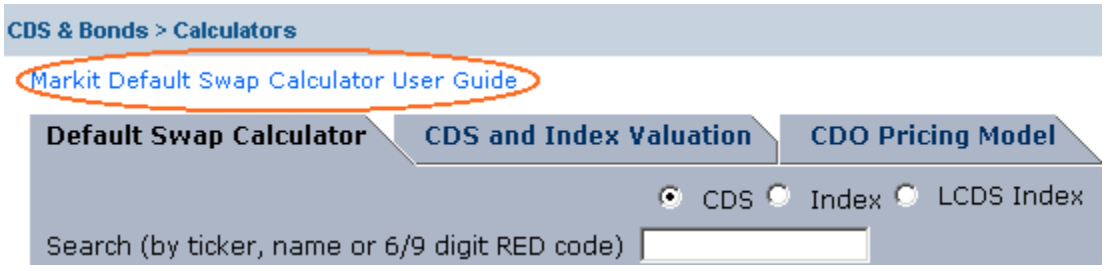
9.1.1 Access the Default Swap Calculator User Guide

To view (or print or download) the Markit Default Swap Calculator User Guide:

☑ Select **Calculators** on the main menu. The **Default Swap Calculator** is the default tab and displays first, as shown in the graphic above.

☑ Click the **Markit Default Swap Calculator User Guide** link in the top left corner of the page, as shown in the graphic above. The PDF document file opens (in a separate Adobe Acrobat Reader window).

☑ The following is a link to the User Guide: Markit Calculator User Guide



☑ Read the document in the Reader window, print it, or save it to your computer. Click the **[x]** button to close the Reader window.

Chapter 10 Indices

Currently, the Indices option on the Markit website provides the following information based on your subscription:

- Credit Indices pricing (current and historical) and constituent information
- Credit Index Tranches pricing

For more information on any of the above products or services or to subscribe, contact your Markit sales representative. Support is available for any of the above products or Services by contacting Markit support. See section 12.1 Contact Us on page 62 of this guide for sales and support contact details.

10.1 Access Indices User Guide & Credit Index Tranches Pricing Service User Guide

User guides for the Indices option and the Credit Index Tranches Pricing Service are available via Markit.com under the **Help** option or by clicking on the following links:

- Index Tranche User Guide
- Index User Guide

10.1.1 Access to Data

For non-credit indices subscribers, Markit limits access to historical and current data to the on-the-run credit indices only. Markit Credit Indices subscribers can access historical and current data for on-the-run and off-the-run credit indices based on their subscription. In addition, permissioning for off-the-run composites is available at a regional level.

Chapter 11 Data Quality Assurance Protocol

Data is at the core of Markit's product offerings. This chapter explains how Markit cleans contributed data before it is distributed to our clients. Both this User Guide and the Markit website reference the "price" of certain securities. These "prices" do not represent a price at which a security has been traded. In addition, these "prices" do not represent any current offers to buy or sell a given security. Markit's "prices" represent books-of-record data that has passed the following list of data tests. These "prices" are subject to all of the limitations and disclaimers described herein.

11.1 Data Contributors

As of March 2012, 22 global banks (for CDS only) are contributing data. Each contributor has been carefully selected based on their significant expertise and involvement in the credit trading markets. Over one million data points are being contributed daily across approximately 3,000 entity-tiers.

11.1.1 Data Sourcing Requirements

Each contributor to Markit provides pricing data from its books of record, feeds to automated trading systems, and other pricing sources on a daily basis. For books of record data, daily closing prices as recorded for a given security or derivative are contributed. For feeds to automated trading systems, the most recent prices fed to that system by the trading desk are contributed. Data feeds are delivered via xml file submission and quoted in the price type contained in contributors' books of record.

Credit Type	Required Data
Bonds	Identifier (CUSIP/ISIN, etc.), price, timestamp and position information.
Default Swaps	Identifier (entity code, tier of debt, currency and documentation clause), default swap-spread curve, and (optionally) position information.

11.1.2 Types of Contributed Data

For the universe of data, the following are the types of contributed data for a given instrument type:

- For investment grade / sub-investment grade bonds, prices are most commonly contributed. These data points are denoted throughout the product as **Credit Price**. Clients can also contribute their calculated Z-spreads. These data points are denoted throughout the product as **Client ZSpread**.
- For credit default swaps, spreads are the only types of pricing contributed. These data points are denoted throughout the product as **Credit Spread**. Clients must also contribute their recovery rates corresponding to each credit curve. These data points are denoted throughout the product as **Client Recovery**.

11.2 Quorum Rules

For a given entity-tier-tenor combination, a composite point is calculated if Markit has received prices from at least 3 distinct dealers of which at least 2 have passed all data cleaning tests.

11.3 Give / Get Rules

Each contributor can only view its own pricing data in relation to Markit's set of data. As such, the service is anonymous. All composite data is retrievable for both investment grade and sub-investment grade data.

- **Investment Grade Bonds / CDS**

For investment grade bonds / credit default swaps, the basic rule is give all/get all. When an instrument has three or more contributors, we show each contribution as a dot on the graph (CDS in red/green, bonds in yellow), with the customer's own contribution in blue (if the customer has made a contribution). The curve is drawn if at least one credit default swap in the curve is quorate, even if the curve is a fallback curve. Please note that customer contributions for default swaps with a different currency or doc clause to those selected in the on-screen list box are shown in yellow rather than blue. However, customer contributions for bonds are always shown in blue.

- **Sub-Investment Grade Bonds / CDS**

For sub-investment grade bonds / credit default swaps, the basic rule is give/get. When an instrument has three or more contributors, and the customer has made one of those contributions, we show each contribution as a dot on the graph. Red values signify the Composite or Best Fit spread dependent upon which Plot type is selected, fitted values are in green, and non-fitted values are yellow. A customer's own contribution is displayed in blue. The curve is drawn if at least one credit default swap in the curve is quorate. Please note customer contributions for default swaps with a different currency or doc clause to those selected in the on-screen list box are shown in yellow rather than blue (even if the curve is a fallback curve).

11.4 Composites

Markit calculates an average of all contributed price and spread data for a given instrument type, entity, tier, maturity, currency, and doc clause. The composite price and spread are an average of passing contributions provided to Markit by its contributors. To produce a composite Markit requires at least three prices. Composites are produced where at least two prices pass all data cleaning tests and at least one other price has been received.

11.5 Obligor and Security Identifiers

Markit has created its own set of identifiers and welcomes input from customers where our tickers have become out of date. Markit has collected the entity data from a variety of sources but undertakes no liability for its accuracy or any obligation to update the information.

Markit default swap instrument tickers are based on the obligor, tier of debt, documentation clause, and currency. For example, "F-CredCan SNRFOR USD CR 5Y Default" is a five-year senior unsecured US dollar default swap on Ford Credit Canada with complete restructuring clause. The list of valid tiers of debt and documentation clauses can be found in the beginning of the Appendix of this guide on page 63.

Markit bond names are based on ticker, coupon, and maturity (where the maturity date format is DDMMMYY). For example, "F-CredCan 6.5 23Feb09" is a Ford Credit Canada bond with a 6.5% coupon maturing on 23 February 2009. Where this name does not uniquely define a bond, a numerical suffix is added (e.g. "F-CredCan 6.5 23Feb09 (2)"). Markit also uses a number of standard bond identifiers, in particular ISIN and CUSIP, with the bond names to identify bonds in the data download.

11.6 CDS Data Cleaning

Markit applies a number of tests on incoming data to help ensure that calculations are performed on a quality dataset. Data that fails any of the tests is excluded from all calculations and from all data quorums. The following sections describe each of the data cleaning tests and adjustments.

The tests currently applied are:

- Curve Buildability
- Backwardation test

- Stale data test
- Outlying data test

In addition, we adjust the data to compensate for the following anomalies:

- CDS Contribution Carry Forward

11.6.1 Curve Buildability Test

The 5-year maturity point is usually the most liquid and frequently marked CDS contract for a given entity-tier. Since lower and upper tenors are not traded as frequently, their contract spreads are typically adjusted according to the movement of 5-year tenor. However, some curves may not be upgraded properly or completely by this method. As a result, contributed curves may have invalid survival probabilities. The curve buildability test checks for valid survival probabilities along the curves using the bootstrapping method in the ISDA CDS Standard Model. Curves which result in unreasonable survival probabilities are rejected.

11.6.2 Backwardation Test

For a given contributor, the backwardation test checks the expected relationship across documentation clauses (DocClause) for submissions on each entity-tier. Specifically, it validates that the following inequality is true for a contributor's spreads of each tenor:

$$CR \geq MM \geq MR \geq XR$$

If a contributor sends curves that do not conform to this rule, the non-standard DocClause curves are rejected. The curve that is retained is the one that matches the DocClause most commonly traded for the given issuer (the standard/default curve). In addition, the test also checks that the basis between a curve in the standard DocClause and curves in other DocClauses for the same currency are not too wide relative to observed average levels.

11.6.3 Stale Data Test

One challenge encountered with respect to incoming data is that it can relate to credits in which an institution previously had, but no longer has, a material position. As the levels in these curves have minimal or no effect on an institution‟s profit or loss, traders tend to update them infrequently or not at all. Therefore the data becomes stale. Such stale data should be excluded.

For each contributed curve, Markit calculates the number of days the 5Y CDS spread has been unchanged. Curves from all dealers are ranked in terms of their 5Y staledays and Markit generally passes the top 50% of curves for illiquid entities and top 67% of curves for liquid entities. An entity is defined to be illiquid if it receives contributions from 13 or fewer contributing banks; otherwise it is defined to be liquid. The remaining curves fail the test and are not used in the composite calculation.

Note that the stale data test is relative. The following are a few important points on the stale data test:

- The stale test always passes at least three curves, given there is a minimum of 3 curves tested;
- Whole curves can either pass or fail the stale test; and
- All curves deemed stale are excluded from the composite calculation on that particular date.

11.6.4 Outlying Data Test

Outlying prices may occur for many reasons, including:

- A trader has not updated her curve recently and the market has moved;
- A curve is incorrectly mapped to the Markit entity name; and
- A trader genuinely has a different opinion of the value of the CDS.

The outlier test works by first calculating a provisional median curve based on all contributions that passed the previous tests i.e. curve buildability, backwardation, and stale data tests. The outlier test then computes a weighted sum of squared deviations across tenors and recovery rate of each contributed curve from the provisional median curve. It then ranks the curves and rejects the ones with highest deviations.

Note that a non-default curve will pass the outlier test if the default curve belonging to the same contributor passes, provided it does not deviate from the default curve more than a certain tolerance level. Furthermore, if the default curve fails the outlier test, then the non-default curve from the same dealer also fails.

11.6.5 CDS Contribution Carry Forward

We have found that approximately 90% of missed contributions are missing for one day, and then return, usually because a feed failed for that day. To fill in these gaps and improve the quality of the sector data used by risk management groups, we carry forward the data. We carry forward missing CDS data by searching for all contributions that exist yesterday but not today. Data is carried forward two days.

11.6.6 Fallback Rules for CDS Composite Pricing

The following table lists the fallback rules used when creating Composite CDS curves. This table is meant to bring transparency to how our CDS curves are derived based on the passing contributions available. In our Composites Report, these values (CcyGrp, DocAdj, EntityTier, and Thin) are given for every point along our curves and are labeled as CompositeLevel.

Fallback Rules		
Flag	**Contributors**	**Description**
Currency Grouping (CcyGrp)	3 or more passed distinct contributors for default curve and enough contributors for other restructuring types	This composite level is assigned to composites for default restructuring and currency where there are at least 3 contributors passing data cleaning tests. It is also assigned to composites that are derived from the default curve by applying an observed restructuring and currency basis.
DocClause Adjusted (DocAdj)	3 or more passed distinct contributors for default curve	Composites for non default restructuring types where a valid basis cannot be observed from contributed data are set equal to the next observed restructuring type in the restructuring sequence (CR, MM, MR, XR). For example, MR would be set equal to XR and marked as DocAdj.
EntityTier	3 or more passed contributions across entity-tier	At this level, composites for the entity-tier are created by averaging all available contributions across all currencies and DocClauses.
Thin	2 passed contributions across entity-tier	Same as above except only 2 contributors passing data cleaning.

11.6.7 Data Quality Ratings

For downloads, Markit provides a quantitative measure of the quality of our data. One of the benefits of this rating is that it enables users to take appropriate action over price discrepancies between their own contributions and Markit composites. When Markit rates the quality of its data at the highest level, clients should make particular efforts to check their own data. Whereas, when Markit rates the data at the lowest level, or does not rate it at all, clients should be more forthcoming in issuing a price challenge.

Markit rates data using a seven-grade letter combination, with AAA being the highest, followed by AA, A, BBB, BB, B and CCC. Ratings are assigned based on both quantitative criteria - of which the most important is the number of distinct passing contributions - and qualitative measures: how competitive, liquid, and transparent the market is; and whether the trades are time stamped, frequently updated tradable quotes.

To achieve a rating at all, our composites must have passed stringent standards on these criteria. Particular confidence can be placed in ratings of BBB or higher, for which a very minimum of three passing contributions are required in addition to the highest scores on qualitative criteria. The AAA rating is only available to data that has obtained the highest score on the qualitative tests and is based on at least nine clean contributions.

11.6.8 Implied Rating

Implied ratings are calculated on a weekly basis by comparing an issuer's 5-year senior standard trading convention spread to the relevant Markit Sector curve 5-year spread and applying the rating of the logarithmically nearest rating curve specific to that sector.

11.6.9 Sector Curve Improvements

The source data for the sectors are the par spread curves from our end-of-day single-name CDS composite pricing service. From this data-set the following filters are applied:

- Curve tier is senior unsecured (denoted as “SNRFOR” in other CDS reports).
- Curve has a full tenor structure – i.e., should have at least the 1-year, 5-year and 10-year maturity points.
- Curve is the current market standard trading convention of that particular entity – as defined by documentation clause and currency. So for each reference entity only one curve is used (the default/standard curve).

From the source data-set:

- Bucket each curve by Markit Sector and average credit rating.
- Within each curve, linearly interpolate any missing maturity points (the full curve structure is 6-month, 1-year, 2-year, 3-year, 4-year, 5-year, 7-year, 10-year, 15-year, 20-year and 30-year).
- Build observed sector curves only for those buckets where there are at least 5 constituent single-name curves.
    1. Within each bucket perform a top-tail test on the 5-year point to remove top and bottom 25% of curves.
    2. For each tenor within a given bucket calculate the mean par spread using the remaining curves.

3. Average the recovery rates of all the remaining curves to calculate the recovery rate of the sector curve.

- Build interpolated sector curves for buckets where there are fewer than 5 constituent single-name curves.

  1. Refer to the Markit Sector Curves User Guide on how interpolated sector curves are calculated for each case.

  2. By default, set the recovery rate of interpolated sector curves as 40%.

In addition to the industry sector buckets a set of rating-only curves (or generic curves) – essentially an aggregate across all the industry sectors – is compiled. The data-set is also available in zero-coupon terms.

11.6.9.1 About ICB Sectors

The Industry Classification Benchmark (ICB) is a four-tiered system used to classify entities based on their revenue sources, i.e., sectors. The four tiers are Industry, Super-Sector, Sector, and Sub-Sector. Key benefits of using ICB include:

- A level platform for comparing the different assets issued by entities within the same hierarchy
- Increased support via access to the ICB Universe Database with over 40,000 companies and 45,000 securities worldwide
- Adoption of what will likely become a global standard
- Consistent classification of entities
- The ICB Sector classification uses the following ten categories and Markit adds one additional category for government:
  - Financials
  - Healthcare
  - Energy
  - Telecommunications Services
  - Basic Materials
  - Utilities
  - Industrials
  - Technology
  - Consumer Goods
  - *Government* (Markit category)
  - Consumer Services

NOTE: Dow Jones Indices and FTSE are responsible for industry classification based on the definitions agreed upon by the ICB advisory committee. You can request the full documentation issued by ICB from Markit via the Markit.com website or via the ICB Website.

NOTE: The Markit Current Reports (or Version 5 reports) use the ICB level one classification of Industry. Previous versions of the reports (Version 4) used Markit Sectors.

11.7 Bond Data Cleaning

Markit applies a number of tests to incoming data to help to ensure its calculations are performed on a quality dataset. Data that fails any of the tests is excluded from all calculations and from all data quorums.

The tests currently applied are:

- Stale data test
- Outlying data test

The following sections describe each of the data cleaning tests and adjustments.

11.7.1 Stale Data Test

Based on research on observed price volatility, the stale test operates with a different threshold for different types of credit (depending on sector and rating). If a contribution exceeds the 'Critical Value' below then it will be excluded from being used to form the composite. The cut-off values are:

Rating	Type	Critical Value (calendar days)
AAA/AA	Sovereign	Do not test as volatility is so low
AAA	Non-sovereign	28
AA	Corporate	21
AA	Financial	10
A	Non-financial	10
A	Financial	7
BBB	All	10
BB	All	10
B	All	14
CCC	All	21

11.7.2 Outlying Test

Like the CDS algorithm, the outlier removal algorithm for default bonds has also expanded significantly from its original formulation, which was to run only a t-test on all points contributed for the same instrument. It now works as follows:

1. Generate a list of bonds where we have at least one contributor price (NB contributor does not in this case include trace.)
2. For each bond, extract all the prices.
3. For each point, set up a test array of other prices such that a price is never tested against other prices from the same contributor, and is only tested against distinct owner/price combinations.
4. We now iteratively perform a t-test on the bond prices, continuing until either the number of good points stabilizes or we drop below 3 distinct contributors. At each iteration, we reject all prices outside the 95% confidence level.
5. Having performed a t-test we now do another iterative test based on the distance of each price from the mean. Each remaining price has its distance from the mean of the others in its test array calculated, and this is tested against a threshold value generated from a function of the bond's rating and maturity. At each iteration, only the price with the biggest distance is rejected. We drop out of the loop if the number of good prices stabilizes. An important point

to note here is that if we get down to two prices, and one of them fails the distance test, then we fail both.

6. Finally we write the results back to the database.

The table below shows maximum distances to mean for bonds used in step 5 above, and is based on results obtained looking at the 90th percentile of this distance, as well as purely subjective views on what constitutes reasonable uncertainty on a bond price given its rating.

	Parameters		Years to Maturity				
Rating	**Const**	**Slope**	**0**	**2**	**5**	**10**	**30**
AAA	0.13%	0.03%	0.13%	0.18%	0.25%	0.38%	0.88%
AA	0.25%	0.04%	0.25%	0.32%	0.43%	0.60%	1.30%
A	0.50%	0.05%	0.50%	0.60%	0.75%	1.00%	2.00%
BBB	1.00%	0.05%	1.00%	1.10%	1.25%	1.50%	2.50%
BB	2.00%	0.03%	2.00%	2.05%	2.13%	2.25%	2.75%
B	3.50%	0.00%	3.50%	3.50%	3.50%	3.50%	3.50%
CCC	5.00%	0.00%	5.00%	5.00%	5.00%	5.00%	5.00%
D	7.50%	0.00%	7.50%	7.50%	7.50%	7.50%	7.50%

11.7.3 Snap Times

Markit receives bond prices with an associated snap time and matches these price-to-swap yield curves as closely as possible to the snap time. Given the yield curve, Markit performs a standard asset-swap calculation to back out the spread where the bond was trading at the time the price was snapped. This spread calculation allows prices submitted by different contributors at slightly different snap times to be compared on a like-for-like basis.

11.7.4 Time-Adjusted Bond Prices

The time-adjusted bond price is the adjusted price for a given bond using the closing yield curve for the currency of the bond. It allows for comparison of bond prices across time zones even when there is a large change in interest rates from one close to the next. For example, prices for USD bonds submitted at London close are adjusted to an equivalent price at New York close assuming the asset swap spreads remain constant.

11.7.5 Z-Spread

The z-spread is an alternative spread value measure to a local currency asset-swap spread. It is calculated iteratively by shifting the entire swap curve in an instrument's currency up or down until the present value of the cash flows of the security using the shifted curve equals the market price.

11.8 Convertible Bond Data

Visibility for convertible bond data differs from that of other instrument types. Notably, buy-side customers can view convertible bond data points even when they are not quorate. Convertible bond data visibility is governed by the rules in the following table. The give/get rules for CDS data referenced in the table below are described in greater detail in the previous section 11.3 on page 53.

Data Field	Composite Calculated	Buy-side Visibility	Sell-side Visibility
Convertible bond bid	Yes	Yes (All clean data)	Yes (3 or more clean

Data Field	Composite Calculated	Buy-side Visibility	Sell-side Visibility
and ask price			contributors; Give / Get Rule)
Equity Closing Price	Yes	Yes (All clean data)	Yes (3 or more clean contributors; Give / Get Rule)
Equity Delta	Yes (Only composites published)	Yes (Only see composite delta if 3 or more contributors)	Yes (Only see composite delta if 3 or more contributors)
FX Rate where applicable	Yes	Yes	Yes
Credit Spread assumption for this bond	No	Yes	Yes (Give / Get Rule)
Equity Option Implied Volatility	No	Yes	Yes (Give / Get Rule)

Chapter 12 Additional Resources

This section provides information about additional help and resources for Markit.com users.

➲ **NOTE**: Access other Markit user and technical guides and other system usage information on the Markit.com website under **Help**, or contact your Markit Client Relations team or your Sales Representative to request copies of guides or other information.

12.1 Contact Us

For questions not answered in this guide, please contact Markit via email at support@markit.com or telephone:

- North America +1 877 762 7548
- Europe 00800 6275 4800
- Japan +81 3 6402 0127
- Singapore +65 6499 0079

For information about Markit's other services, please contact a Markit sales representative via email at sales@markit.com or telephone:

- London +44 (0) 207 260 2345
- New York +1 212 931 4910
- Singapore +65 6823 1370
- Tokyo +813 4360 8280
- Toronto +1 416 481 4923

12.2 Online Help

Help is available online when you click the **Help** link on the upper right hand side of the Markit.com page header, as shown below. From the Help menu, you can access this User Guide, a list of Frequently Asked Questions (FAQ), and additional Technical and User documentation.

12.3 Tips for Filtering Downloaded Data in Excel

The following tips may be useful if you view downloaded data or reports in Excel.

☑ To add filters in Excel, open the **Data** menu, and then select **Filter** > **Autofilter**. This technique helps in sorting and viewing selected information from your dataset.

☑ The most popular filters are on **Instrument Date** and **Contributor Type**.

12.4 Troubleshooting & Tips

If you have has any problems accessing the website or need more information about installation requirements or security, contact the Markit Client Relations Team or a Markit Sales Representative. See the Online Help section above or the Contact Us section on page 62 for details.

12.5 Seniority Levels

The following table defines the possible values for the CDS Seniority field where it appears.

➲ **IMPORTANT NOTE**: In the table below, the order in which the tiers are listed indicates the ranking by the debt is considered for CDS and LCDS.

Rank	Seniority or Tier Abbreviation	Description
CDS		
1	SECDOM	Secured Debt (Corporate/Financial), Domestic Currency (Sovereigns)
2	SNRFOR	Senior Unsecured Debt (Corporate/Financial), Foreign Currency (Sovereigns)
3	SUBLT2	Subordinated or Lower Tier 2 Debt (Banks)
4	JRSUBUT2	Junior Subordinated or Upper Tier 2 Debt (Banks)
5	PREFT1	Preference Shares, or Tier 1 Capital (Banks)

12.6 Documentation Clause Types

The following table defines the possible values for the Documentation Clause field where it appears.

➲ **NOTE**: Documentation Clause is typically abbreviated as DocClause.

Abbreviation	Description
CR	Cum (With) Restructuring, or Old Restructuring
MM	Modified-Modified Restructuring
MR	Modified Restructuring
XR	Ex-Restructuring or Without Restructuring

12.7 Report Field Descriptions

The first two tables in this section list the possible field values for Seniority and DocClause types and the remaining tables define the fields for the following reports.

- Sector (i.e. ICB Industry) Report
- Convertible Bond Report
- Indices Report
- Liquidity Metrics Report
- Fixed Coupon Report

All CDS and Bond reports are documented online on the **Download** page on the **Current Reports** tab. On the Current Reports tab, select the report options you want and the report description table display at right, as shown in the example below. The lists are updated as any changes are made. See section 7.1 Current Reports on page 43 of this guide for more information about accessing these on-screen report descriptions.

Reports with historical data include the same fields as the reports with current data; only the data varies.

Description of CDS Reports					
Field	Description	CDS Composite	CDS Contributions	CDS DataQuality	Upfront
AvRating	The average of the Moodys and S&P ratings adjusted to the seniority of the instrument and rounded to not include the '+' and '-' levels.	Y	Y	Y	Y
Backwardation	A Y/N flag to indicate whether a customer's seniority is backwardated			Y	
CarryFwd	Indicates the number of days a contribution has been carried forward. A price is carried forward by adjusting for the average change in all good points from one day to the next.			Y	
CarryFwd5y	See 'CarryFwd'		Y		

12.7.1 Sector Report

For instructions on how to access this report, see section 7.1 Current Reports on page 43.

➲ **NOTE**: As of March 2006, this report began using ICB Industry data (not Markit Sector data).

Field	Description
Type	Either Levels (today's price or spread) or Changes (difference between today's price and spread and yesterday's) as selected by user.
Date	Date used for report data as selected by user in Date field.
PrevDate	The previous date to which the selected Date is compared.
IndustryName	The ICB Industry level one code.
Rating	The Markit average rating.
Interpolated	Indicates whether or not the curve was interpolated.
Recovery	The mean recovery rate across the sector (industry) / rating.
Spread_6m through Spread_30y	The mean spread rate across the sector / rating at different maturities, including: 6M, 1Y, 2Y, 3Y, 4Y, 5Y, 7Y, 10Y, 15Y, 20Y, and 30Y.

12.7.2 Convertible Bond Report

For detailed information on how to access this report, see section 7.1 Current Reports on page 43.

Field	Description
Date	The date the price data was submitted for the convertible bond.
Contributor	The contributor of the composite or TRACE data for the convertible bond.
ShortName	The short name for the issuer of the convertible bond.
Coupon	The coupon of the convertible bond.
Maturity	The maturity date of the convertible bond.
Ccy	The currency for the convertible bond.
Tier	The tier of debt for the convertible bond.
Depth	The number of contributor prices used to build the composite price data.

Field	Description
PriceBid	The composite bid price for the convertible bond.
PriceAsk	The composite ask price for the convertible bond.
EquityMid	The composite of the supplied equity mid.
Delta	Dealer-submitted delta composites.
CDSSpread	The spread from the Markit default swap curve for the underlying entity, evaluated at the maturity of the bond.
Ticker	The issuer ticker.
Instrument	The instrument name.
AvRating	The average rating of the instrument to every third notch.
ImpliedRating	The implied rating of the instrument based on the five-year senior default swap with market convention currency and DocClause.
Sector	The ICB Industry code (previously the Markit Sector code).
Region	The issuer region.
ISIN	The issuer ISIN.
CUSIP	The issuer CUSIP.

12.7.3 Indices Report

For detailed information on how to access this report, see section 7.1 Current Reports on page 43.

Field	Description
Name	The name of the index.
Series	The series number of the index.
Version	The version number of the index.
Term	The Index period.
RED Code	The 9-character RED Code for the index.
Index ID	The Markit Index ID.
Maturity	The index Maturity Date.
On the Run	Indicates if this is the latest series and version of this index.
Composite Price	The top and tailed quartiles and then average index price.
Composite Spread	The top and tailed quartiles and then average index spread.
Model Price	The theoretical price based on components.
Model Spread	The theoretical spreads based on components.

Field	Description
Depth	The number of good contributions used to calculate the composite for this instrument.
Heat	The Markit heat or recent activity level indicator calculated as today's absolute change in spread divided by the absolute average daily change over the month excluding today's change.

12.7.4 Liquidity Metrics Report

For detailed information on how to access this report, see section 7.1 Current Reports on page 43.

Field	Description
Date	The date for which the data was contributed
Ticker	The ticker for the reference entity
Name	The abbreviated short name for the reference entity
Red Code	6-digit RED Code
Tier	The tier of the contract
Currency	Currency of the contract
DocClause	The documentation clause of the contract
Running Coupon	The fixed coupon level of the entity-tier
Region	The region of the reference entity
ICB Sector	The ICB industry sector of the reference entity
Range	Range of bid-ask sample used. Values are: High (95th Percentile) and Average where High is 95th percentile bid-ask value for entity-tier and Average is the average bid-ask value for entity-tier
Upfront Mid	Upfront composite value for the given tenor (6-month through to 10-year)
Upfront BA Spread	Bid/ask for the upfront composite derived from quotes for the given tenor
ConvSpread Mid	Conventional composite value for the given tenor
ConvSpread BA Spread	Bid/ask for the conventional composite derived from quotes for the given tenor
Bid Ask Type 5y	The bid/ask spread type for the 5-year point. Values are: Observed; Rolled; and Estimated
Dealers Count	The number of dealers contributing data in quotes for this entity-tier
Quotes Count	Number of unique quotes for the curve (for all tenors combined)
Composite Depth 5y	The number of distinct contributors at the composite fallback level for the 5-year composite point from the end-of-day books of record composite price service
Est. Notional	The estimated notional size for the entity-tier
Liquidity	Calculated liquidity score for the entity-tier. Scale is 1 to 5 where 1 indicates the highest liquidity.

12.7.5 Fixed Coupon Report

For detailed information on how to access this report, see section 7.1 Current Reports on page 43.

Field	Description
Date	The date for which the data was contributed.
Ticker	The ticker for the reference entity.
ShortName	The abbreviated short name for the reference entity.
RedCode	The six digit RED code.
Tier	The seniority of the instrument.
Ccy	The currency of the instrument
DocClause	The documentation clause. MM=Modified Modified Restructuring. MR=Modified Restructuring. CR=Old Restructuring. XR=No Restructuring
RunningCoupon	The fixed coupon level of the instrument
Contributor	Indicates the source of data.
Upfront	The composite upfront fee for the given point on the curve.
Real Recovery	The composite of the dealer recovery rates
Assumed Recovery	The conventional recovery rate (40% for senior curves and 20% for subordinated curves, except Japan where 35% and 15% are used, and Emerging Markets where 25% is used for all tiers).
ConvSpread	The conventional spread for the given point on the curve. Otherwise known as the quoted spread.
Rating	The data quality rating for this point on the curve
CompositeCurve Rating	A quantitative measure of the quality of our data, averaged across the points on this curve.
CompositeDepth 5y	The number of distinct contributors at the composite fallback level.
Sector	The ICB sector of the entity
Region	The region of the reference entity.
Country	The country of the reference entity.
AvRating	The average of the Moody's and S&P ratings adjusted to the seniority of the instrument and rounded to not include the '+' and '-' levels.
ImpliedRating	Implied Ratings are calculated on a weekly basis by comparing the issuer's 5Y senior standard trading convention spread to the 5Y spreads of our sector curves and applying the rating of the logarithmically nearest rating curve specific to that sector.
CompositeLevel	The fallback level of the composite price calculation.
CompositeLevel Recovery	The fallback level of the composite recovery rate calculation.