CME Group

CME CORE User Manual

May 29, 2025

Neither futures trading nor swaps trading are suitable for all investors, and each involves the risk of loss. Swaps trading should only be undertaken by investors who are Eligible Contract Participants (ECPs) within the meaning of Section 1a(18) of the Commodity Exchange Act. Futures and swaps each are leveraged investments and, because only a percentage of a contract's value is required to trade, it is possible to lose more than the amount of money deposited for either a futures or swaps position. Therefore, traders should only use funds that they can afford to lose without affecting their lifestyles and only a portion of those funds should be devoted to any one trade because traders cannot expect to profit on every trade. All examples discussed are hypothetical situations, used for explanation purposes only, and should not be considered investment advice or the results of actual market experience.

The information within this manual has been compiled by CME Group for general purposes only. CME Group assumes no responsibility for any errors or omissions. Additionally, all examples in this manual are hypothetical situations, used for explanation purposes only, and should not be considered investment advice or the results of actual market experience. All matters pertaining to rules and specifications herein are made subject to and are superseded by official CME, CBOT and NYMEX rules. Current rules should be consulted in all cases concerning contract specifications.

Table of Contents

Getting Started

CME CORE (Clearing Online Risk Engine) is an interactive margin calculator that provides a means for cleared over-the-counter customers and clearing firms to:

- Calculate initial margins using portfolio upload or manual trade entry to model actual or hypothetical portfolios.
- Maintain transparency with clearing house minimum margin methodology applied to all customers.
- Calculate capital efficiencies across multiple asset classes. See below for all supported product types including transparency into interest rate swaps (IRS) portfolio margining program.
- View real-time margin dashboard.
- View positions in a portfolio.

CME CORE consists of multiple components, which are accessible from the Landing page.

Additional Information

For additional information on any of these products, reference:

- **Cleared swaps**

For more on CME CORE and to get started:

- CME CORE: Clearing Online Risk Engine

For more information view the CME CORE demo:

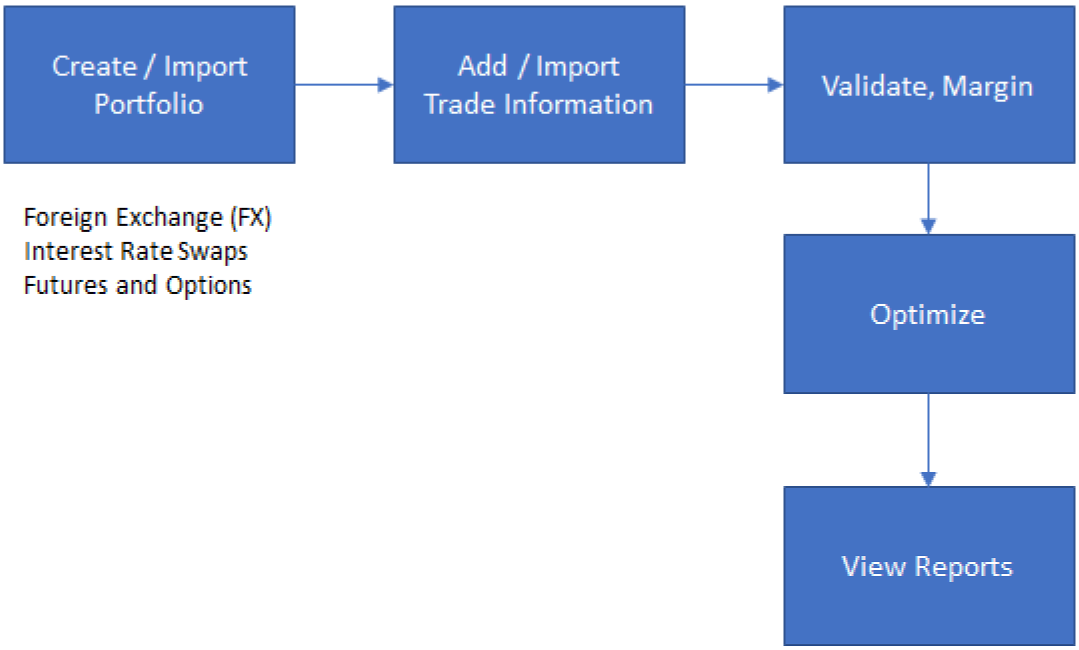
- Getting started
- Uploading and margining Futures & Options
- Rates overview
- Rates portfolio management

Functionality

CME CORE provides a tool to enter portfolios, margin trades, and view reports for:

- Interest Rate Swaps (IRS Trades and IRS Delta Ladder)
- Foreign Exchange Trade (FX)
- Futures and Options (F&O)
- Portfolio Margining
- Margin Optimizer

Work Flow

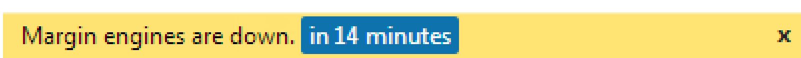


All components follow the same work flow:

1. Add trade information to a grid (download a sample .CSV file) or manually add products to a portfolio.
2. Validate trades, save portfolio, margin / optimize portfolio.
3. View and interpret reports.

Receive an Administrative Message

Administrative messages display in a yellow band above the Portfolio section.



- To close the message band, select the **X**.

Contact Information

Access the [Client Systems Wiki Contact Information] screen for CME CORE contacts.

What's New

The list below describes the updates made to the CME CORE Help system.

Date	Topic	Description
May 29, 2025	Footer	Updated footers on all online pages of this webhelp.
Dec 29, 2023	Email Support	Changed CME CORE email support from **cme.core@cmegroup.com** to posttradeservices@cmegroup.com.
Mar 17, 2023	Analysis Swaptions Ideal Optimization PNL report	Deprecated Ideal Optimization. Removed all references to Swaptions (no longer supported at CME). Removed all references to Ideal Optimization. Removed PNL report for FX portfolio.
Mar 7, 2023	Removed old FX instructions	Removed outdated and superseded content.
Mar 1, 2023	FX and F&O Calculator Rates Calculator	Grouped topics to fall into the two Margin Calculator screens.
Feb 11, 2023	Futures & Options Margin Calculator	• Changes to screen layout and options. • Removed old section for Futures & Options Margin Calculator--New Margin button now includes both SPAN and SPAN 2 options. • Defined Cycle Selection options.
Jan 17, 2023	Color and screen reformat	Color and screen reformat to adhere to standards.
Dec 16, 2022	Footer Links	Online version: modified footer's links to Contact Us and Survey.
Apr 27, 2022	Format	Apply new CME formatting standards.
Oct 13, 2021	Login	Redesign of CME Customer Center menus.
Apr 22, 2021	Download Software	SPAN software includes Risk Manager.
Apr 20, 2021	Enhanced Futures and Options	Enhanced User Interface for Futures & Options Margin Calculator
Nov 14, 2019	Home	Updated for new application re-design.
Mar 22, 2018	CDS	Removed references to Credit Default Swap (CDS) throughout.

Date	Topic	Description
Dec 16, 2017	Various	Layout Reference and general upload / download updates.
Sep 8, 2017	Trade Overview	Removed CMECE, for CME Europe decommission.
Jun 23, 2017	All	font and layout updates
Aug 20, 2016	Landing Page / Main Menu > Account Summary Manage Portfolios > My Cleared Trades Manage Portfolios	Real Time Margin Dashboard / Account Summary added. Real time positions (My Cleared Trades) added.
May 24, 2016	1. Manage Trades 2. Foreign Exchange 3. Trade Overview - Swap-tions 4. Trade Overview 5. Download Center 6. Rates Calculation 7. Manage Trades 8. Trade Validation Errors 9. Delta Ladder Report 10. Futures and Options Reports 11. Interest Rate Swap Margin	1. Coupon Blending and termination is no longer available. 2. PNL reporting is not included in reports, with exception of PNL vector histogram. 3. Swaptions added to IRS product scope and interest rate view. 4. CMECE added as a futures and options exchange Input options updated. 5. Updated Download and Software selections, which are based on given entitlements and available products. 6. Cleared EOD removed from rates calculator. 7. Updated manually entered trades menu options. 8. Brazil Real added to supported currencies for Zero Coupon swaps and IRS Layout Reference. 9. P&L no longer listed in Delta Ladder report. 10. Contributing factor breakdown is no longer available from Futures and Options reports. 11. IRS Margin Details Scenario Analysis is no longer available.
Jun 22, 2015	Getting Started	Revised login instructions
Aug 15, 2014	1. Manage Report Gen-eration (now called Run Analysis) 2. Rates Calculation 3. Trade Overview 4. Manage Portfolios (Rates) and CDS / FX	• Added Termination to the Rates Calculation Section (1). • Updated Rates Calculation screen to include Status (CORE/Cleared) (3). • Updated IRS description (4). • Search feature added to Portfolio menu descriptions (5).
May 10, 2014	1. Download Center 2. The IRS Trade Editor	1. Added new screen for Download Center. 2. Added Basic Swap information. 3. Added a new Basic Layout Reference.

Date	Topic	Description
	3. Basic Layout Reference Updates that reference above changes: 4. The Landing Page and Main Menu 5. Manage Trades 6. Manually Enter Interest Rate Swaps	4. Modified download center content. 5. Added a section for IRS Trades. 6. Modified to take into account Basic Swap.
Apr 14, 2014	1. Rates Calculation 2. CDS and FX Trade Management	Removed legacy data for IRS and DL. (n/a) Adjustments to existing sections for removal of legacy IRS and DL section: • Modified Rates Calcution section (1). • Added CDS and FX Trade Managment section (2).
Mar 15, 2014	1. Added topics: • Rates Calculator • Portfolio Type Options • Manage Portfolios • Manage Trades • Manage Report Generation 2. Modified topics: • The Landing Page and Main Menu • Trade Overview • Portfolio Margining section • Add Trade Information to a Grid • Futures & Options Trade Management	• Added sections for Rates Calculator (1) . • Modified section to reference Rates Calculator (2).
Jan 10, 2014	Added topics: • Futures and Options Trade Management • Manage Portfolios • Manage Trades • Base Trades and Hypothetical Portfolios	• Added topics for Futures and Options GUI update (1). • Modified existing topics to adjust for Futures and Options GUI update (2).
Aug 24, 2013	1. Trade Overview 2. Add Trade Information to a Grid 3. Manually Enter Interest	• Updates for VNS (1, 2, 3, 4). • Scheduling a margin report (5).

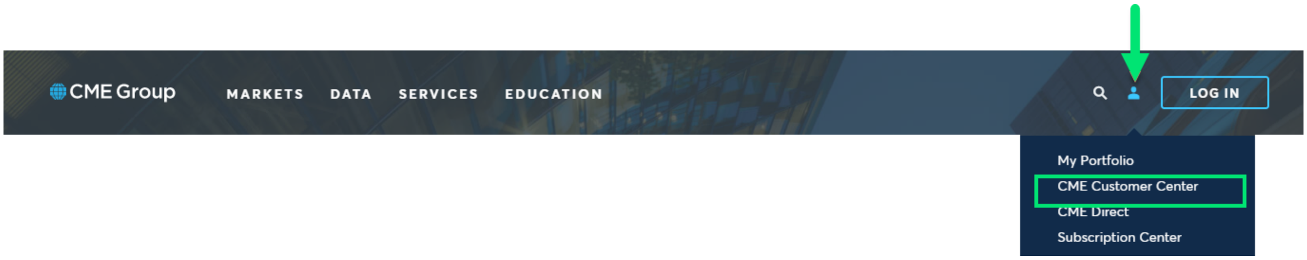
Date	Topic	Description
	Rate Swaps 4. Using the IRS Single Trade Editor 5. Margining, Viewing and Exporting	

Login and Logout

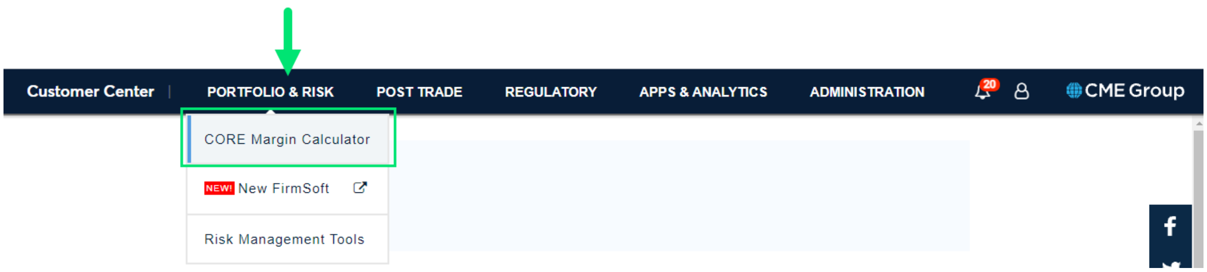
CME CORE uses CME Group Login IDs for authentication. You may login (or register for an ID) from the CME Customer Center at cmegroup.com. Refer to the CME Group Login WebHelp for additional information.

To log into CME CORE:

1. Navigate to: https://cmegroup.com/.
2. Select the **Profile** icon and select **CME Customer Center**:

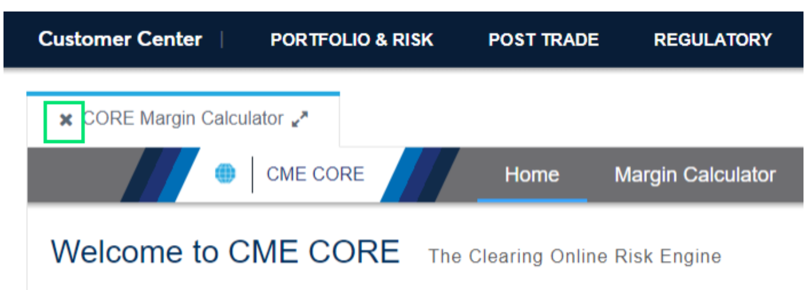


3. Enter your CME Group Login credentials and select **Login**.
4. From the Customer Center menu, select **PORTFOLIO & RISK** > **CORE Margin Calculator**.



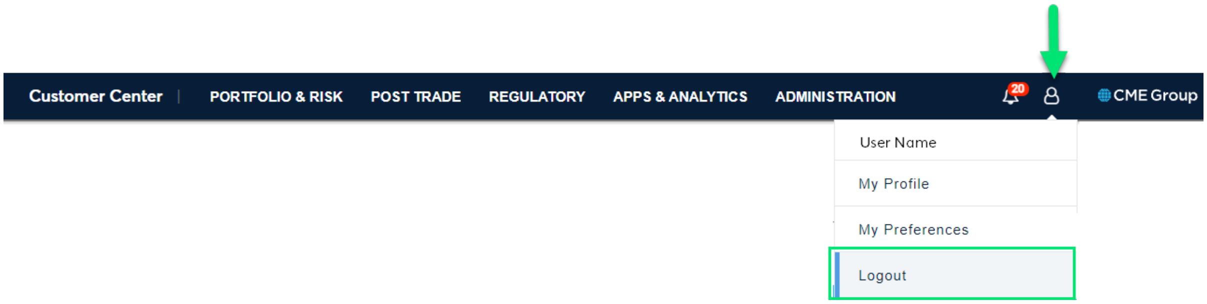
To exit CME CORE:

Select the **X** to close the **CORE Margin Calculator** tab.



To Logout of CME Customer Center:

Select the **Profile** icon and select **Logout**.


Customer Center
PORTFOLIO & RISK
POST TRADE
REGULATORY
APPS & ANALYTICS
ADMINISTRATION
20
CME Group
User Name
My Profile
My Preferences
Logout

CORE Landing Page and Main Menu

Upon login the CME CORE landing page appears with the **Home** tab selected. CME CORE has a responsive design and is accessible from wide screen, tablet, and mobile devices.

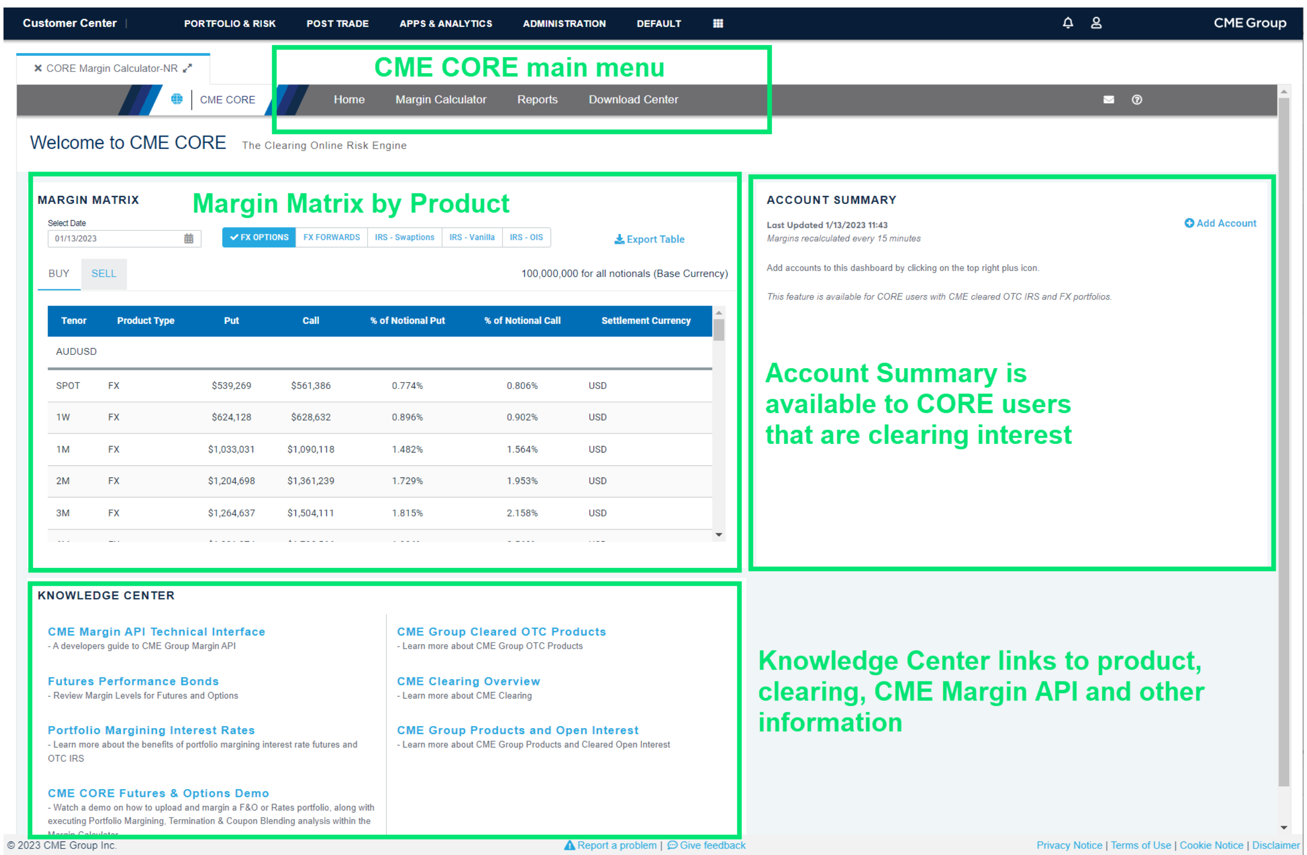
Main Menu

The following additional items are available from the Main Menu:

- Margin Calculator
- Reports
- Download Center

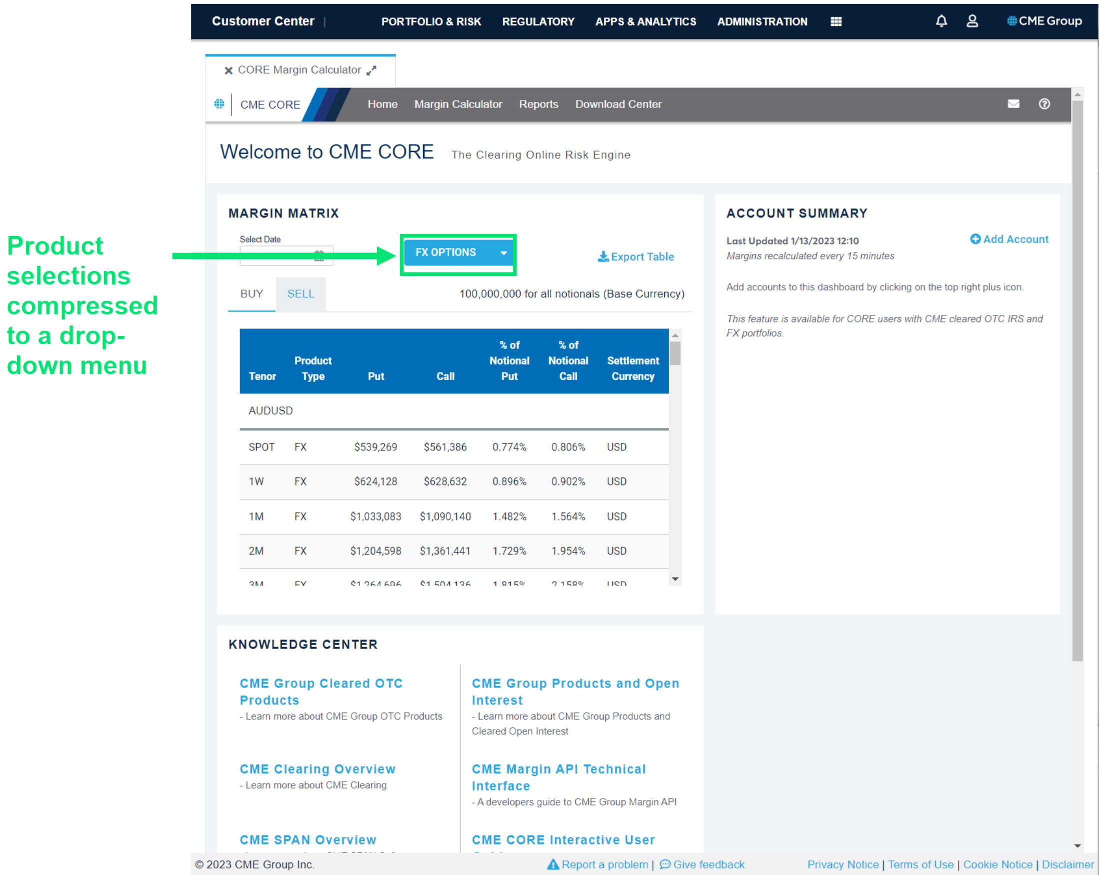
Various Device Views

Wide Screen Format



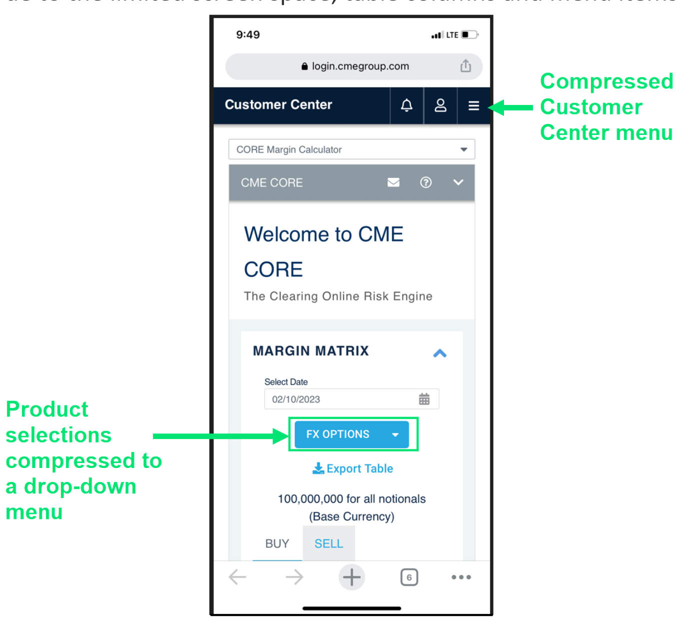
Tablet Format/Reduced Width Screen

Due to the limited screen space, table columns and menu items may appear compressed.



Mobile Device Format

Due to the limited screen space, table columns and menu items may appear further compressed.



Margin Matrix for Foreign Exchange Trade and Interest Rate Swaps

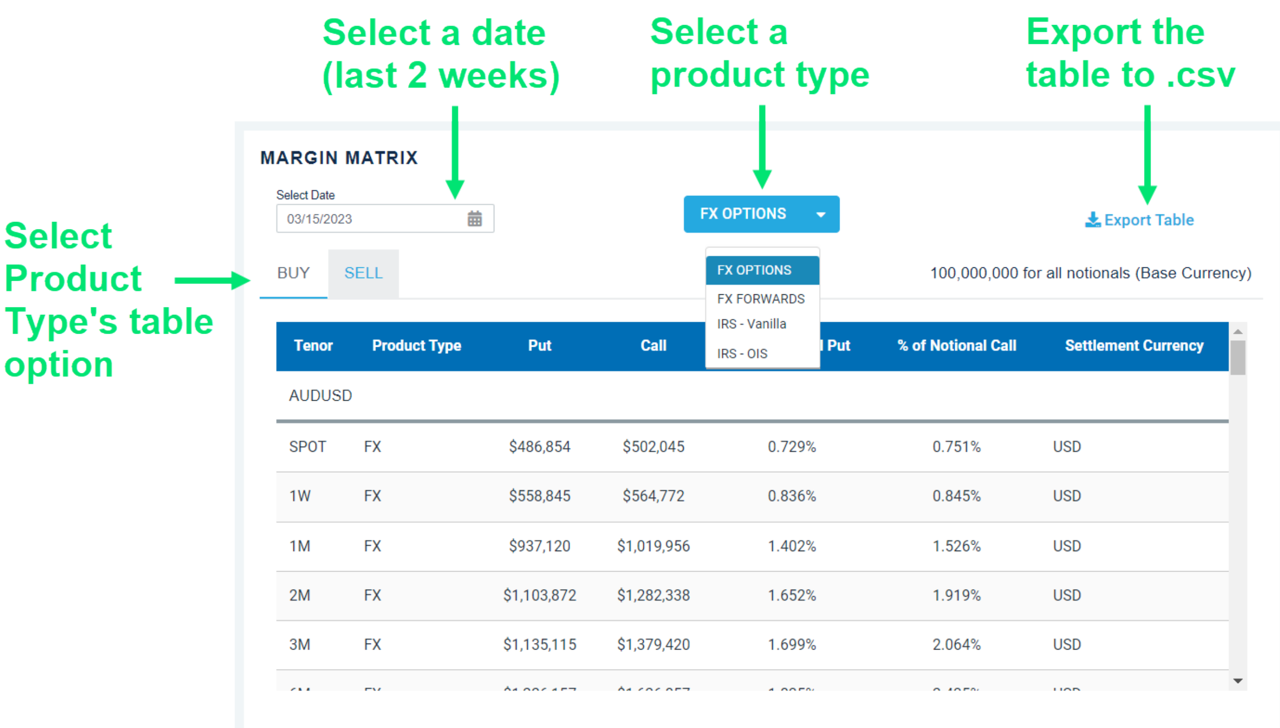
Margin Matrix displays margins (standard tenor) based on product type: Foreign Exchange and Interest Rate Swaps.

To select particular margin matrix:

1. Select a trading date (prior 2 weeks) from the Select Date field.
2. Select a **Product Type** from the menu (smaller screen size may show this as a drop-down menu).

3. Select a table option for the Product Type:
    - FX Options: **BUY** or **SELL** tab
    - IRS Vanilla and IRS - OIS: **USDE** or **Local Currency**
4. Optional: Select **Export Table** if you wish to download the data to a .CSV file.

Available functions:



Account Summary

Using the Account Summary - Real-time Margin Dashboard users can view margin, and trade count data for portfolios with cleared OTC interest rate swap (IRS) trades. Information is available for end-of-day (previous trading day) portfolios and positions throughout the trading day. Data is updated every 15 minutes for current portfolios.

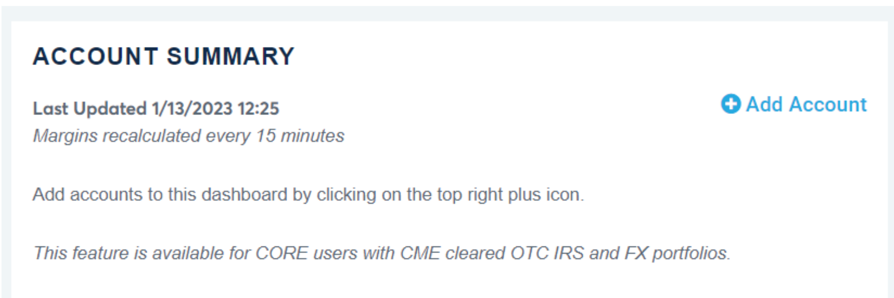
To be entitled to use the Account Summary function, request access via an email to posttradeservices@cmegroup.com.

- Provide your CME Group Login ID.
- Requested feature: Real time dashboard, Account Summary.
- Associated performance bond account.
- Legal entity name to which you require access.
- The asset class for which you want interactive margin calculations.

The CME CORE registration team reviews requests and confirms with the firm's verification officer. Upon completion, notification is sent to the requestor.

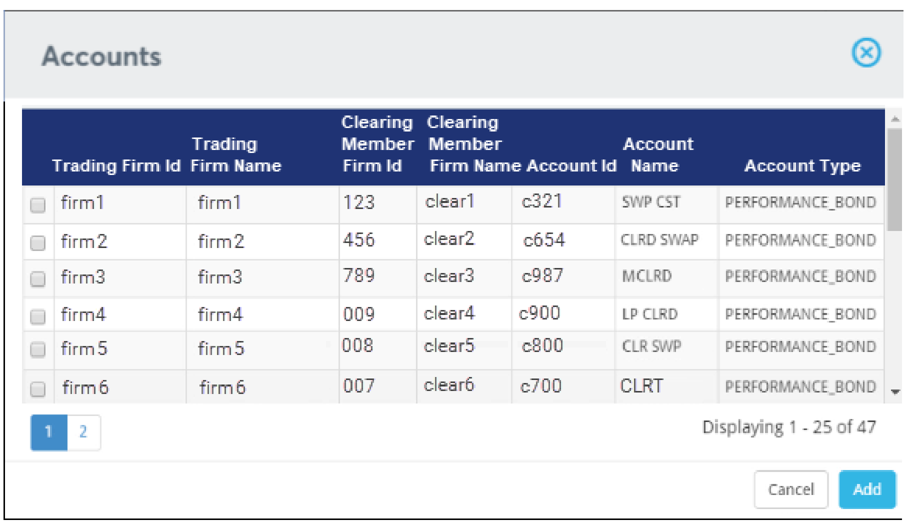
To add accounts:

1. On the CME Core Home screen > Account Summary pane, select **Add Account**.



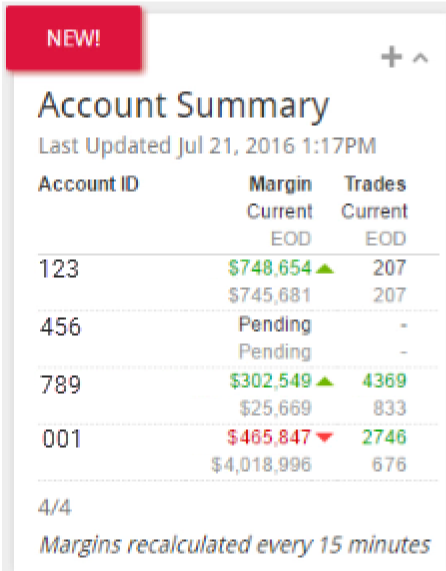
2. From the dialog that appears, select one or more **accounts** to add, then select **Add**.

   Available accounts are limited to those which you are authorized, by the firm's verification officer, to view.

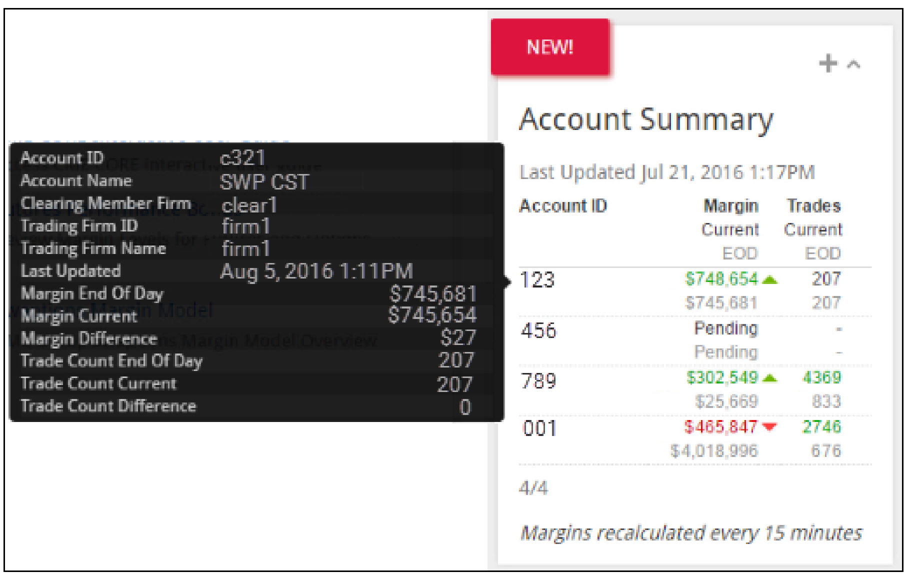


Trading Firm Id	Trading Firm Name	Clearing Member Firm Id	Clearing Member Firm Name	Account Id	Account Name	Account Type
firm1	firm1	123	clear1	c321	SWP CST	PERFORMANCE_BOND
firm2	firm2	456	clear2	c654	CLRD SWAP	PERFORMANCE_BOND
firm3	firm3	789	clear3	c987	MCLRD	PERFORMANCE_BOND
firm4	firm4	009	clear4	c900	LP CLRD	PERFORMANCE_BOND
firm5	firm5	008	clear5	c800	CLR SWP	PERFORMANCE_BOND
firm6	firm6	007	clear6	c700	CLRT	PERFORMANCE_BOND

The selected accounts are added.



Moving the mouse pointer to an account opens a dialog with additional information.



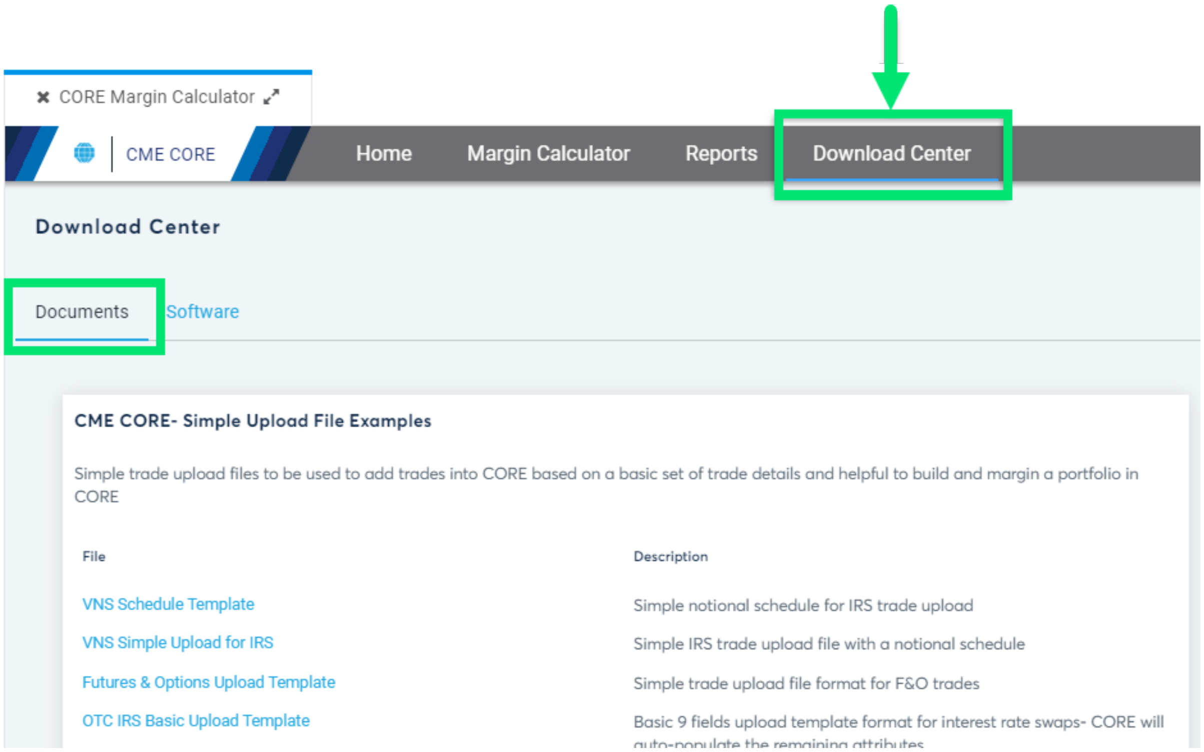
Download Center

Download documents or software from the Download Center.

- Documents
- Software

Download CORE Documents

Download asset class templates and supported products list.



Download documents include these categories:

- Simple Upload File Examples
- CME CORE - Help Documents
- Welcome to CORE: Futures and Options

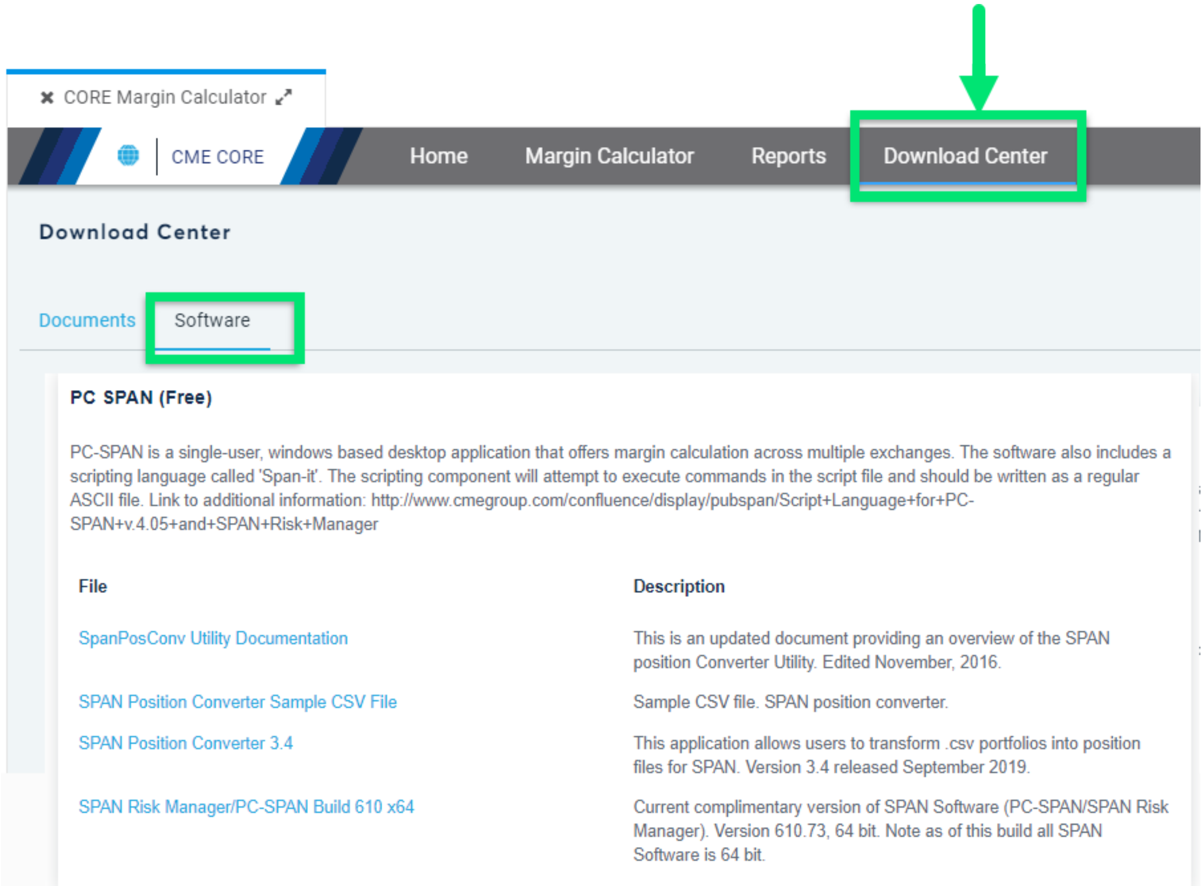
To download files:

1. On the CME CORE menu, select **Download Center.** Download options appear in a list.
2. Select the **Documents** tab.
3. Select file to download.

   The file is saved to the browser's default Download folder.

Download CORE Software

Download **PC-SPAN** and **SPAN Risk Manager** and request CME Optimizer.



SPAN Software is a single-user, windows based desktop application that offers margin calculation across multiple exchanges. The software also includes a scripting language called **Span-it** that performs automatic margin calculation once a day. For more information call the SPAN Hotline at +1 (312) 648-3888.

To request CME Optimizer, contact posttradeservices@cmegroup.com.

To download files:

1. On the CME CORE menu, select **Download Center.** The download options display.
2. Select the **Software** tab.
3. Select the software to download. Software downloads.
4. Open the zipped file and run the **setup.exe** file.

> **Note**: File save / open actions may vary depending on browser type.

Margin Overview

The following describes the products and processes of CME CORE margining:

Products:

- Interest Rate Swaps (includes Portfolio Margining and Optimization)
- Delta Ladder (includes Portfolio Margining and Optimization)
- Foreign Exchange (FX)
- Futures and Options (F&O)

Margining Processes:

- Futures and Options Margin
- IRS/Delta/Interest Rates Futures Portfolio Margining
- Margin Optimization
- Historical Value at Risk (HVaR)
- Simplified Incremental VaR Analysis

To Switch between product screens, use the Margin Matrix.

Products

Interest Rate Swaps

Interest Rate Swaps (IRS) are calculated using Historical Value at Risk (HVaR). Interest Rate Swaps can be margined against Futures and Options and are available for Fixed vs. Floating Swaps and Basis Swaps.

Input options include:

- Upload .CSV file or manually enter proposed trade data:
  - Vanilla
  - OIS
  - Zero Coupon
  - Basis
  - FRA
- Import Trades or Variable Notional Schedule

See Amortizing Swaps Clearing for more on Variable Notional Swaps.

See Cleared OTC Initiatives - CME Group: An Overview for more on Interest Rate Swaps.

Simplified Incremental VaR Analysis

Simplified Incremental VaR Analysis is triggered through the Combine Selected functionality. This functionality provides the ability to easily combine two or more portfolio that contain IRS trades or a delta ladder, and receive the margin results for the new aggregate portfolio.

Delta Ladder

Delta Ladder Estimation Engine provides low latency IRS margin calculation for portfolios represented by DV01 across the tenor / curve structure. The Estimation Engine estimates results that are generally within a couple percentage points of variance from full revaluation, and is recommended for use with low latency estimation of results. Delta Ladders can be margined against Futures and Options.

The portfolio is populated based on apportioning DV01 to various IRS curves and tenor buckets. For example, a 10-year swap with DV01 of 100 on a USD 3-Month Libor Trade could be entered in CME CORE by populating the 3656 day (10-year) column in the Delta ladder entry screen and using a 3-Month Libor Curve.

The generated reports include:

- Margin Report
- Delta Ladders

Simplified Incremental VaR Analysis can also be run on Delta Ladder portfolios.

Optimization can be performed from the Rates Calculation screen.

See Delta Ladder Spec for more on creating Delta Ladders in CME CORE.

Foreign Exchange

OTC FX Clearing provides a post-execution clearing and settlement service designed to meet the risk-mitigation needs of market participants. This allows customers to retain the flexibility of OTC products and to utilize any established OTC execution method, while addressing counterparty credit risk.

The generated report includes:

- Account information

See Cleared OTC Initiatives - CME Group: An Overview for more on FX trading.

Futures and Options

Futures and Options supports calculation of all eligible futures and options contracts by the following exchanges:

- CME
- NYMEX
- COMEX
- CBOT

Interest Rate Futures and Options are available for portfolio margining and are calculated using CME SPAN framework.

The generated reports include:

- IRS & Delta Ladder & Futures (SEQ) Portfolio Margin Details (pending asset classes)

  > **Note**: Access from the Rates tab if Futures and Options are margined with IRS and / or Delta Ladder.

- Futures and Option Report (Futures and Options only)

Margining Processes

Futures & Options Margin

Portfolios containing CME-cleared Futures & Options contracts are margined using the SPAN® and/or SPAN 2® margin framework. More details:

- SPAN
- SPAN 2

Porfolio Margining is accessed from the FX and F&O Calculator screen.

IRS/Delta/Interest Rates Futures Portfolio Margining

Portfolio Margining provides the ability to margin Interest Rate Swaps and/or Delta Ladders with Interest Rate Futures by leveraging the current multi-currency HVaR framework. CME CORE calculates savings from a total costs perspective.

Porfolio Margining is accessed from the Rates Calculator screen.

The generated reports include:

- IRS Trades & Futures (SEQ) Portfolio Margin Details
- Delta Ladder & Futures (SEQ) Portfolio Margin Details
- IRS & Delta Ladder & Futures (SEQ) Portfolio Margin Details

See Portfolio Margining of Cleared OTC IRS Swaps and Futures for more on portfolio margining.

Margin Optimization

The Margin Optimizer specifies the ideal allocation of Interest Rate Futures and Options to move into the OTC Customer Cleared Swaps account to minimize portfolio risk, and therefore, reduce margins. Clearing Members can use the Margin Optimizer to facilitate Portfolio Margining for both their clients and their house accounts. Interest Rate curve sensitivities in the form of Delta Ladders and/or Interest Rate Swaps are optimized against Futures.

Margin Optimization is accessed from the Rates Calculator screen.

The generated reports include:

- IRS Portfolio Margin Optimization Report
- Delta Ladder Portfolio Margin Optimization Report
- IRS & Delta Ladder Portfolio Margin Optimization Report

See CME CORE Margin Optimization Demo for a demo.

Historical Value at Risk (HVaR)

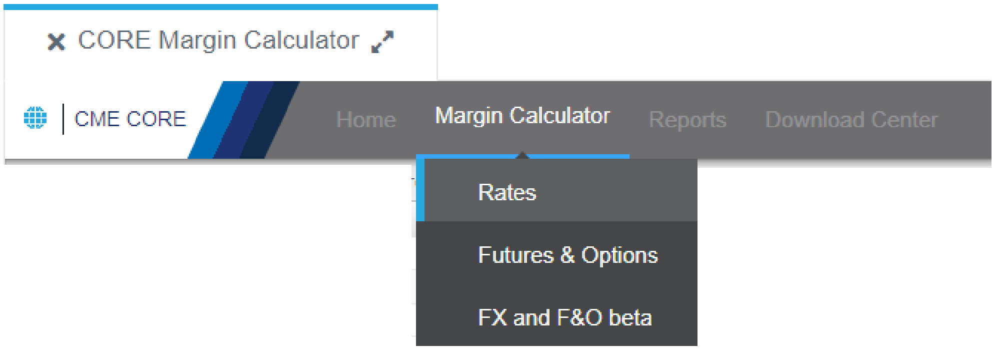
- HVaR calculation for Interest Rate Swaps, Delta Ladder, Portfolio Margining and Margin Optimization:
  - Margins are built to provide 99% coverage over a 5-day closeout Period
  - Historical scenarios are:
    - Generated using a 5-year look back period
    - Synchronized across all observed tenors on the zero curve, across all currencies
    - Scaled using Exponentially Weighted Moving Average (EWMA) based volatility forecasts
  - Margin is currently the 99.7 percent of portfolio changes (loss) across all scenarios
- HVaR calculation for FX:
  - Initial margins calculated utilizing historical VaR, using a 99%, 5-day loss coverage assumption.

Simplified Incremental VaR Analysis

Simplified Incremental VaR Analysis is useful for running a base portfolio of Interest Rate Swaps or Delta Ladders each day and then adding in smaller IRS portfolios without having to do a margin re-run—essentially dynamic margin creation. This tool is typically used when very large portfolios are used and re-running the portfolios with additional trades would be time consuming.

Simplified Incremental VaR Analysis is accessed via the Combine Selected function of the Rates Calculator screen.

Margin Calculators

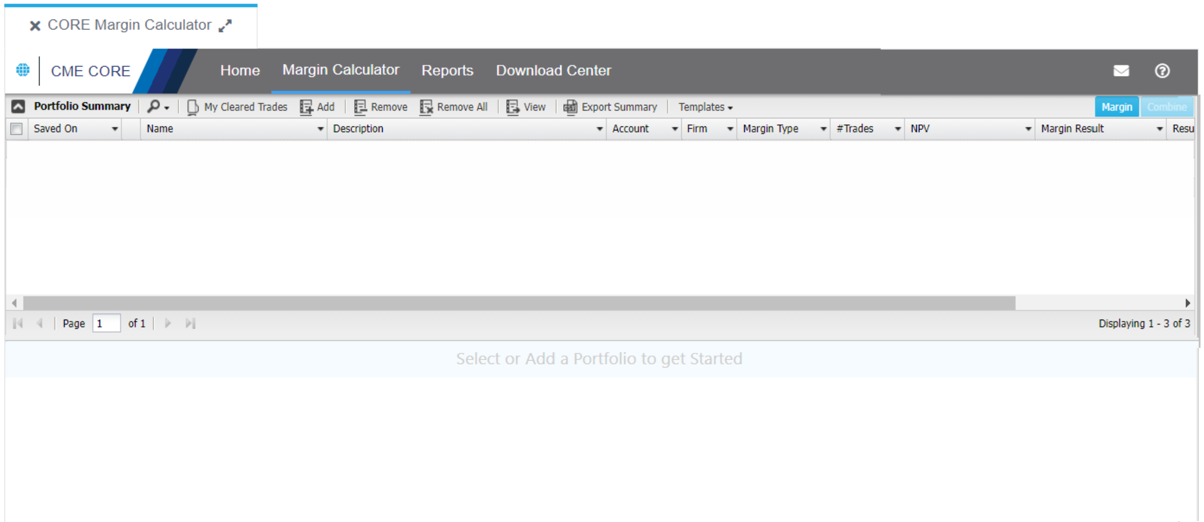


Access portfolios from the two Margin Calculators--**Rates** or **FX and F&O**. Margin Optimization is available from the Rates Calculation screen.

To select a product:

1. Select **Margin Calculator**.
2. Select the product to margin.
   - FX and F&O for Futures and Options (F&O) and Foreign Exchange (FX):

- Rates for Interest Rate Swaps (IRS), Delta Ladders:



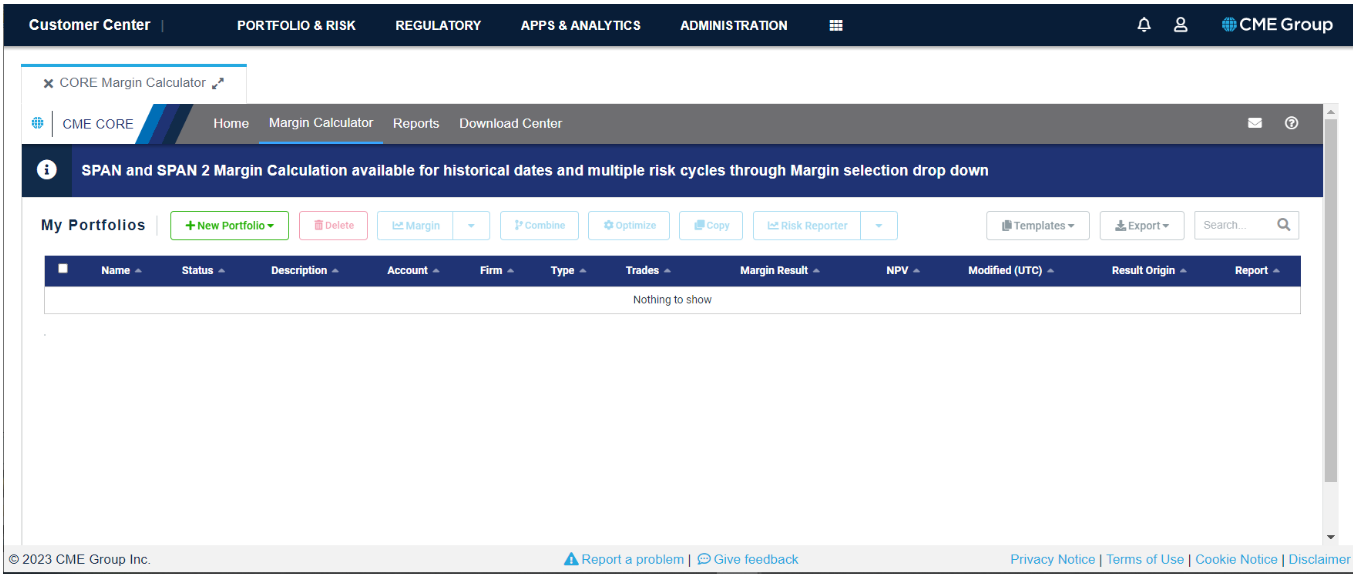
FX and F&O Margin Calculator Screen

This section provides instructions in using the FX and F&O Margin Calculator screen. The screen allows users to better manage cleared or hypothetical portfolios to compute margin requirements that include in-scope products in the SPAN and SPAN2 framework.

To access the interface:

1. Login to CME CORE.
2. Select **Margin Calculator > FX and F&O**.

The FX and F&O Calculator screen appears:

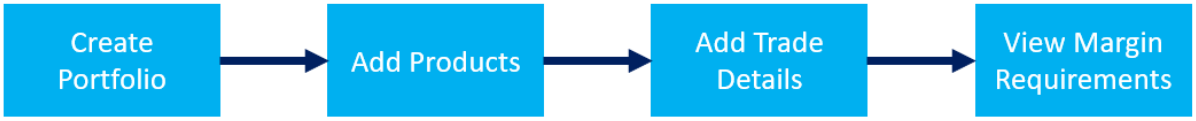


From this screen, you may upload portfolios or use a build wizard to create new portfolios.

Build FX and F&O Portfolios Manually and Calculate Margin

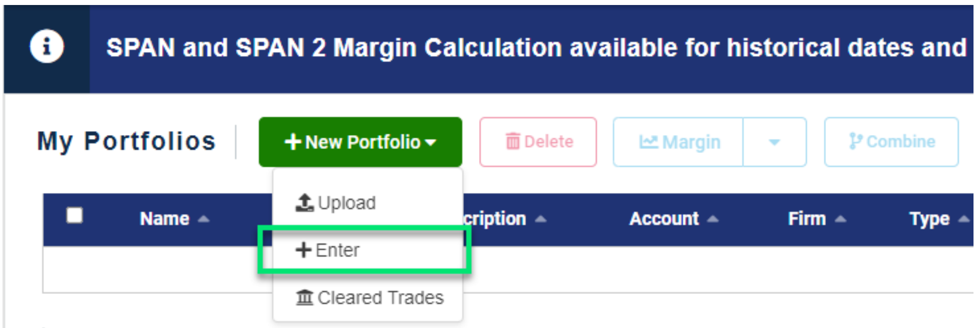
These instructions cover how to build a portfolio manually, add products and trades, and margin. For omnibus/parent portfolio, see Omnibus Portfolio.

Building a portfolio manually is aided by a build wizard--prompting users to create the portfolio by building positions or trades in eligible instruments. You may then immediately add trade details and view margin requirements.



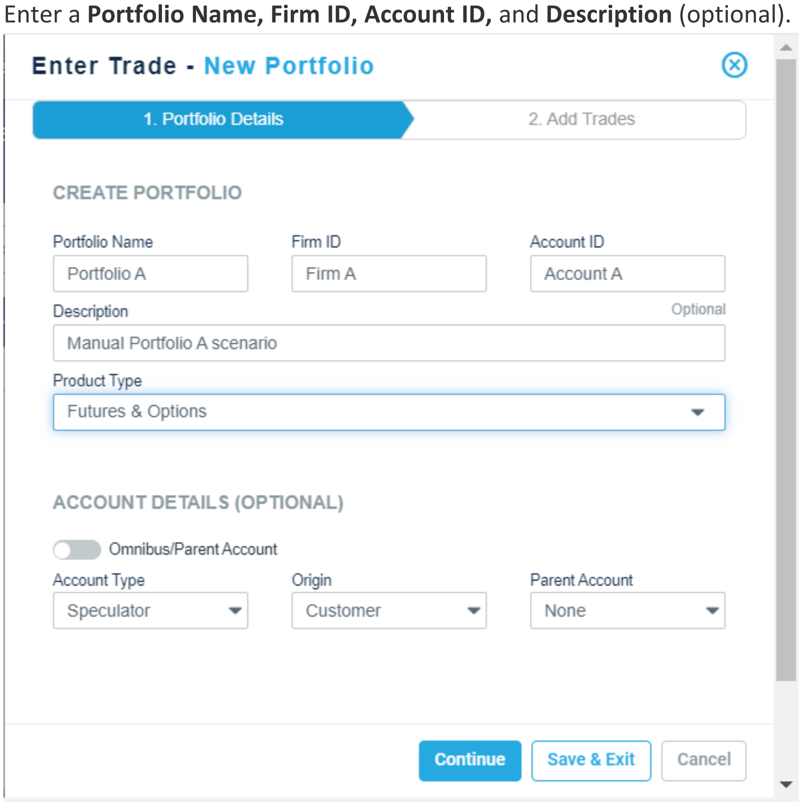
To build a portfolio manually:

1. Select **+New Portfolio** > **+Enter**.



2. In the wizard's **1. Portfolio Details** tab:

   a. Enter a **Portfolio Name, Firm ID, Account ID,** and **Description** (optional).

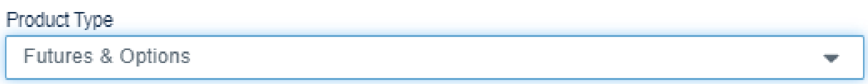


   b. Select **Product Type** (FX or Futures & Options).

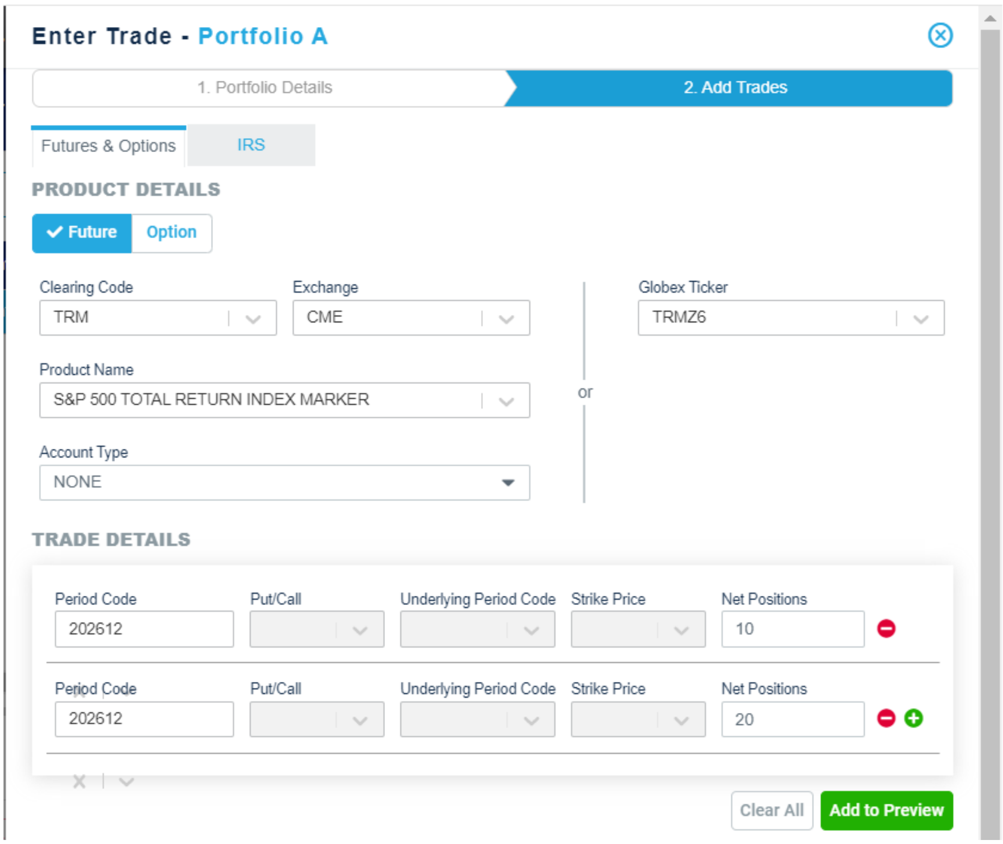
3. Optional Steps for Account Details:
    a. Select the **Account Type** (Speculator, Hedge, or Member).
    b. Select the **Origin** (House or Customer).
    c. Select the **Parent Account** if this is a child account (for F&O portfolios only).
4. Select **Continue**. (The **Save & Exit** and **Cancel** exits the form.)
5. Use the instructions below to create either an F&O or FX portfolio.

To manually add trades for Futures or Options:

1. When creating the portfolio, be sure to select **Futures & Options** for the Product Type.



2. In the wizard's **2. Add Trades** tab, identify products details for trades in this portfolio:



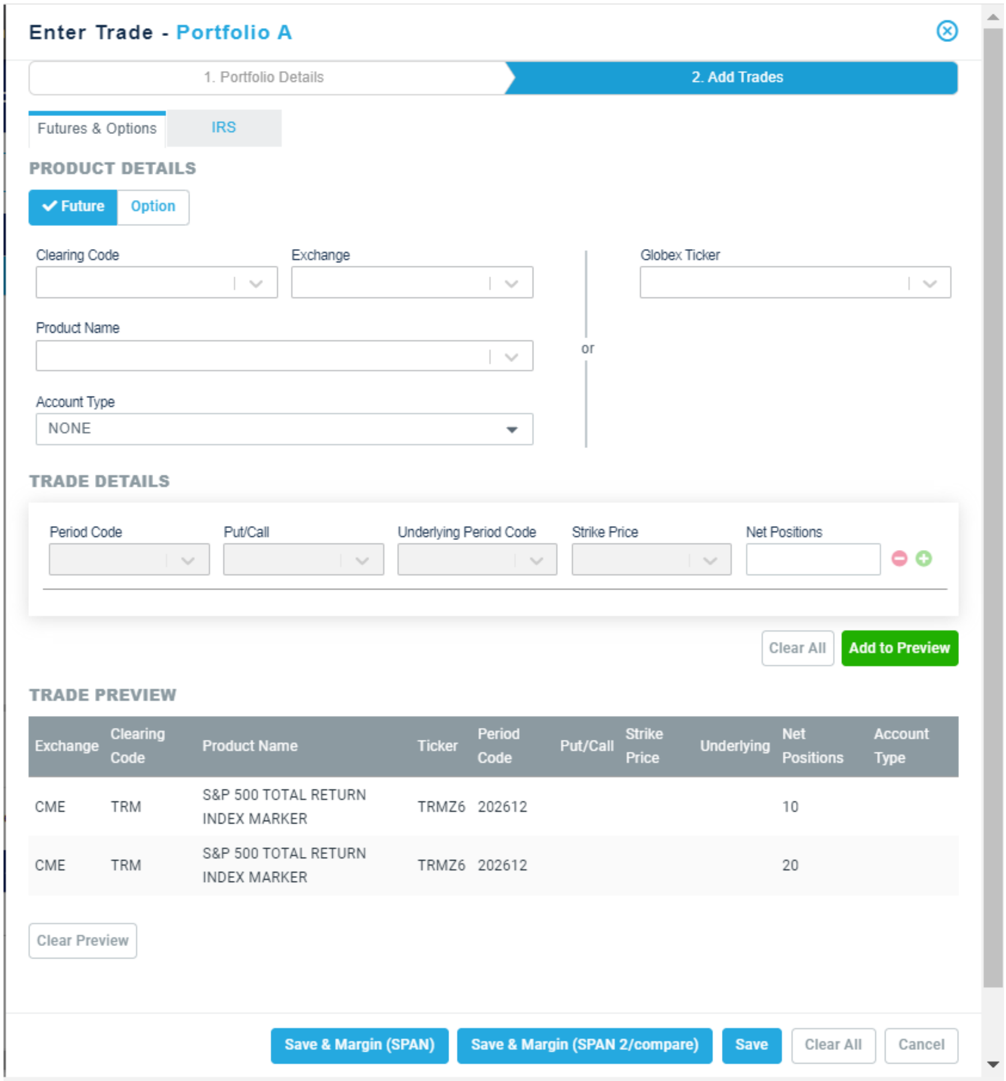
    a. Select **Future** or **Option**.
    b. Choose how to enter **Product Details**:
        - Left Side - Begin to enter the **Product Name** or **Clearing Code** and select from the narrowed list; this automatically populates the other fields in this form.

          OR

        - Right Side - Use the drop-down or enter the **Globex Ticker** symbol (example TRMZ6) to automatically populate the left side fields.

c. Enter the **Trade Details** (one or more trades).
   i. Use the drop-down or enter **Period Code** (when product matures) and **Net Positions**.
   ii. For Options, also enter relevant **Put/Call** and **Strike** details.
   iii. Use the **+** to add rows for the named Product and identify additional **Period Codes** and **Net Positions** quantity. (Use the **-** to remove a row.)

d. Select **Add to Preview** to save entries to the **Trade Preview** section and clear the product and trade details fields. (The **Clear All** will erase all entries without adding to Trade Preview.)

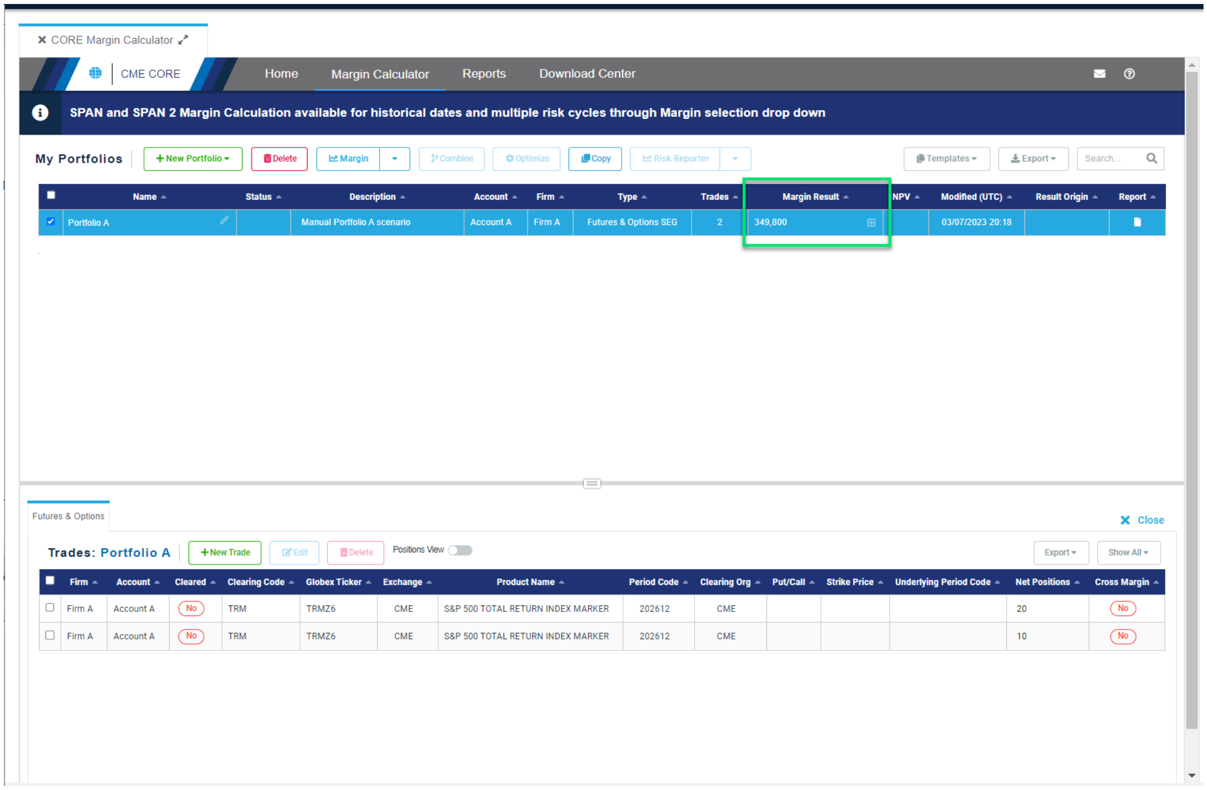


Exchange	Clearing Code	Product Name	Ticker	Period Code	Put/Call	Strike Price	Underlying	Net Positions	Account Type
CME	TRM	S&P 500 TOTAL RETURN INDEX MARKER	TRMZ6	202612				10	
CME	TRM	S&P 500 TOTAL RETURN INDEX MARKER	TRMZ6	202612				20	

e. If desired, add more products and its trade details to this portfolio by repeating Steps a - d above.

3. Select **Save & Margin (SPAN)** or **Save & Margin (SPAN 2/compare)** to close and save the form and obtain the latest end of day margin requirements. (The **Save** option will save without margining; **Clear All** removes all product details entered thus far; **Cancel** closes the form without saving.)

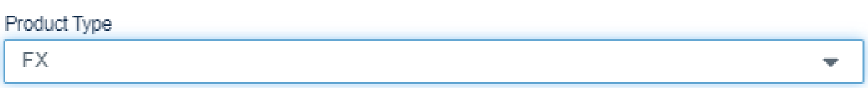
   The newly added Portfolio appears as a row in the **My Portfolio** grid (top of screen). A selected portfolio (appears in blue row) and shows its trades in the Trades grid (bottom of screen).



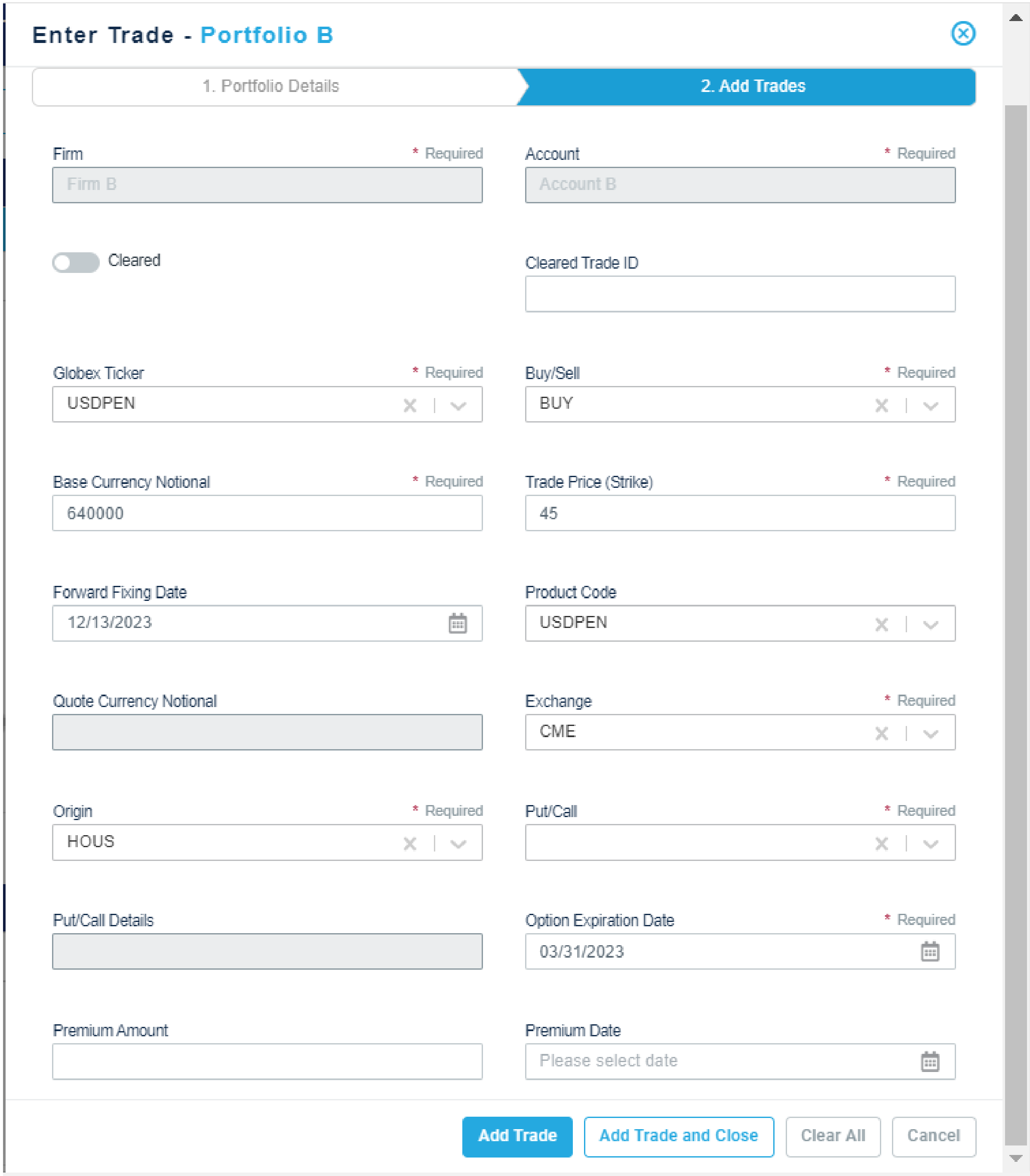
Note: To see more details on margining, see SPAN and SPAN 2 Framework.

To manually add trades for FX:

1. When creating the portfolio, be sure to select **FX** for the Product Type.



2. In the wizard's **2. Add Trades** tab, identify products details for trades in this portfolio:



a. If Cleared, select slider and enter the **Cleared Trade ID**.

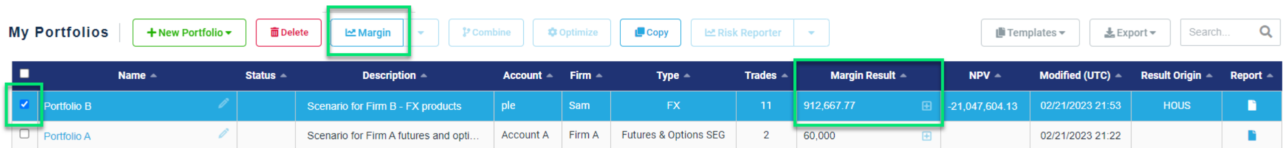
b. Enter/Select the following:

- **Globex Ticker**
- **Buyer/Sell**
- **Base Currency Notional**
- **Trade Price (Strike)**
- **Forward Fixing Date**

- **Product Code**
- **Quote Currency Notional**
- **Exchange**
- **Origin**
- **Put/Call Details**
- **Option Expiration Date**
- **Premium Amount**
- **Premium Date**

3. Select **Add Trade**. (**Add Trade and Close** will add the trade and close the build wizard.)
4. Check the newly added FX portfolio and select **Margin**.

   The margin result appears for the FX portfolio:



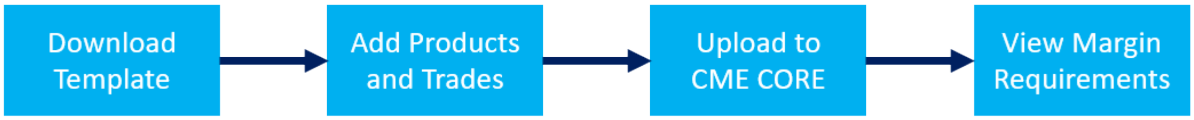
> **Note**: Message "Margining in progress..." appears momentarily. The default will be for SPAN framework, day prior and EOD settings.

> **Note**: If you enter a date in the past (e.g., a year prior) and your trades include products that did not exist at that time, the system will display validation errors. Therefore, be sure to enter valid trades for products that existed at the point in time for which you want margin calculated. This is best accomplished by uploading trades from a .CSV file. The build wizard's **2. Add Trades** is only applicable to products that exist today.

Upload Portfolio for FX and F&O

These instructions cover how to upload a portfolio from a .CSV file that contains details of trades.

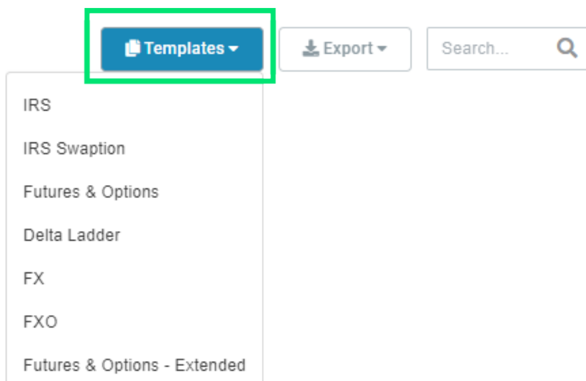
You can build a portfolio using a spreadsheet. Simply download a .CSV template from CME CORE, populate it with product and trade details, upload completed .CSV file to CME CORE and view margin requirements.



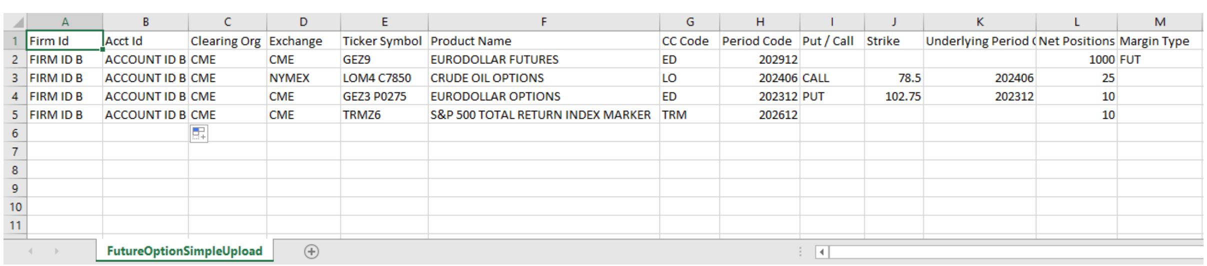
To upload a portfolio:

1. Download a template (.cvs format) and populate with data.

    a. Select a template such as Futures and Options from the **Templates** drop-down menu.



    b. Open the downloaded template and populate with your portfolio, products and trade details. CORE has auto-fill logic for fields left blank in this template. It is suggested users either supply the Globex Ticker Symbol in field **E** and leave blank fields **F - K** or populate clearing code product data in fields **G - K** and leave blank fields **E - F**.



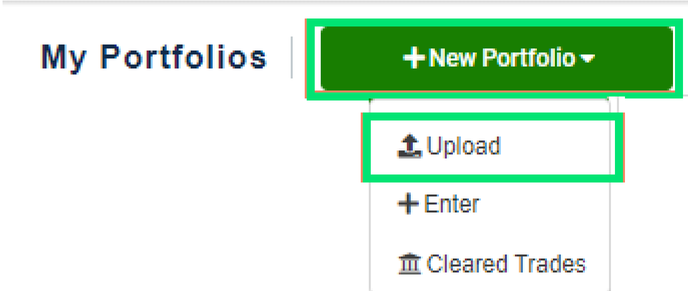
	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Firm Id	Acct Id	Clearing Org	Exchange	Ticker Symbol	Product Name	CC Code	Period Code	Put / Call	Strike	Underlying Period (	Net Positions	Margin Type
2	FIRM ID B	ACCOUNT ID B	CME	CME	GEZ9	EURODOLLAR FUTURES	ED	202912				1000	FUT
3	FIRM ID B	ACCOUNT ID B	CME	NYMEX	LOM4 C7850	CRUDE OIL OPTIONS	LO	202406	CALL	78.5	202406	25	
4	FIRM ID B	ACCOUNT ID B	CME	CME	GEZ3 P0275	EURODOLLAR OPTIONS	ED	202312	PUT	102.75	202312	10	
5	FIRM ID B	ACCOUNT ID B	CME	CME	TRMZ6	S&P 500 TOTAL RETURN INDEX MARKER	TRM	202612				10	
6													
7													
8													
9													
10													
11													

FutureOptionSimpleUpload

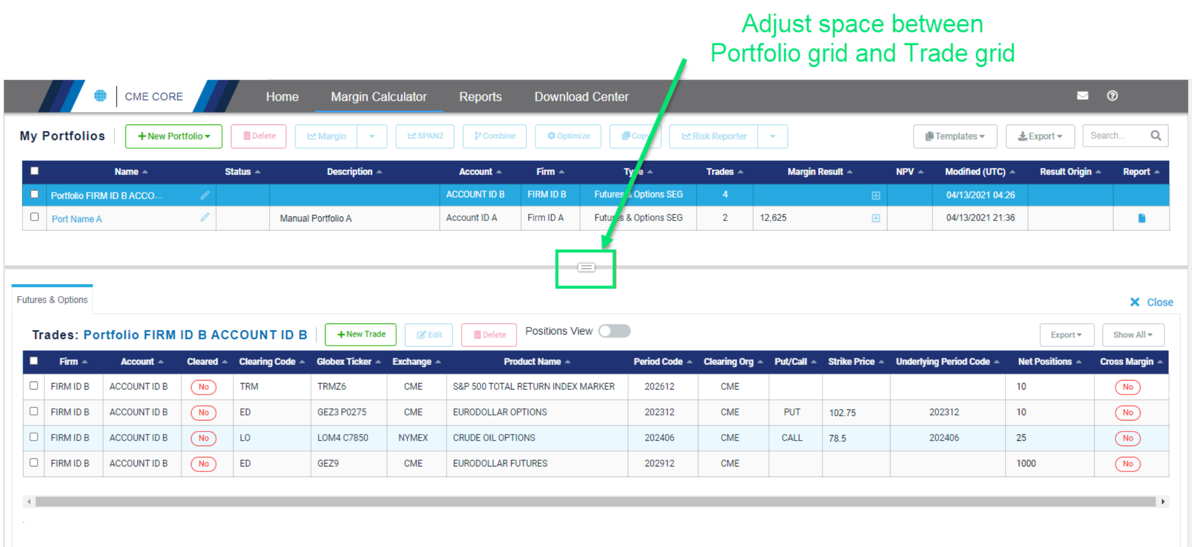
    c. Save the .CSV file.

2. Upload saved file to CME CORE and margin. Users can also choose to drag and drop portfolios directly into the portfolio grid instead of selecting **New Portfolio --> Upload**.

    a. Select **+New Portfolio > Upload**.

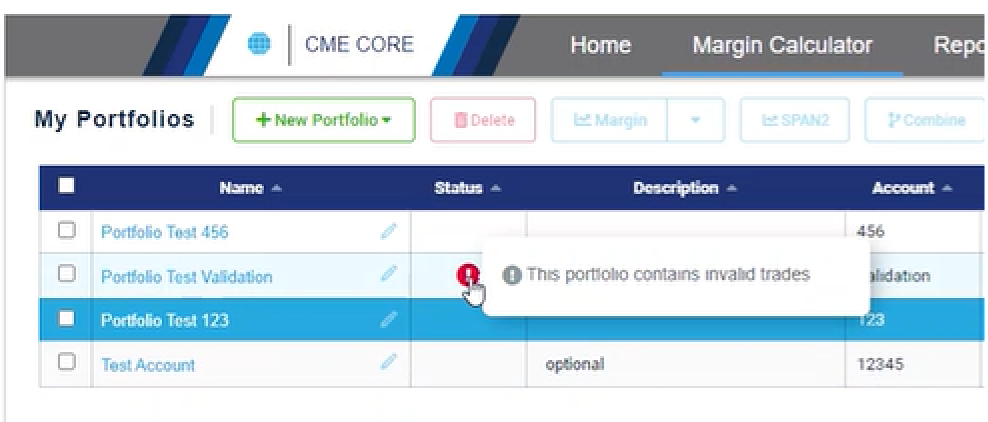


b. Select the saved file and select **Open**. The system creates a new portfolio from the uploaded file and validates the data.

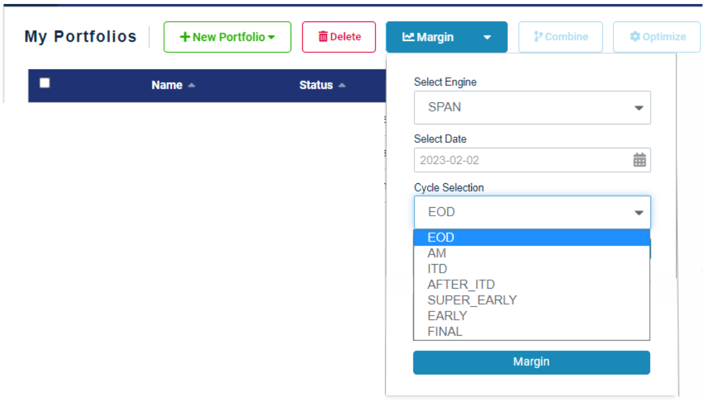


c. Adjust the space between **portfolio grid** and **trades grid** as needed to see the trades details.

Note: Portfolio validation errors show a warning symbol in the "Status" field. Hovering the mouse over the warning symbol shows a message that identifies the error. When a portfolio is margined, the products with errors are excluded from the total margin.



3. Check the box in the first column for the portfolio and select the drop-menu for **Margin**.



   a. Select **Engine** (SPAN or SPAN2 frameworks).
   b. Select the **Date** (defaults to prior day; can be up to 18 months prior).
   c. Select the **Cycle Selection** (defaults to EOD).

Cycle Name within CME Core	SPAN File Cycle Code	Approximate Timestamp of Risk Data
AM	".a"	~10:00 AM CT
ITD	".i"	~11:00 AM CT
AFTER_ITD	".ai"	~1:00 PM CT
SUPER_EARLY	".be"	~2:00 PM CT
EARLY	".e"	~3:00 PM CT
FINAL	".s"	~4:30 PM CT
EOD	".c"	~5:45 PM CT

   d. Select **Margin**.

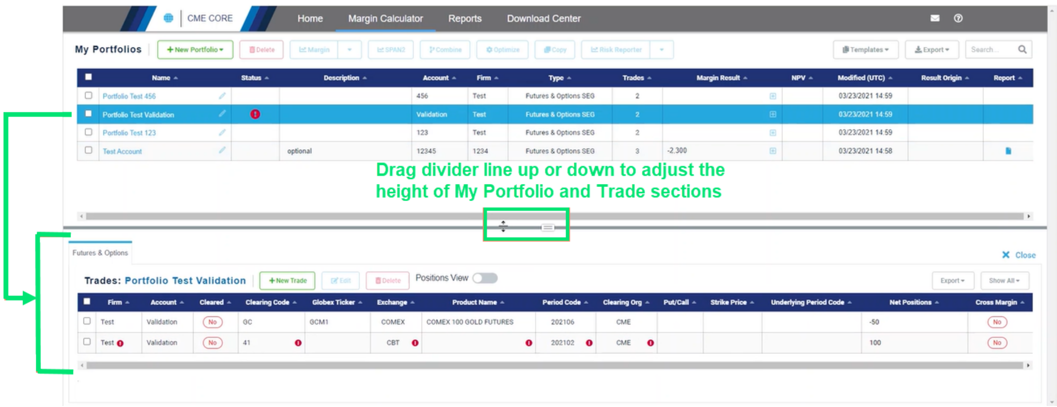
Note: Message "Margining in progress..." appears momentarily. If you do not use the Margin drop-down (simply selecting Margin from the My Portfolio menu) the default will be for SPAN framework, EOD, prior day.

Note: If you enter a date in the past (e.g., a year prior) and your trades include products that did not exist at that time, the system will display validation errors. Therefore, be sure to enter valid trades for products that existed at the point in time for which you want margin calculated. This is best accomplished by uploading trades from a .CSV file.

Manage Portfolios and Trades

These instructions provides steps to manage portfolios and their respective trades in the FX and F&O Calculator screen.

The screen lists portfolios at the top and the selected portfolio's (highlighted in blue) trade details at the bottom. The dividing line in between can be dragged up or down to adjust the section's size.



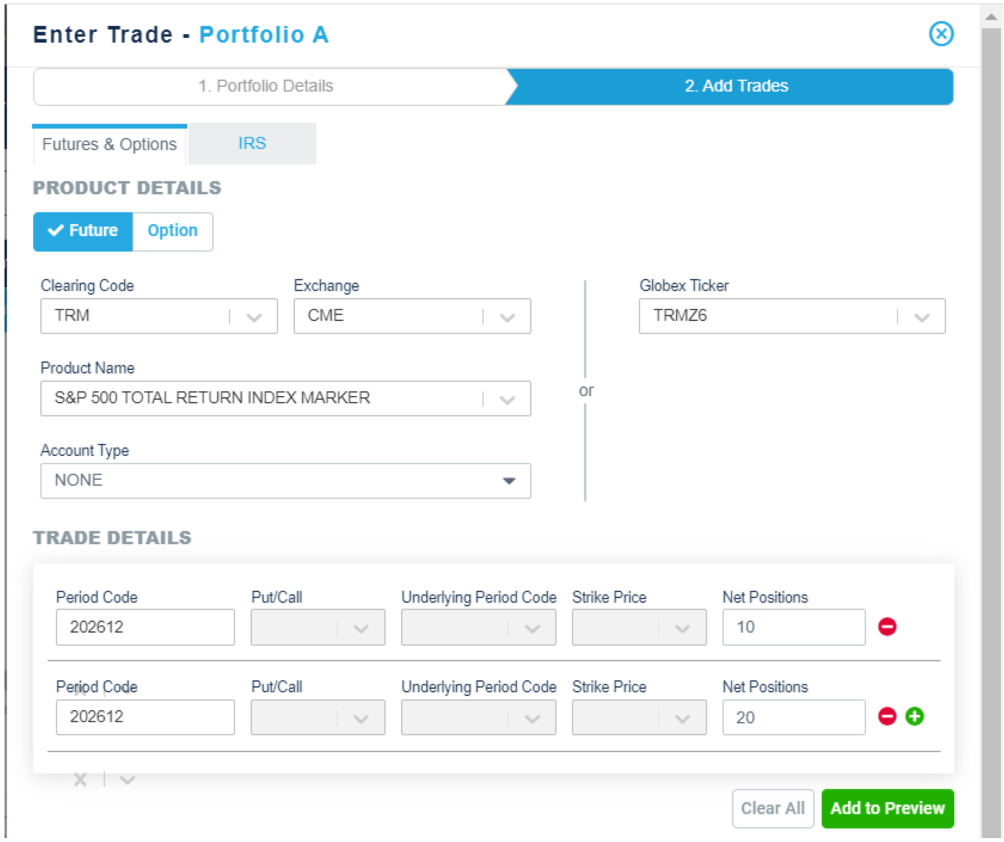
Manage Trades Grid

To add trades to Futures & Options portfolio:

1. Select the Futures & Options portfolio.
2. Select **+New Trade**.
3. In the wizard's 2. Add Trades, complete the form as needed:
    a. Select **Future** or **Option**.
    b. Choose how to enter **Product Details**:
        - Left Side - Begin to enter the **Product Name** or **Clearing Code** and select from the narrowed list; this automatically populates the other fields in this form.

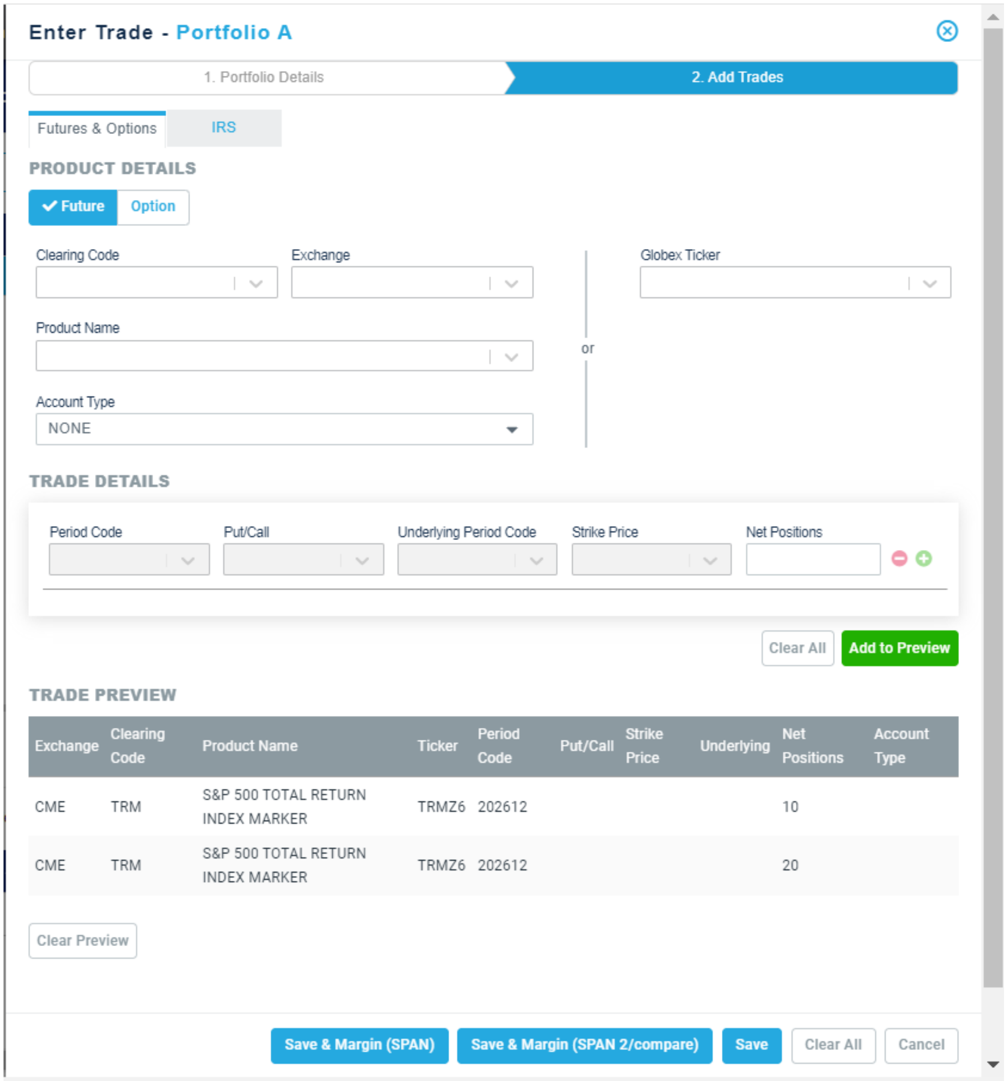
          OR

        - Right Side - Use the drop-down or enter the **Globex Ticker** symbol (example TRMZ6) to automatically populate the left side fields.



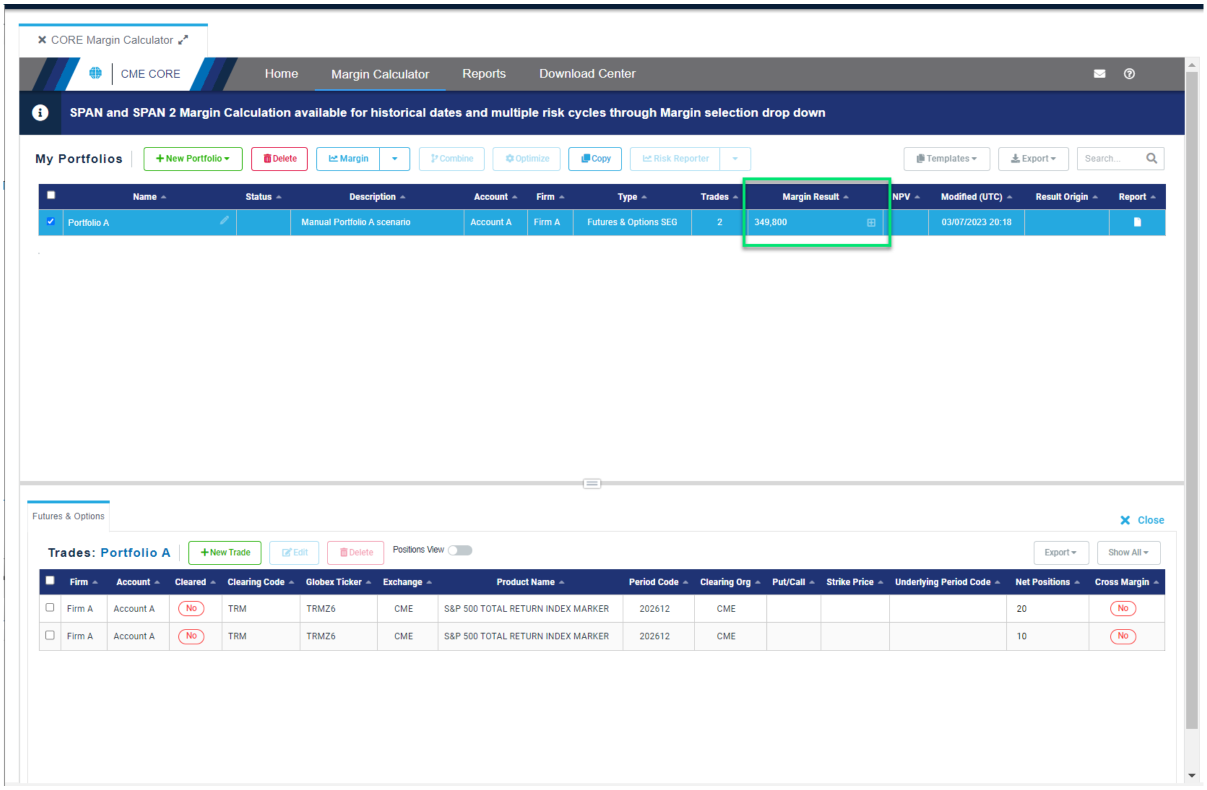
c. Enter the **Trade Details** (one or more trades).
   i. Use the drop-down or enter **Period Code** (when product matures) and **Net Positions**.
   ii. For Options, enter relevant **Put/Call** and **Strike** details.
   iii. Use the **+** to add rows for the named Product and identify additional **Period Codes** and **Net Positions** quantity. (Use the **-** to remove a row.)

d. Select **Add to Preview** to save entries to the Trade Preview section and clear the product and trade details fields. (The **Clear All** erases all entries without adding to Trade Preview.)



e. If desired, add more products and trade details to this portfolio by repeating Steps a - d above.

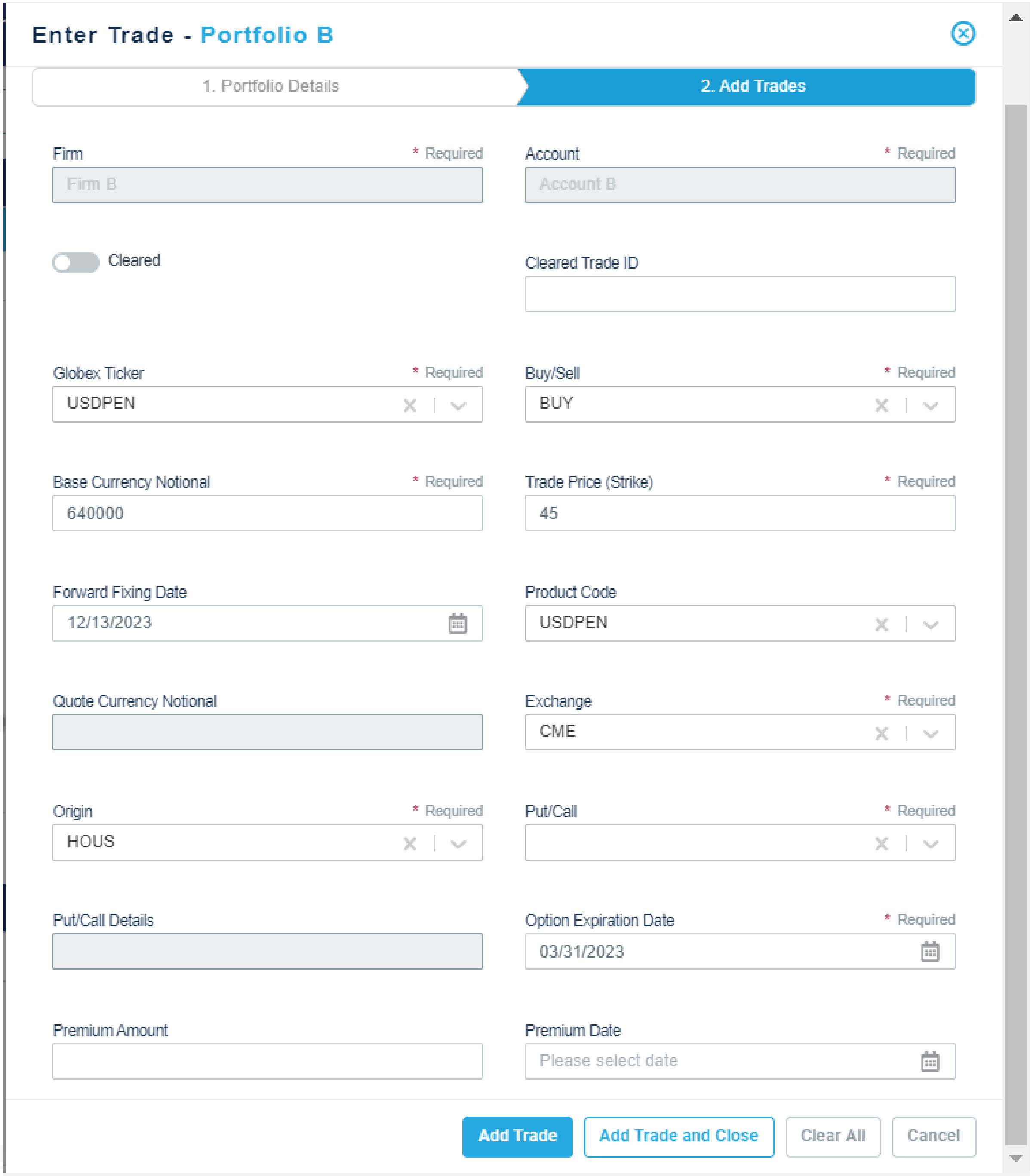
f. Select **Save & Margin (SPAN)** or **Save & Margin (SPAN 2/compare)** to close and save the form and obtain the latest end of day margin requirements. (The **Save** option will save without margining; **Clear All** removes all product details entered thus far; **Cancel** closes the form without saving.)



To add trades to FX portfolio:

1. Select the FX Portfolio.

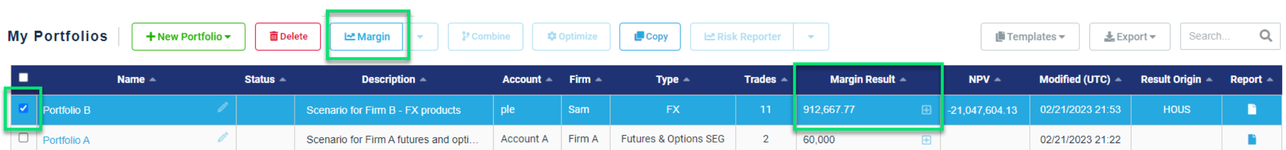
2. Select **+New Trade**.



3. In the wizard's **2. Add Trades**, complete the form as needed:
   a. If Cleared, select slider and enter the **Cleared Trade ID**.
   b. Enter/Select the following:
      - Globex Ticker
      - Buyer/Sell
      - Base Currency Notional

- Trade Price (Strike)
- Trade Price (Strike)
- Forward Fixing Date
- Product Code
- Quote Currency Notional
- Exchange
- Origin
- Put/Call Details
- Option Expiration Date
- Premium Amount
- Premium Date

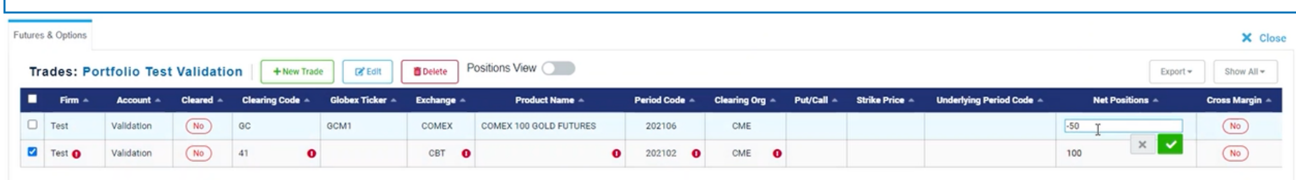
4. Select **Add Trade**. (**Add Trade and Close** will add the trade and close the build wizard.).
5. Select **Margin**. The margin result appears for the FX portfolio:



To Edit a Trade

1. Check the box in the first column to select the trade.
2. Select **Edit**.
3. In the wizard's **2. Add Trades**, modify the form's field contents as needed.
4. Select **Save** when finished.

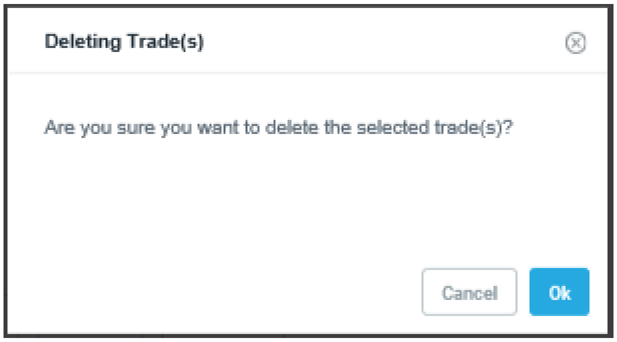
> **Note**: if you wish to only modify the **Net Position** in an F&O portfolio, simply modify it inline while viewing the trade in the Trades Grid; select the green Checkmark when finished.



To Delete Trade:

1. Check the box(es) in the first column to select the trade(s).
2. Select **Delete**.

3. Select **OK** in the confirmation dialog box:



Manage Portfolios Grid

To Search for a Portfolio:

1. Select  and enter a search term in the box. Any portfolio that matches the term within the Name, Account or Firm fields will display.
2. To clear the search "filter," remove the entry in the Search field.

To Delete a Portfolio:

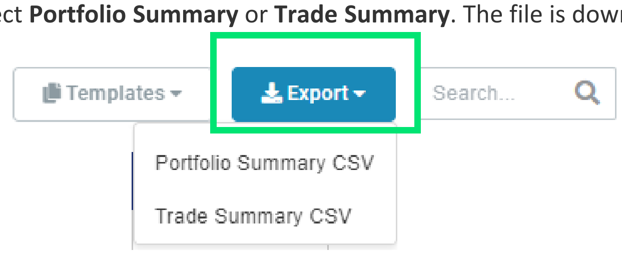
1. Check the box(es) in the first column to select the porfolio(s).
2. Select **Delete**. CME CORE automatically purges portfolios after 30 days of inactivity.

To Copy a Portfolio:

1. Check the box in the first column to select the portfolio you want to copy.
2. Select **Copy**. A new portfolio row appears with the name "Copy of <original portfolio>". This may be useful in comparing hypothetical portfolio edits.

To Download Portfolio Summary or Trade Summary:

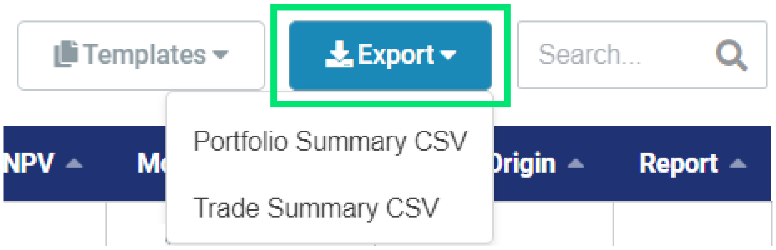
1. Select **Export**.
2. Select **Portfolio Summary** or **Trade Summary**. The file is downloaded.



To Export Trades:

1. Open portfolio by selecting the blue hyperlink in the name field.
2. Select **Export**.

3. Select **Portfolio Summary CSV** or **Trade Summary CSV**. The file is downloaded.

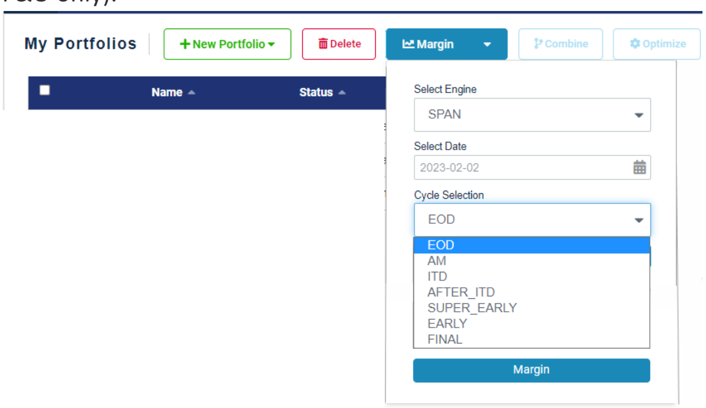


To Combine Portfolios:

1. Check the boxes in the first column to select the portfolios you want to combine.
2. Select **Combine**. The trades of the portfolios are combined in a new portfolio and appears at the top of the **My Portfolios** list.

To Margin Portfolio(s):

1. Check the box in the first column for the portfolio and select **Margin** (for FX) or select the drop-menu for **Margin** (for F&O only).



   a. Select **Engine** (SPAN or SPAN2 framework).
   b. Select the **Date** (defaults to prior day; can be up to 18 months prior).
   c. Select the **Cycle Selection** (defaults to EOD).

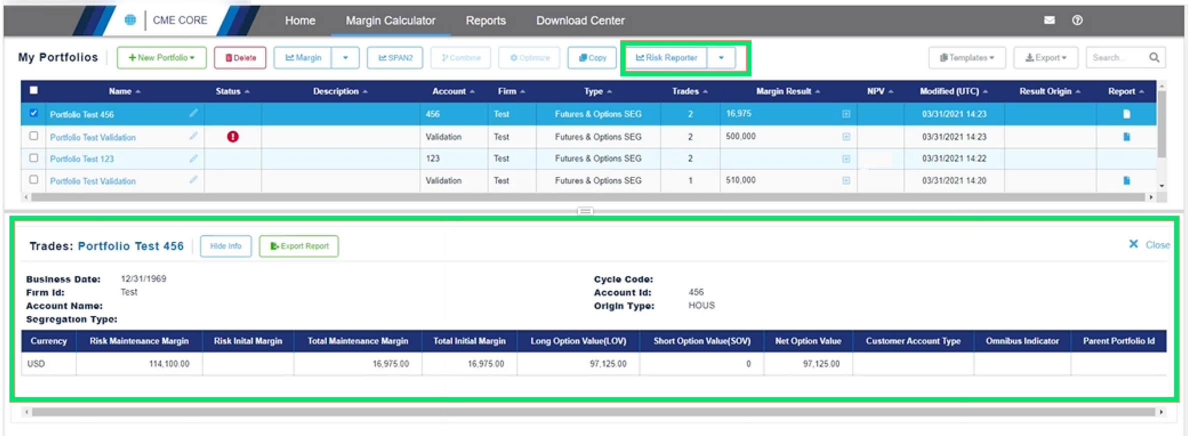
Cycle Name within CME Core	SPAN File Cycle Code	Approximate Timestamp of Risk Data
AM	".a"	~10:00 AM CT
ITD	".i"	~11:00 AM CT
AFTER_ITD	".ai"	~1:00 PM CT
SUPER_EARLY	".be"	~2:00 PM CT
EARLY	".e"	~3:00 PM CT
FINAL	".s"	~4:30 PM CT
EOD	".c"	~5:45 PM CT

   d. Select **Margin**.

The system displays the results in the **Margin Result** column.

Notes:

- CME CORE returns margin requirements for this portfolio based on yesterday's end of day or date that is specified.
- Portfolios with validation errors can be margined but margin results do not include the invalid trades.
- View a breakdown of margin results by selecting **Risk Reporter**.

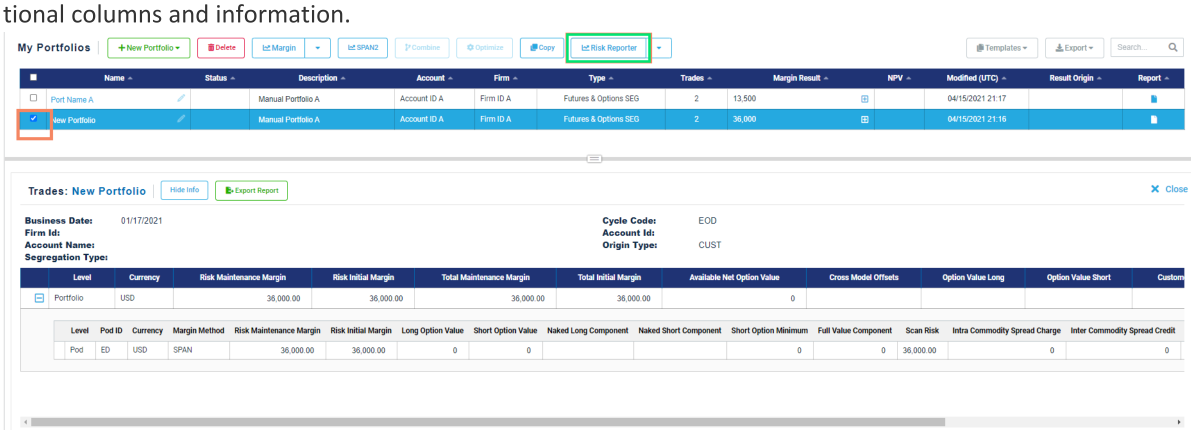


- The Risk Reporter content can be downloaded by selecting **Export Result** within this screen.

To View Risk Report:

After generating margins, you may access a risk report to view a breakdown of margin results.

1. Check the box(es) in the first column to select the portfolio(s) for which you want to generate a risk report.
2. Select **Risk Reporter**. The system displays the results at the bottom part of the screen; scroll to the right to see additional columns and information.



- Risk Reporter shows the risks at two levels (Portfolio and Pod) for portfolios with SPAN products and three levels (Portfolio, Pod and Product Group) for portfolios with SPAN 2 products.
- **Export Report** downloads the report to a .CSV file.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	Level	BusDate	Cycle	Run	Currency	FX_Rate	OmnibusI	Firm ID	Account N	Account II	Parent Po	Segregati	Customer	Clearing C	Pod	Margin M	Product G	Risk Main
2	Portfolio	1/17/2021	EOD		USD			Firm ID A						CME				36000
3	Pod	1/17/2021	EOD		USD			Firm ID A		Account ID A				CME		SPAN		36000
4																		
5																		
6																		
7																		

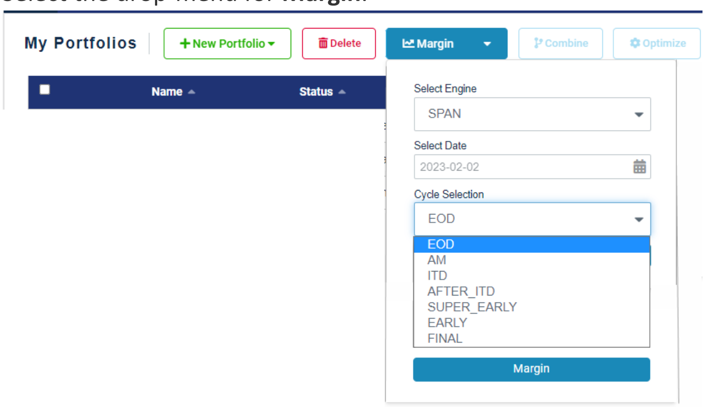
- Select **X Close** to close the report.

SPAN® and SPAN 2® Framework

These instructions cover how to margin if you have already built a portfolio or uploaded a portfolio.

To margin with SPAN or SPAN 2 framework:

1. Check the box in the first column for the portfolio that you wish to margin (only F&O portfolios can use the Margin drop-down menu option).
2. Select the drop-menu for **Margin**.



   a. Select **Engine** (SPAN or SPAN 2 framework).
   b. Select the **Date** (defaults to prior day; can be up to 18 months prior).
   c. Select the **Cycle Selection** (defaults to EOD).

Cycle Name within CME Core	SPAN File Cycle Code	Approximate Timestamp of Risk Data
AM	".a"	~10:00 AM CT
ITD	".i"	~11:00 AM CT
AFTER_ITD	".ai"	~1:00 PM CT
SUPER_EARLY	".be"	~2:00 PM CT
EARLY	".e"	~3:00 PM CT
FINAL	".s"	~4:30 PM CT
EOD	".c"	~5:45 PM CT

   d. Select **Margin**.

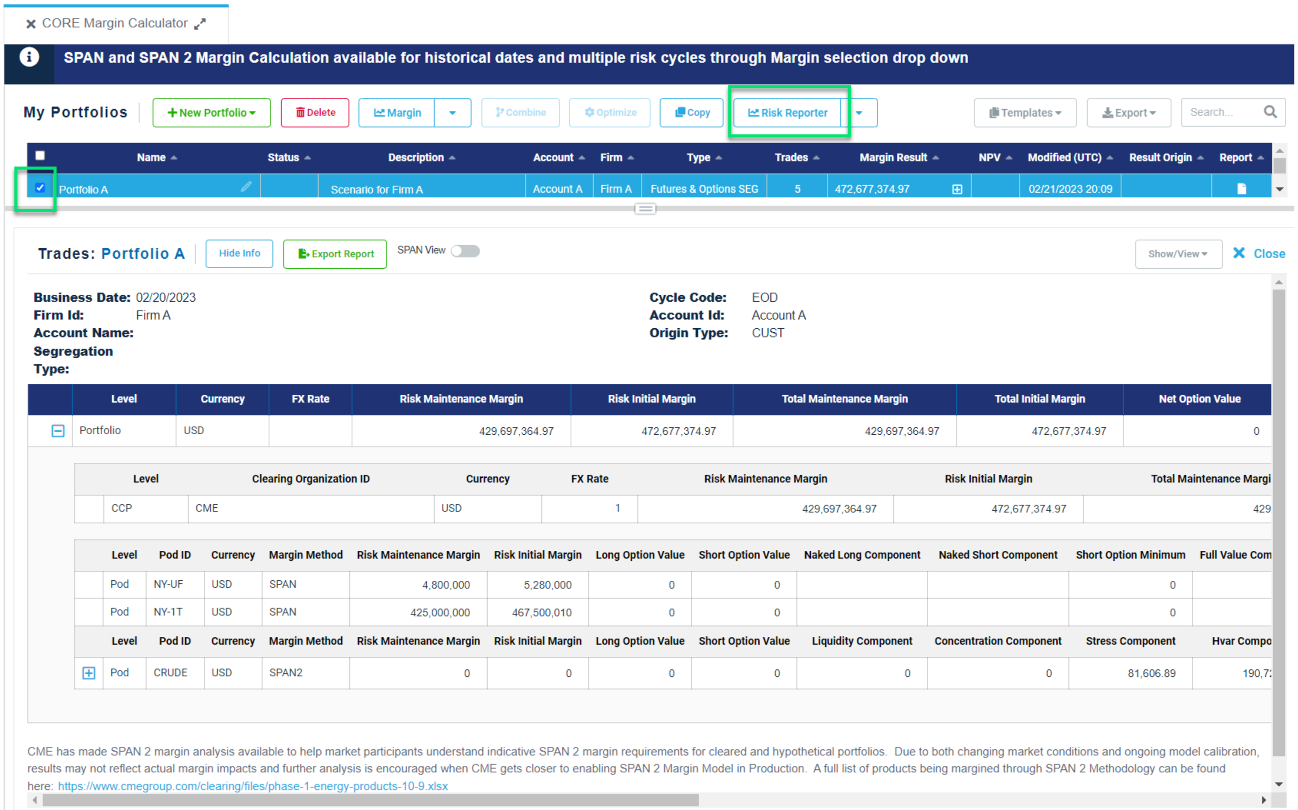
Note: Message "Margining in progress..." appears momentarily. If you do not use the Margin drop-down (simply selecting Margin from the My Portfolio menu) the default will be for SPAN framework, day prior and EOD settings.

Note: If you enter a date in the past (e.g., a year prior) and your trades include products that did not exist at that time, the system will display validation errors. Therefore, be sure to enter valid trades for products that existed at the point in time for which you want margin calculated. This is best accomplished by uploading trades from a .CSV file. The build wizard's **2. Add Trades** is only applicable to products that exist today.

Note: Margin results returned using **SPAN2** includes requirements for SPAN2 products; whereas margin results returned using **Margin** will not include requirements for SPAN 2 products.

To view Risk Report with SPAN 2:

1. Check the box(es) in the first column to select the portfolio(s) (with SPAN 2 products) for which you want to generate a risk report.
2. Select **Risk Reporter**. The system displays the results at the bottom part of the screen; scroll to the right to see additional columns and information.



- Risk Reporter shows the risks at three levels:
  - **Portfolio**: aggregate sum of all requirements.
  - **Pod**: the combined commodity level aggregate requirement.
  - **Product Group:** lowest level of detail provided in the SPAN2 framework.
- **Export Report** downloads the report in a .CSV file.

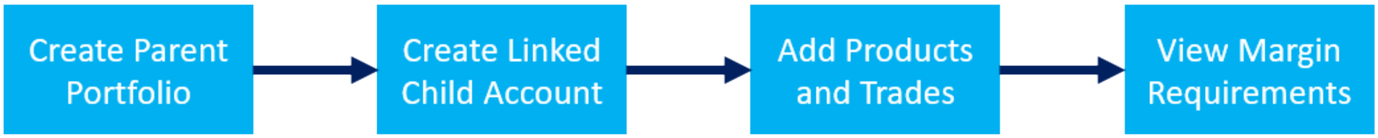
3. Select **X Close** to close the report.

Note: All portfolios with in-scope SPAN 2 products will return margins in the SPAN 2 framework when selecting **Margin**.

Omnibus Portfolio

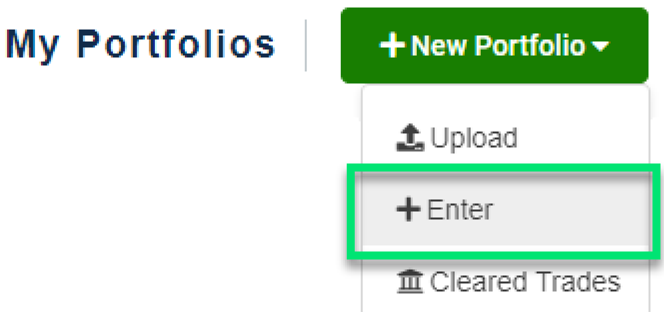
These instructions cover how to build and manage omnibus portfolios.

An omnibus portfolio structure is comprised of a parent portfolio and 0, 1 or many child accounts. First create the parent, then create linked children, add products/trades, then margin.

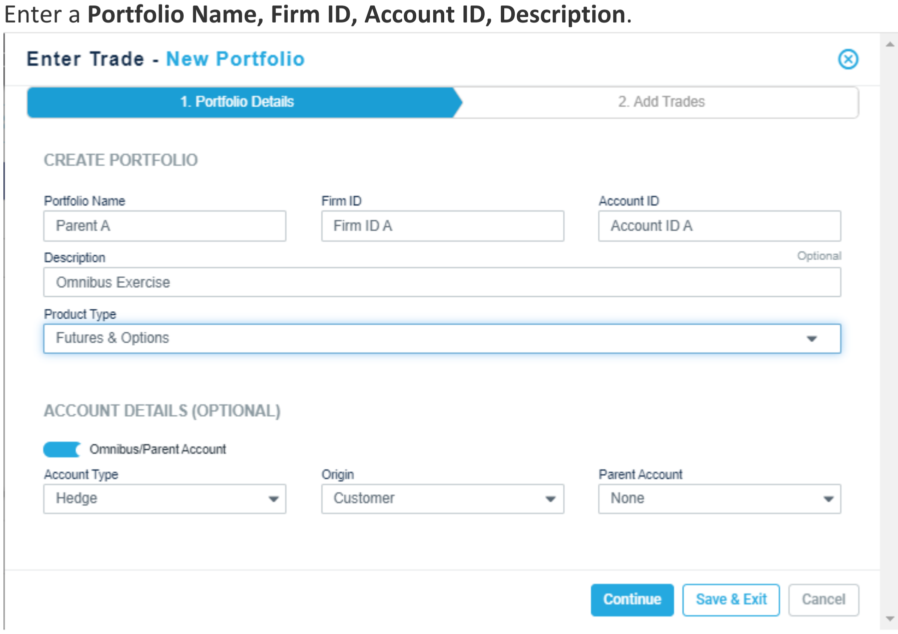


To build an omnibus portfolio PARENT account:

1. Select **+New Portfolio > Enter** from the FX and F&O Calculator screen.



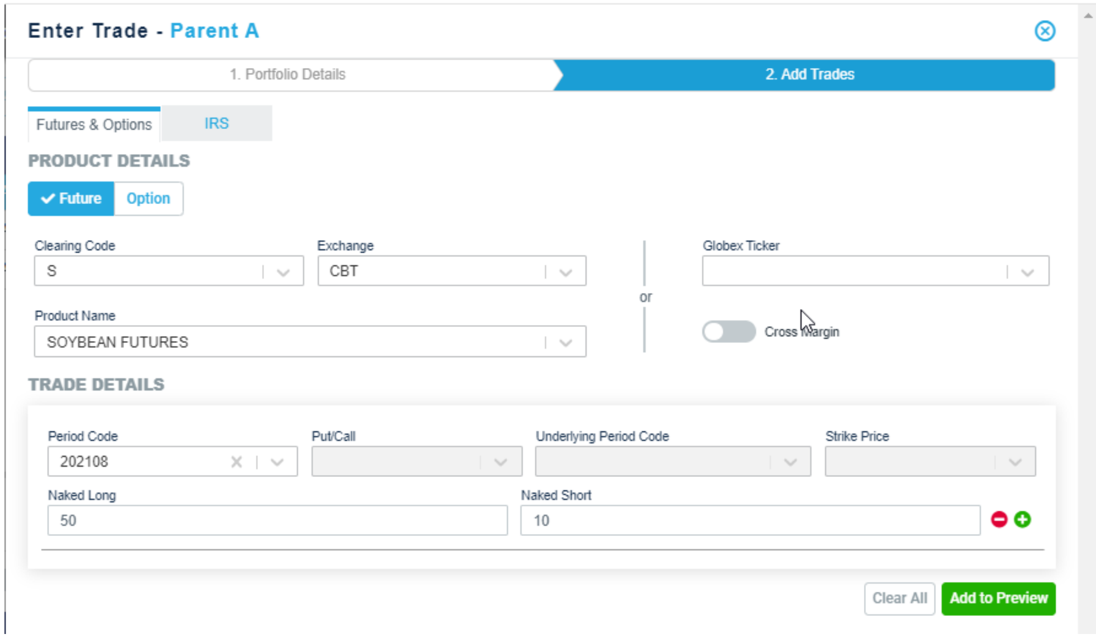
2. In the wizard's **1. Portfolio Details**:
   a. Enter a **Portfolio Name, Firm ID, Account ID, Description**.



   b. Select **Futures and Options** for **Product Type**.
   c. Activate the slider for **Omnibus/Parent Account**.
   d. Select the **Account Type** and **Origin**.

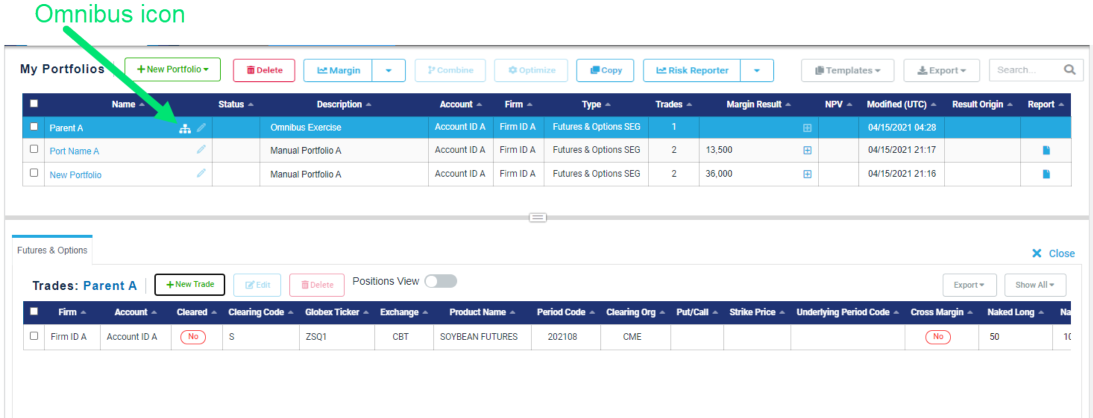
e. If this a fully disclosed omnibus portfolio (parent has no naked positions):
   a. Select **Save and Exit**
   b. Follow instructions for creating a child account (below entitled "***To build a omnibus portfolio CHILD account***"). Child positions should not be expressed in the parent portfolio.

f. If this is an undisclosed or partially disclosed omnibus portfolio:
   a. Select **Continue**.
   b. In the wizard's **2. Add Trades** tab, identify products and trades for this parent positions and select **Add to Preview**. Parent positions are represented as "Naked Long" or "Naked Short" quantities.



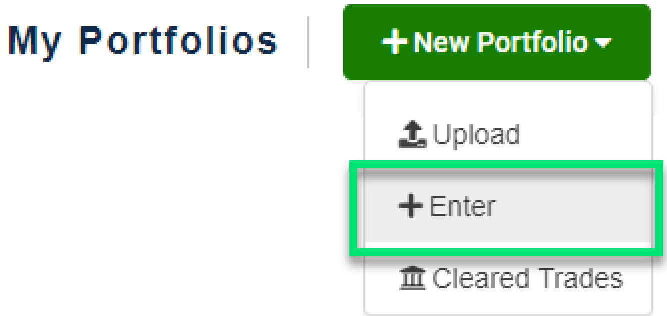
   c. Select **Save** to exit the wizard. The omnibus icon appears on the right of the portfolio name.

Omnibus icon



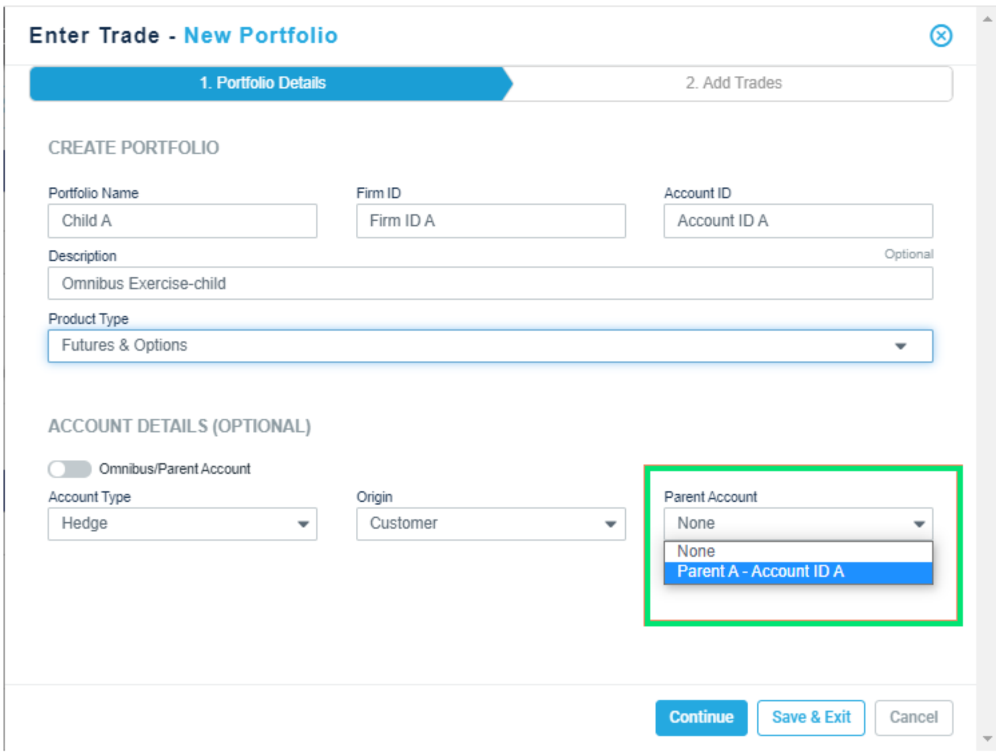
▷ To build a omnibus portfolio CHILD account:

1. Select **+New Portfolio > Enter** from the FX and F&O Margin Calculator screen.

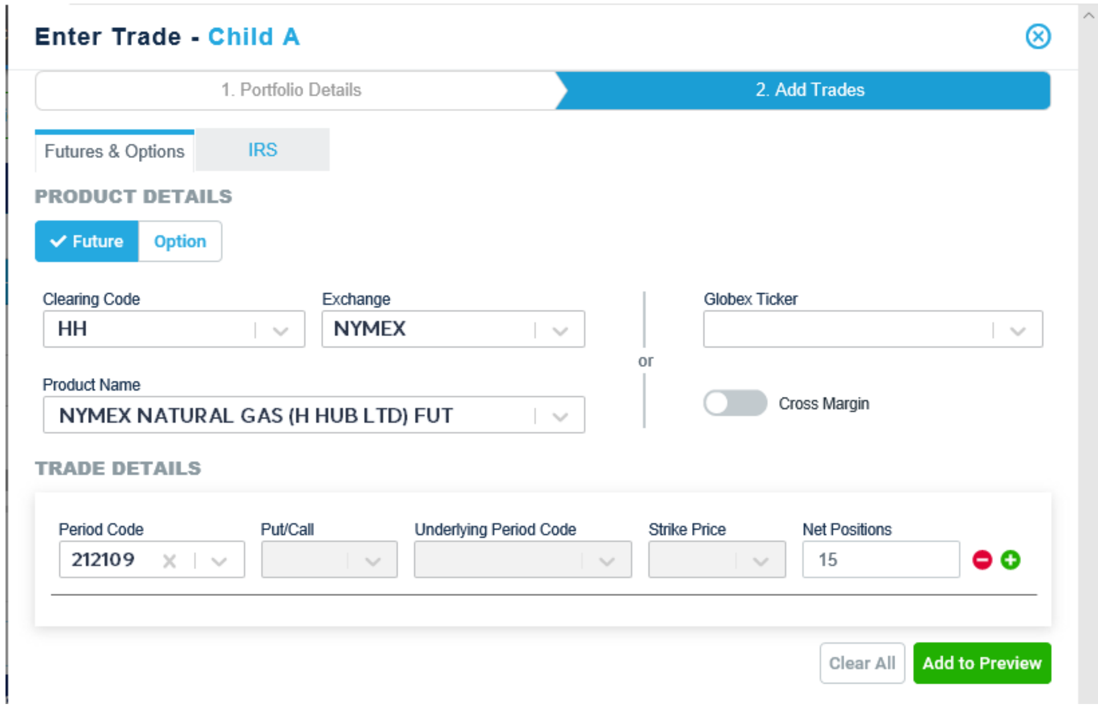


:

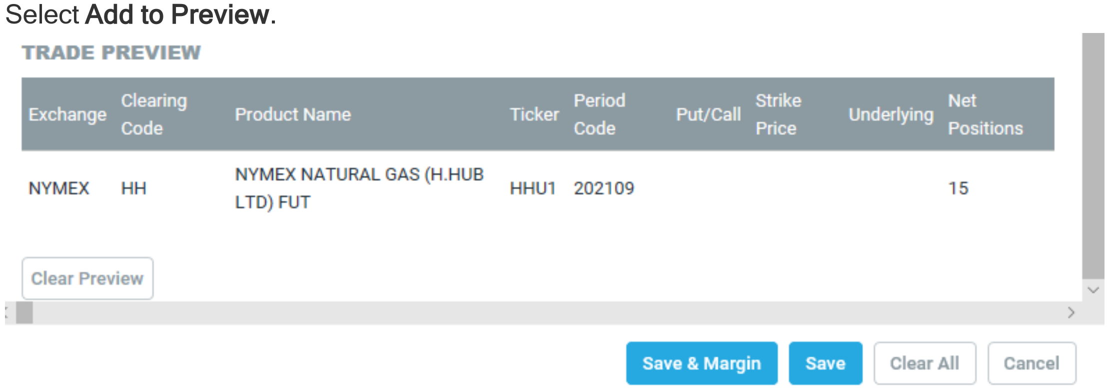
2. In the wizard's **1. Portfolio Details** tab for this child account:
   a. Enter a **Portfolio Name, Firm ID, Account ID, Description** . Ensure the Firm ID of the child matches that of the parent.



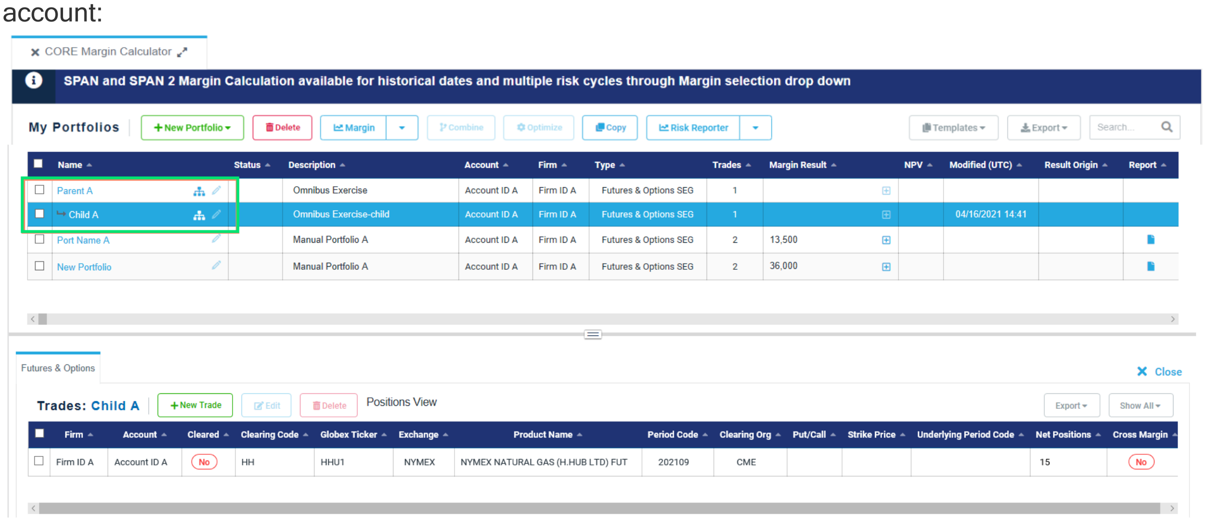
   b. Select **Futures and Options** for **Product Type**.
   c. Select the **Account Type** and **Origin**.
   d. Select the **Parent Account** from the drop-down menu to link this child account to the appropriate parent account. (The Firm ID determines what parent accounts appear in the drop-down menu).
   e. Select **Continue**.
3. In the wizard's **2. Add Trades** tab:
   a. Identify products and trades for this child's positions. Note that child account quantities are expected to be entered as net positions, unlike the naked position of the parent account.



b. Select **Add to Preview**.

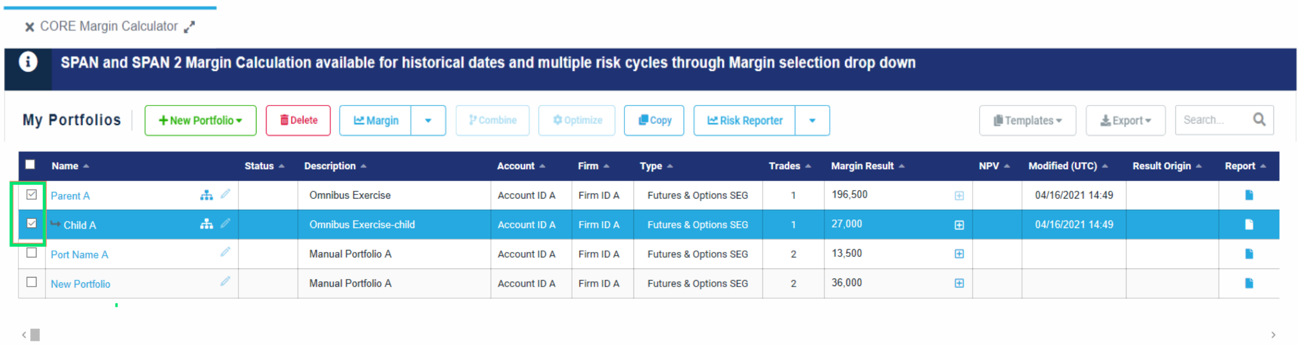


c. Select **Save** once all trades have been entered. The portfolio grid shows the linked parent and child account:



▷ To retrieve margin results for omnibus PARENT and CHILD portfolios:

1. Check the boxes for the parent and child portfolio. Since child account margin impacts the parent account, margining a child account in isolation will also re-margin the parent account.



2. Select **Margin**.

Notes:

- When opening an omnibus parent account, CME CORE first presents the parent naked positions.
- If the portfolio has been margined, the aggregate parent+child positions can be viewed in the parent by selecting the "Positions View" slider in the Trades grid.
- To help users better manage parent/child portfolios, CME CORE presents warning messages in the "Status" field when the user edits parent or child positions. This warning error is intended to call out stale margin results for portfolio where edits have occurred.

Rates Margin Calculator Screen

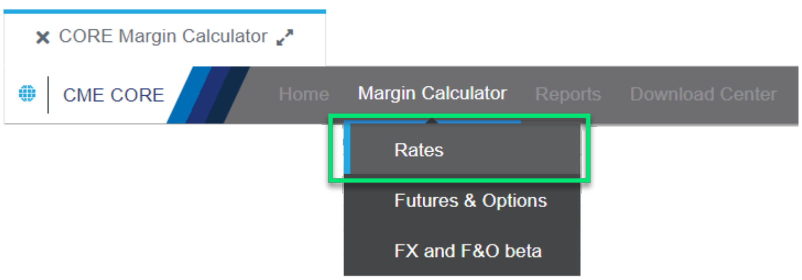
This section provides instructions in using the for Rates Calculator screen. Use the Rates Calculator screen to manage portfolios, trades, margining and optimization for the Interest Rate Swaps, Delta Ladders and Futures and Options. Portfolios may consist of any of these individual trade types or combinations of these trade types. Portfolios may also be combined, using Combine option. Note that F&O portfolios created in FX and F&O Calculator screen also appear in the Rates Calculator screen.

Access the Portfolio Type Options screen for a full list of all trade types that may be utilized from the Rates Calculator screen and the margining / optimization options that are available for these trades.

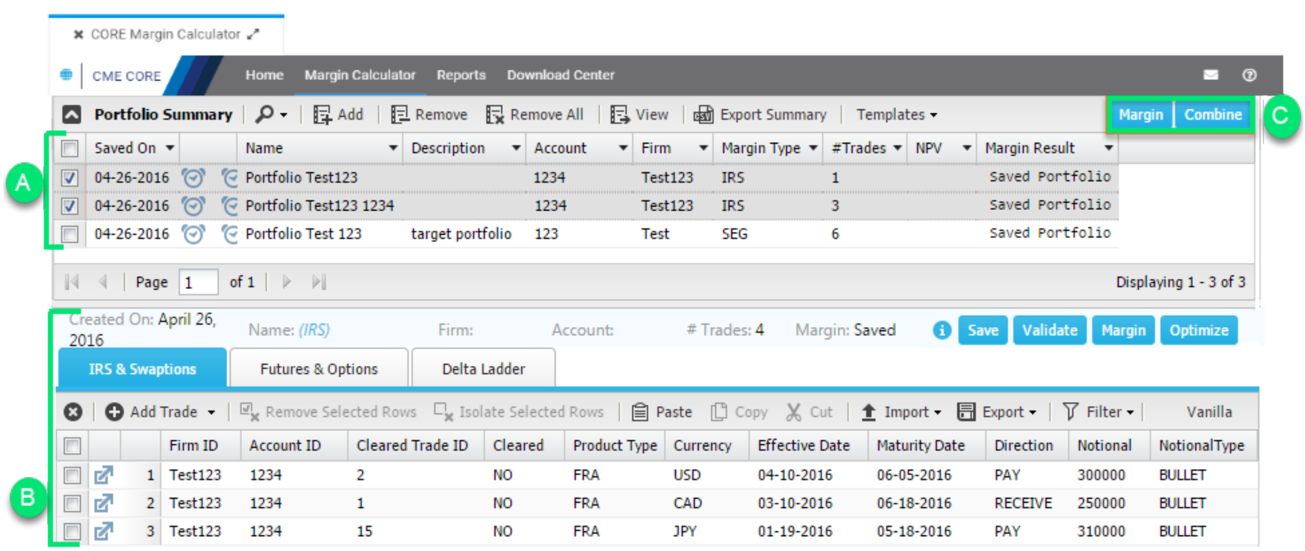
- **CORE**: For any aggregate portfolio or any combination of IRS, Delta Ladder or Futures in the Rates Calculator. This include hypothetical portfolios and cleared portfolios which have been edited.
- For **Interest Rate Swap** portfolios only:
  - **Cleared CUR**: Status is assigned when the user loads a current portfolio via the “Load Cleared Portfolio” functionality intraday. CME CORE builds a portfolio that includes all trades cleared in the account up to that point in time.

To access the interface:

1. Login to CME CORE.
2. Select **Margin Calculator > Rates**.



The Rates Calculator screen appears:



The Rates Calculator screen allows multiple types of trade portfolios to be entered and margined / optimized. To manage this, there are three tabs in the Trade grid (bottom half of screen): **IRS**, **Futures & Options** and **Delta Ladder**. Trades are entered from their respective grids.

Futures and Options portfolios can either be: futures segregated accounts (SEG), OTC sequestered accounts (SEQ), or a combination of the two.

A. Manage Portfolios in the **Portfolio** section:
   - Load trades and load cleared portfolios (IRS only)
   - Add a new portfolio
   - Remove selected portfolios
   - Export the portfolio summary
   - Download templates
   - Schedule a Margin Report

B. Manage Trades in the **Trade Grid**:
   - Add
   - Edit / Remove / Export
   - Save
   - Validate
   - Margin
   - Optimize

C. Manage Report Generation in **Portfolio Section** or **Trade Grid**:
   - Margin
   - Combine Selected

Portfolio Types in Rates Calculator Screen

Multiple portfolio types may be loaded and margined from the Rates Calculator screen. Portfolio types include:

- Interest Rate Swaps (IRS)
- Futures and Options (SEG, SEQ, SEG-SEQ)
- Delta Ladders (DL)

Futures and Options portfolios can either be: futures segregated accounts (SEG), OTC sequestered accounts (SEQ), or a combination of the two.

These portfolio types can be combined into different margin types. The table below shows all possible combinations, and which results are available for that margin type. If a Result is indicated "False" in the table below, a result will not be returned for the margin / optimization when it is run in CME CORE.

Selecting Optimize triggers margin optimization.

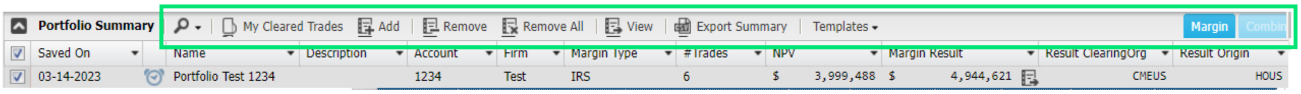
- **Optimal margin results based on Margin Optimization**: Calculates the ideal allocation of *user defined futures* (trades provided in the upload) to move into an OTC sequestered account to minimize portfolio risk.

Note: When adding Futures, denote the Margin Type as **FUT** to signify the future is in a Futures Segregated (SEG) account, or **OTC** to signify the future is in a Sequestered (SEQ) account.

Margin Type	Margin Result	Opt Result
SEG	Yes	False
SEQ	False	False
SEQ/SEG	False	False
DL	Yes	False
DL/SEG	Yes	Yes
DL/SEQ	Yes	Yes
DL/SEQ/SEG	Yes	Yes
IRS	Yes	False
IRS/SEG	Yes	Yes
IRS/SEQ	Yes	Yes
IRS/SEQ/SEG	Yes	Yes
IRS/DL	Yes	False
IRS/DL/SEG	Yes	Yes
IRS/DL/SEQ	Yes	Yes
IRS/DL/SEQ/SEG	Yes	Yes

Managing Rates Portfolios

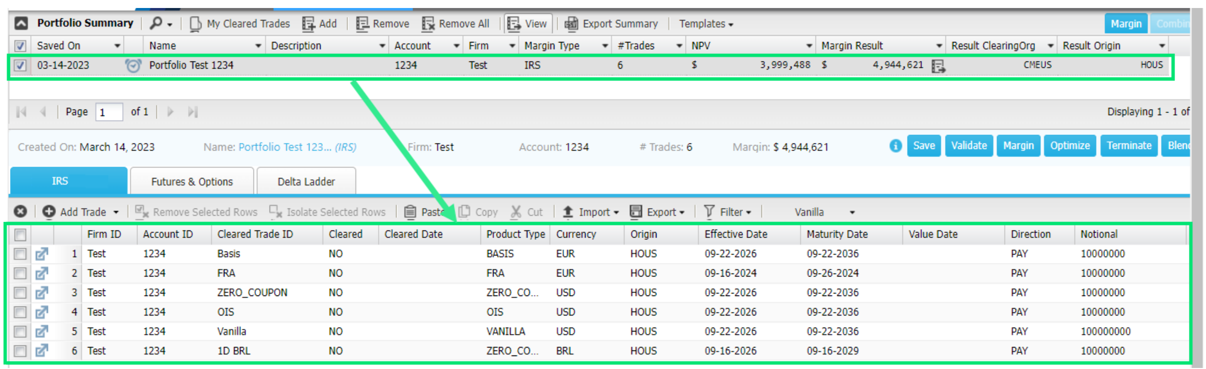
Use the Portfolio section to manage all portfolio types generated on this screen.



Portfolio Options

Portfolio management workflow typically involves: portfolio creation, accessing the portfolio at a later time, exporting portfolio information, and deleting the portfolio. Example templates may be downloaded for portfolio types.

- **Search**: Sort / Filter the Portfolio list to display only matching results.
  - Search portfolios
  - Load trades



	Firm ID	Account ID	Cleared Trade ID	Cleared	Cleared Date	Product Type	Currency	Origin	Effective Date	Maturity Date	Value Date	Direction	Notional
1	Test	1234	Basis	NO		BASIS	EUR	HOUS	09-22-2026	09-22-2036		PAY	10000000
2	Test	1234	FRA	NO		FRA	EUR	HOUS	09-16-2024	09-26-2024		PAY	10000000
3	Test	1234	ZERO_COUPON	NO		ZERO_CO...	USD	HOUS	09-22-2026	09-22-2036		PAY	10000000
4	Test	1234	OIS	NO		OIS	USD	HOUS	09-22-2026	09-22-2036		PAY	10000000
5	Test	1234	Vanilla	NO		VANILLA	USD	HOUS	09-22-2026	09-22-2036		PAY	100000000
6	Test	1234	1D BRL	NO		ZERO_CO...	BRL	HOUS	09-16-2026	09-16-2029		PAY	10000000

- **My Cleared Trades**:
  - Select and import clearing accounts into CORE.
  - For the selected account, view positions (end of day or current) for a lookback period for the last 30 days.
- **Add a Portfolio**:
  - Add a new portfolio (use for hypothetical portfolios)
  - (Requires user entitlements)
  - Remove selected / Remove All portfolios
- **View**:
  - View selected portfolio trades, that comprise a portfolio.
  - Update,as necessary.
- **Export Summary**:
  - Export the portfolio summary
- **Templates**:
  - Download templates that represent various IRS, Futures, Options and Delta Ladder portfolios.

Add a Rates Portfolio

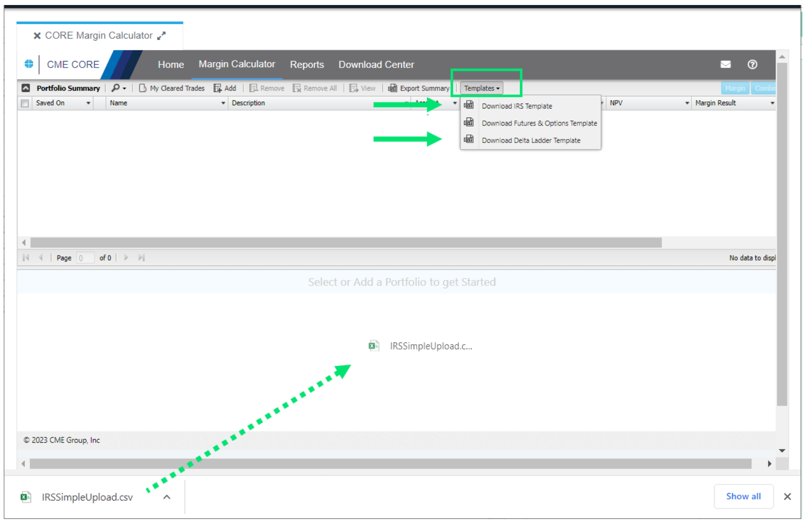
One or more IRS or Delta Ladder portfolios can be imported or manually entered from the Rates Calculator screen. You may also create an IRS or Delta Ladder portfolio from the FX and F&O screen.

Note the following:

- If file is entered manually, portfolio does not show up in the Portfolio summary until the file is saved.
- If more than one file is loaded and the Account / Firm information is the same for all files, then the generated portfolio will be named Portfolio [Firm] [Account] and have the same Account / Firm information.
- If more than one file is loaded and the Account / Firm information is not the same for all files, then the generated portfolio will be named "Portfolio Aggregate Aggregate," and both Account and Firm will have the value of "Aggregate."

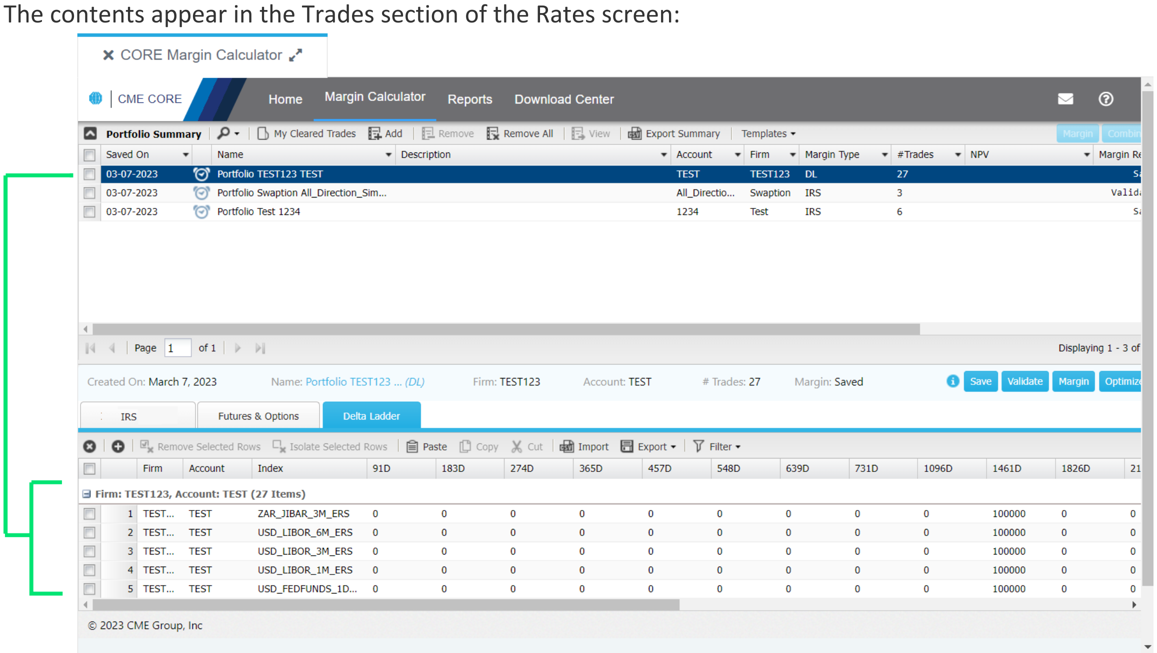
To add portfolio contents from a product Template in Rates Calculator screen:

1. Select **Margin Calculator > Rates**.
2. Select **Templates** and select a product type (**IRS** or **Delta Ladder**) to download a .CSV template.



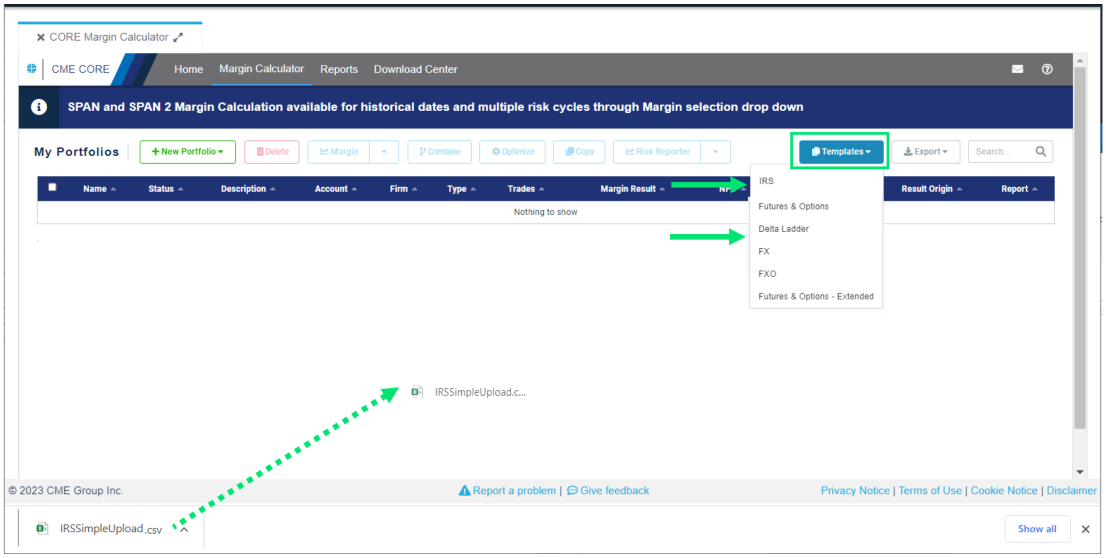
3. Drag and downloaded template icon into the body area of the portfolio table.

   The contents appear in the Trades section of the Rates screen:

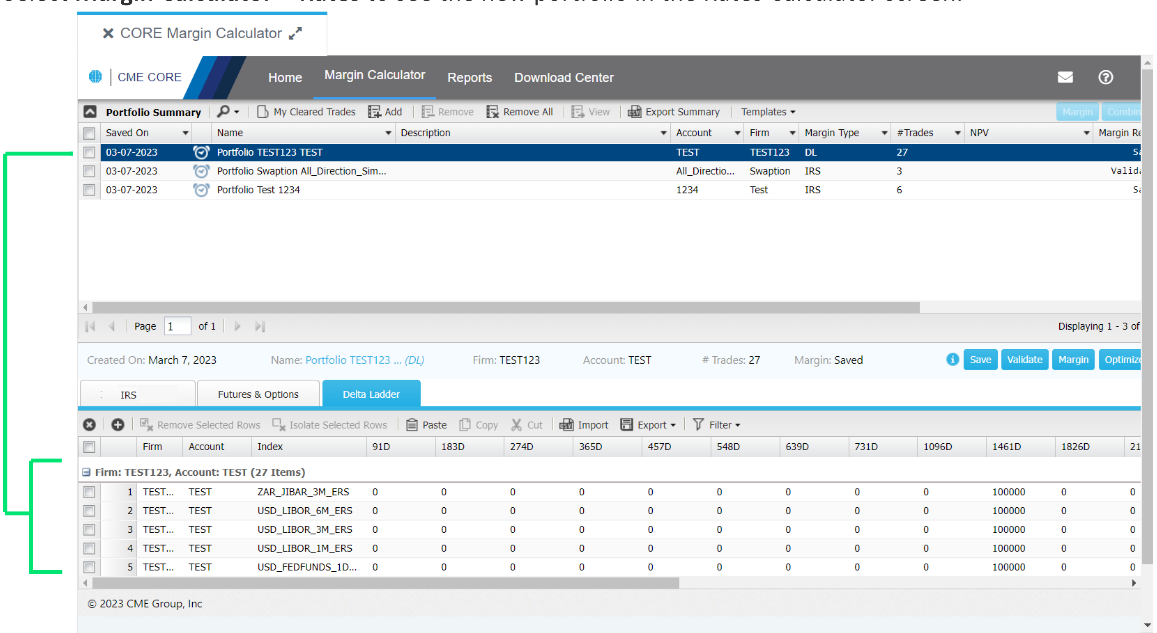


To add portfolio contents from a product Template in FX and F&O Calculator screen:

1. Select **Margin Calculator > FX and F&O**.
2. Select **Templates** and select a product type (**IRS** or **Delta Ladder**) to download a .CSV template.
2. Drag the downloaded template icon into the body area of the portfolio table:



3. Select **Margin Calculator > Rates** to see the new portfolio in the Rates Calculator screen.

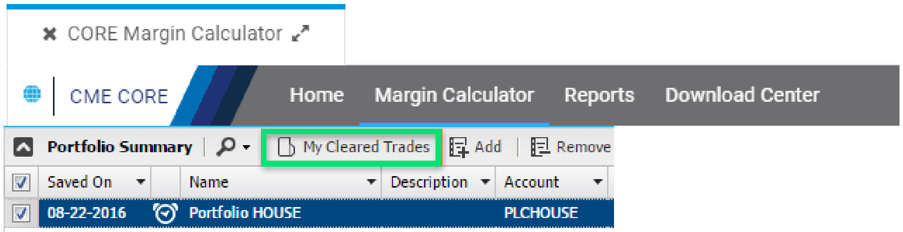


My Cleared Trades / Real-Time Positions

Using the My Cleared Trades functionality, users can view end-of-day (prior trading day) and current (real-time) trade data for OTC interest rate swap (IRS) and cross margined futures. Additional information includes cleared portfolios, margin results and cleared trade data. This may reduce the need to upload cleared portfolios to perform a margin analysis.

To load a cleared portfolio:

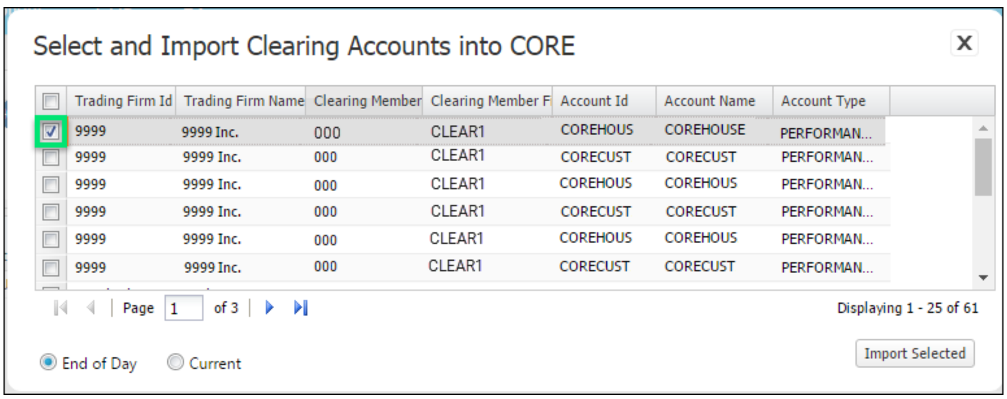
1. In the **Margin Calculator** > **Portfolio** menu, select **My Cleared Trades**.



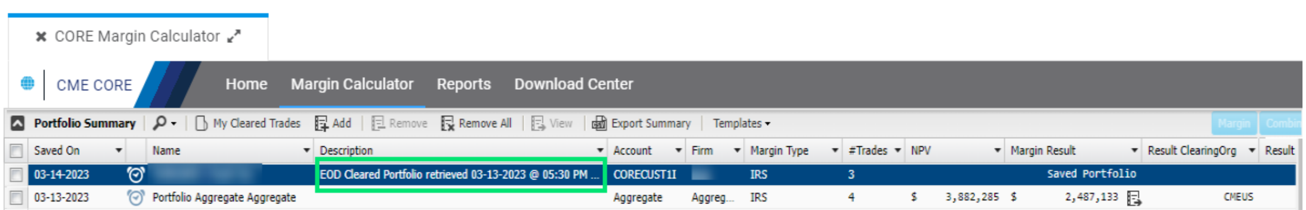
The **Select and Import Clearing Accounts into CORE** dialog box appears.

> **Note**: Clearing accounts can be sorted by selecting a column heading.

2. Select accounts to add.



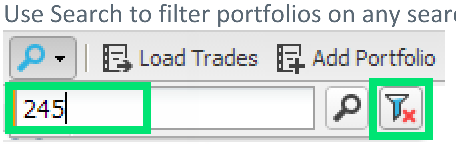
3. Select **End of Day** or **Current**.
4. Select **Import Selected**.
5. Portfolios load into trade grid, with a status of **Cleared EOD** or **Cleared CUR**.



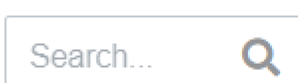
6. To view trades, select the newly loaded portfolio, then select a tab from the **Trades** pane.

Search Portfolios in the Rates Screen

Use Search to filter portfolios on any search term within the Name, Account or Firm fields.



To search portfolios:

1. Select the magnifier 

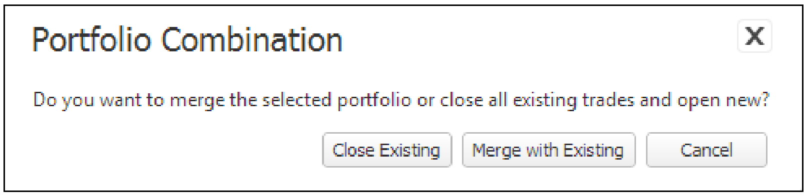
 icon and enter a search term in the box. Only portfolios that match the entered term in any part of the Name, Account or Firm fields display.
2. To clear the search "filter," select the filter icon. All portfolios display.

Load Trades

Trades are loaded similarly to other portfolios. If two or more portfolios are loaded into the trade grid at the same time, then a new aggregate portfolio will be generated when the portfolio is margined.

To load trades:

1. Select the box adjacent to the portfolio(s) to load.
2. Select **Load Trades**. One of the following occurs:
    - If there is no existing portfolio, the trades load.
    - If there is an existing portfolio, a dialog box displays with the Portfolio load options.
3. If the dialog box displays, select **Close Existing**, **Merge with Existing** or **Cancel**. Trades load or action is canceled.

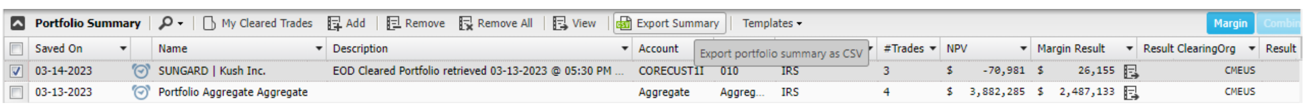


Export the Portfolio Summary

Export a the currently selected summary of all portfolios.

To export the portfolio summary:

Select **Export Summary**. Summary information is downloaded in a .CSV file.



Remove Selected Portfolios

Remove one or more portfolios from the Portfolio section.

To remove one or more portfolios:

1. Select the box adjacent to the portfolios to remove.
2. Select **Remove**.

Downloads

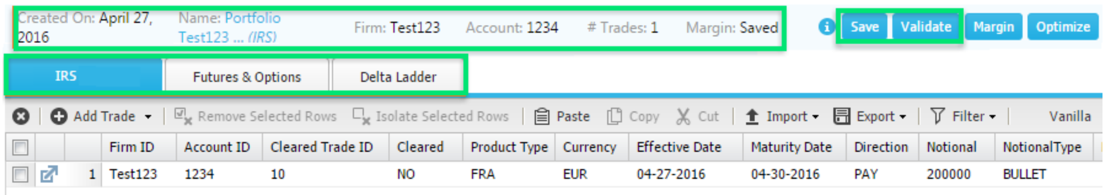
Download sample files.

To download templates:

1. Select **Downloads**.
2. Select file to download from the list. File downloads in a .CSV file.
3. **Open** or **Save** file.

Managing Rates Trades

Use the Trade grid to manage trades for all portfolio types generated on this screen.



Portfolios in the Trade Grid are identified by: Created on Date, Name, Firm, Account and Number of Trades. Margin indicates portfolio status, and following Margin, will show the margined amount.

There are three trade grids:

- IRS
- Futures and Options
- Delta Ladder

From an open portfolio, select a tab to view trades for the corresponding trade types.

> **Note**: Futures and Options may also be viewed and updated from the Futures and Options screen.

IRS Trade Reference

IRS trades may be imported or manually entered using the basic template, the simple template, or the trade register.

See the following layout reference for input fields for each template:

- Basic template required fields
- Simple template input fields
- Trade register input fields

Editing Trades Grid for Rates

The Rates Calculator's Trade Entry (Grid) contains basic tools for managing trade information--basic editing, import/export and filtering tools.

The Trade Menu provides the following functionality:

- Copy, cut and paste trade information
- Add rows
- Remove or isolate rows
- Import and export portfolios
- Filter trades by specified criteria
- Hide / Show Portfolio Summary

Note: The Interest Rate Swap screen has an additional option to select between view types.

Copy, Cut and Paste Trade information

CME CORE provides basic editing capabilities to make it easier to enter, modify or remove trade information. Individual data cells or rows of data can be copied and pasted within a trade section.

- You cannot cut and paste between different portfolios.
- Short-cut keys CTRL-C, CRTL-V and CRTL-X can also be used to copy, paste and cut information.
- If the **Paste**, **Copy** and **Cut** options are grayed out in the trade menu, these options are not available on your browser. Use the **Ctrl-C** (Copy), **Ctrl-X** (Cut) and **Ctrl-V** (Paste) options only.
- Copying / pasting more than one row or column at a time is not recommended.
- CME CORE does not check that rows are pasted into a corresponding cell, for example, Firm ID into Firm ID. Verify that data has been posted into the correct row and column.

To copy and paste trade information:

1. Select one or more data cells or a row of trade data.
2. Use **Ctrl-C** to copy the trade information or select **Copy** in the **Trade** menu.
3. Select, from **left to right** or **up to down**, the cells into which to paste the data, and use **Ctrl-V** or **Paste** in the **Trade** menu to paste the information.

To cut and paste trade information:

1. Select one or more data cells or a row of trade data.
2. Use **Ctrl-X** to cut the trade information or select **Cut** in the **Trade** menu.
3. Select, from **left to right** or **up to down**, the cells into which to paste the data, and use **Ctrl-V** or **Paste** in the **Trade** menu to paste the information.

Add Rows

To add a trade row:

Position the cursor in the section where the row is to be added and select the **[+]** symbol on the left of the menu. The new row shows in the trade list.

Note:View Manage Trades in the Rates Calculation section for adding IRS trades manually from the Trade Grid.

Remove or Isolate Rows

To delete one or more rows:

1. Check the box or boxes adjacent to the rows to delete.
2. Select **Removed Selected Rows**.

To isolate one or more rows:

1. Select the box or boxes adjacent to the rows to isolate.
2. Select **Isolate Selected Rows**.

Import or Export a Trade Portfolio

Import any type of portfolio from a .CSV file. Export trade data into Excel, PDF or XML (formatted for use with API) files. Use a file that was previously exported from CME CORE or create a file manually. Files exported from other applications can also be used, as long as they have the correct format.

See Add Trade Information to a Grid for importing trade information.

To export a trade portfolio:

1. Select the **Export** arrow. The export options display.
2. Select a file option. The **Opening Portfolio** window displays.

   Note: Export to API option is available for IRS, FX and Futures and Options trade data.

3. Select **Open with** or **Save File** option.

   Note: Files are saved to the **Downloads** directory.

Filter Trades

Trades can be filtered by various options, depending on which CME CORE product is being used. Only one filter type can be selected at a time.

To filter trades:

Select the **Filter** arrow and select the appropriate filter.

Hide / Show Portfolio Summary

To view more trades in the Trade grid, the Portfolio section can be hidden, so that the Trade grid displays on a larger portion of the screen.

To toggle between hiding and showing trades:

Select the icon to hide the Portfolio section and the icon to make the Portfolio section visible when it is hidden.

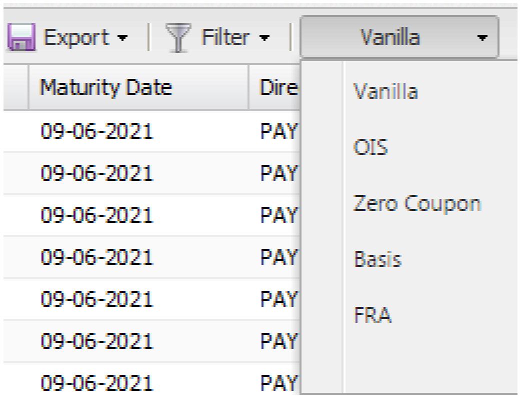
Interest Rate View

Interest Rate Swaps have additional functionality to select between view types.

Note: This selection is for viewing trades. Product type can also be selected for individual trades.

To select an IRS view:

Select the arrow to the right of Vanilla and select a Product view.



View displays:

- Vanilla: View only simple columns
- OIS: View only Overnight Index Swap columns
- Zero Coupon: View only Zero Coupon columns
- Basis: View only Basis columns
- FRA: View only Forward Rate Agreement columns

Note: To easily view / enter all fields for a single trade, use the IRS Basic Trade Editor.

Other Trade Grid Features

From the Trade Grid:

- Import Trades
- Manually Enter non-IRS Trades
- Manually Enter Interest Rate Swaps
- Add a Variable Notional Schedule (VNS)
- Edit / Remove / Export trades
- Save and Validate portfolio(s)

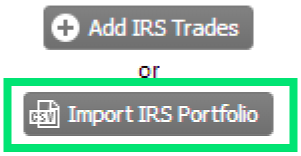
Import Trades

Import portfolios for any trade type. IRS trades may also require a Variable Notional Schedule (VNS).

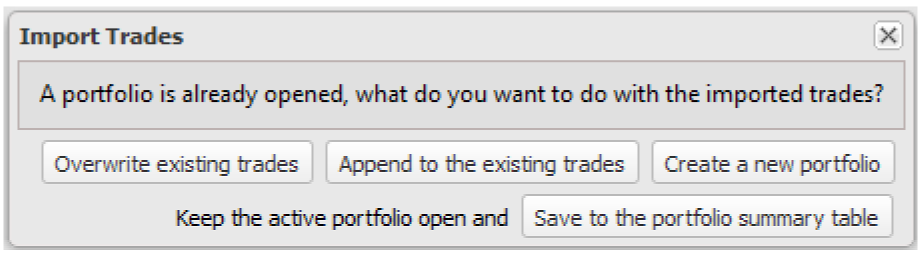
Note: When adding Futures, denote the Margin Type as **FUT** to signify the future is in a Futures Segregated (SEG) account, or **OTC** to signify the future is in a Sequestered (SEQ) account.

To import a portfolio:

1. Select **Add Portfolio** to add a new portfolio **OR** select the box adjacent to an existing portfolio and select **Load Trades** to load an existing portfolio.
2. Do one of the following:
   - **New Portfolio**:
     a. Select **Import Portfolio** button in the appropriate trade grid.

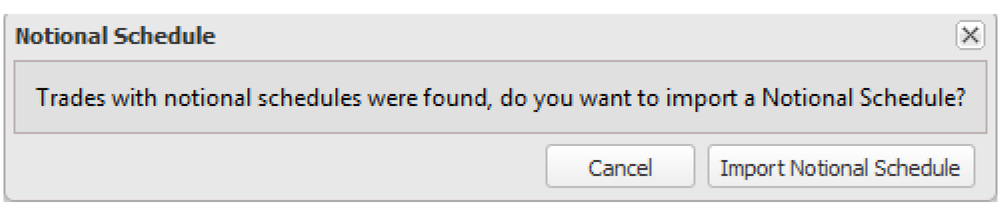


     b. From the **Import Items** dialog box, select a file to import.
     c. Select **Import**. Trades appear in **Trade Grid**.
     d. Select **Save**.
   - **Existing Portfolio**:
     a. Select **Import**.
     b. If the **Import Trades** dialog box displays, select an option:



     c. In the **Import Items** dialog box, select a file and select **Import**.

     The **Uploading** message displays, and the trade grid populates.
3. IRS Trades only: If trades with notional schedules are found, the Notional Schedule dialog box displays.



   Do one of the following:
   - Select **Import Notional Schedule**, select a file and select **Import**. The Variable Notional Schedule imports.
   - Select **Cancel**. The dialog box closes.

Manually Enter non-IRS Trades

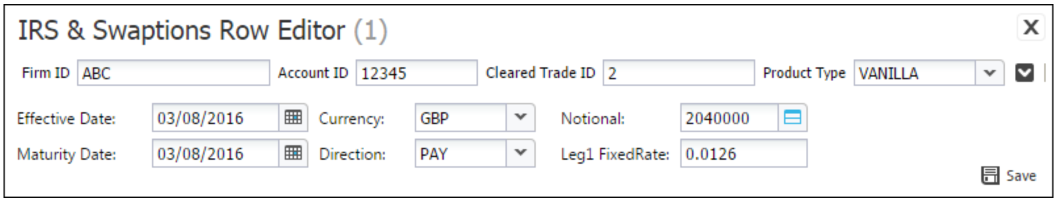
To add non-IRS trades to a grid manually:

1. Select **Add Portfolio** and select **Enter Manually** to add a new portfolio **OR** select the box adjacent to an existing portfolio and select **Load Trades** to load an existing portfolio.
2. Select the **[+]**button, place cursor in the new row and enter all item information.

Manually Enter Interest Rate Swaps

A minimal amount of information is required to generate an IRS Portfolio for the selected swap. Leg information can be entered manually or generated automatically. Use the IRS Row Editor to enter this information.

Note: Using the Expanded Trade Editor for entering more complicated IRS swaps.



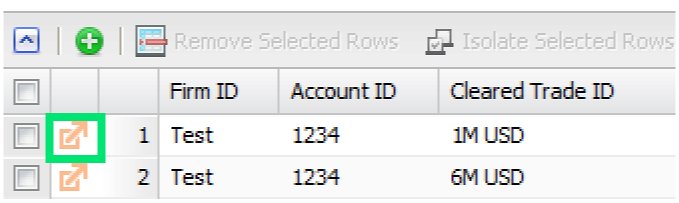
Displayed Fields vary by product type.

- Select the expand icon ( ) to view the expanded trade editor.
- The current row number displays at the top, in parentheses.
- Select **Save** to save changes.
- All Basic Swap fields are required when entering information directly into the trade grid.
- Variable Notional Swaps can be manually entered.

To manually enter trades:

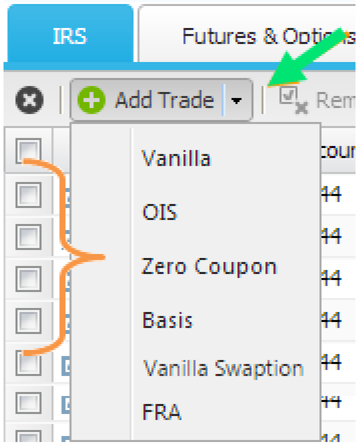
1. Select **Add Portfolio** and select **Enter Manually** to add a new portfolio **OR** select the box adjacent to an existing portfolio and select **Load Trades** to load an existing portfolio.
2. Do one of the following:

   - From the **IRS** tab, select the icon on the left side of a trade row.

   OR

   - From the **IRS** tab, select **Add Trade** and select a **Product Type**.



The **IRS Basic Editor** displays.

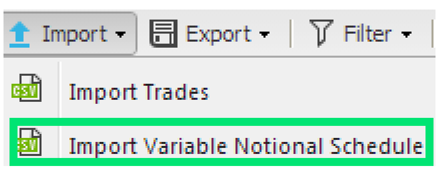
3. Enter **Firm ID**, **Account ID** and **Cleared Trade ID**.
4. Select a **Product Type**. Fields displayed may vary depending on product type selected.
5. Select / enter remaining fields as required.
6. Select **Save** when information is complete.

Add a Variable Notional Schedule

Import or manually add a VNS from the IRS trade grid when there are existing IRS Trades.

To import a Variable Notional Schedule for IRS Trades:

1. Select the Import arrow and select **Import Variable Notional Schedule**.



The **Import Items** dialog box displays.

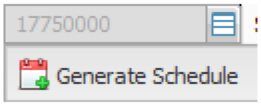
2. Select a file and select **Import**. The **Variable Notional Schedule** imports.

To manually enter a Variable Notional Schedule for IRS Trades:

1. In the **Notional** column, select the **Schedule** icon for a **Variable Notional Swap**.

> **Note**: Notional Type for Variable Notional Swaps is SCHEDULE.

Generate Schedule displays.



2. Do one of the following:
    - Select **Generate Schedule**. Schedule generates and displays.
    - Manually enter schedule amounts in **Step Notional** column.
3. Select another section of the display. Schedule closes and schedule icon turns green.

Edit / Remove / Export Trades

The menu functionality on the Rates Calculator screen does not differ from the other non-Futures and Options screens.

To edit, remove or export trades on any portfolio:

1. Select the tab of the portfolio to edit.
2. Follow instructions in corresponding section on the Trade Menu.

Save and Validate Portfolios

Save and Validate Portfolios prior to margining or optimization.

To save and validate trades:

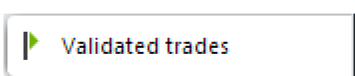
1. Select **Save**. Trades are saved. Confirmation message displays. Margin fields in both the Trade Grid and the Portfolio section will indicate trade is saved.

    > **Note**: If a Portfolio with a different trade type is added, a new portfolio is created with a Margin Type that reflects this. For example, if IRS trades are added to a DL portfolio, a new portfolio is created with Margin Type IRS/DL.

    > **Note**: If the Cross-Margin boxes are checked for a futures position, this denotes that the trade is in a OTC Sequestered account and the margin type will be SEQ. If this box is selected for some of the future positions, but not all the futures, the margin type will be SEG-SEQ.

    > **Note**: If the Account / Firm information is not the same for both files, the Portfolio Name will be "Aggregate Aggregate," and Account and Firm values will both be "Aggregate."

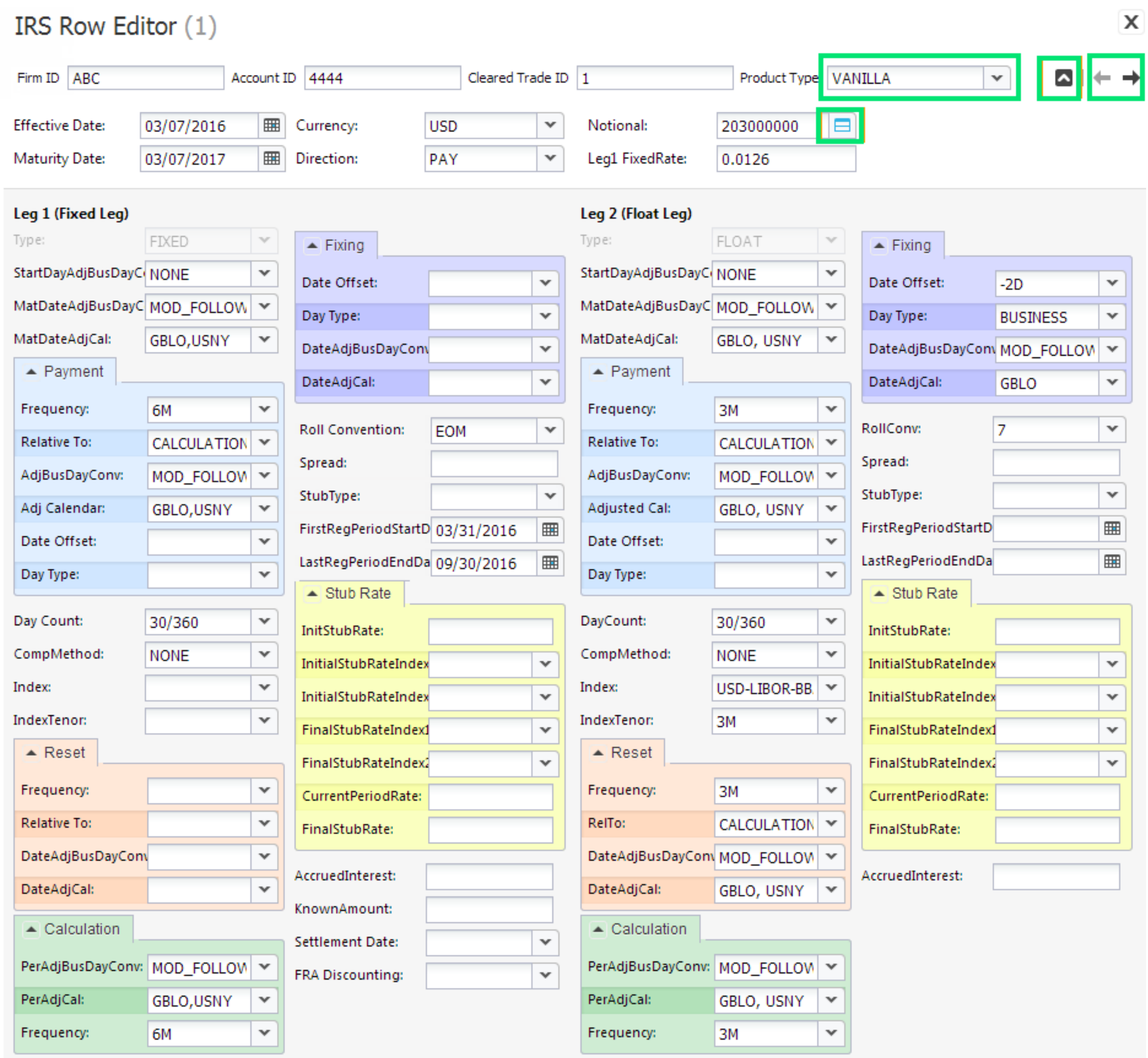
2. Select **Validate**. If Validation passes, confirmation message displays.



    - If validation errors occur, correct and re-validate.

IRS Expanded Trade Editor

The IRS Expanded Trade Editor shows all fields for a single IRS trade in one view.



To edit a trade using the IRS Expanded Trade Editor:

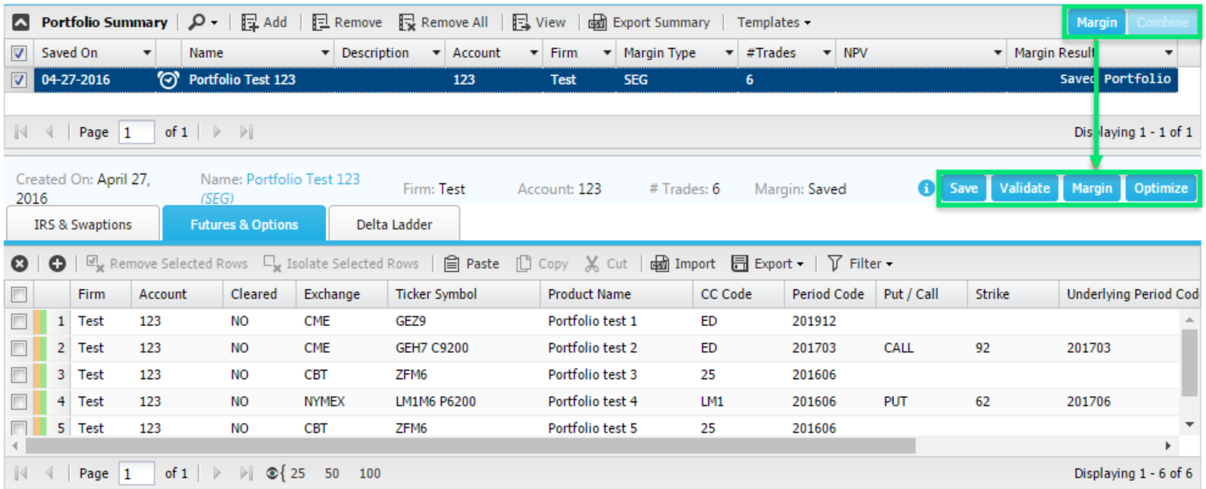
1. Select the expand icon ( ) in the upper right of the screen.

   The editing window expands.

2. Select a **Product Type**. View will adjust to show only fields required for the selected product type.
3. Enter information as appropriate.
4. Select in the upper right of the **IRS Trade Editor** when finished with all edits. The **IRS Trade Editor** closes, and the row information will appear as entered in the **Trade** grid.
5. Select **Save** in the upper right of the **Trade** grid. Row is saved.

Run Analysis

Run analysis for margining, combining portfolios and optimization to generate reports for an IRS portfolio. Functionality for these options is split between the Portfolio section and Trade Grid of the Rates Calculator screen.



Report Generation Options

Margin, combine or optimize portfolios:

- Margin
- Combine Portfolios
- Optimize

Viewing Reports

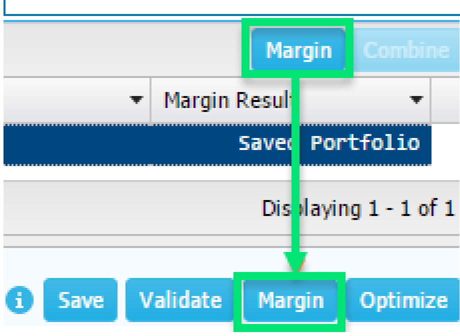
To view **generated reports**, select the report icon adjacent to the report ( ), or select Report and navigate to the corresponding report tab.

Margin Portfolios

Margin portfolios from the Portfolio section or the Trade Grid.

Note:From the Rates Calculator, Futures & Options-only portfolios cannot be margined if they contain any futures in the OTC Sequestered account (if Margin Type is SEQ or SEG-SEQ).

Note: Reports generated from the Portfolio section can also be scheduled.



To margin a portfolio from the Portfolio section:

1. Check the box adjacent to the portfolio to margin.
2. Select **Margin** in the Portfolio menu. Portfolio is margined. Margin result amount displays in the **Margin Result** column of the **Portfolio** section and the **Margin** field of the **Trade Grid**.

To margin a portfolio from the Trade Grid:

1. Load trades into the **Trade Grid**, then validate pending trade submission.
2. Select **Margin**. Portfolio is margined. Margin result amount displays in the **Margin Result** field of the **Portfolio** section.
3. To view reports, access the individual report screen. For example, view IRS/SEG reports in Reports -> IRS.

Combine Portfolios

Combine multiple portfolios that contain an IRS or DL Margin Type (like DL/SEG with an IRS) to create a combined portfolio with margin result.

> **Note**: Portfolios that consist of Futures and Options ONLY (margin types: SEG, SEQ, SEG-SEQ) are not eligible to be combined with other portfolios via "Combine Selected" option.

Margin Type	#Trades	Margin Result
IRS/DL	15	$ 3,408,898
IRS	13	$ 3,204,194
DL	2	$ 464,507

To combine portfolios:

1. Load a portfolio that contains IRS trades or a delta ladder (this includes aggregate portfolios that contain IRS and DL margin types).
2. Check the box adjacent to each margined portfolio to combine. The **Combine** button becomes active.

3. Select **Combine**. A new portfolio is created and a margin result is generated for the portfolio.

Optimize Portfolios

Selecting Optimize triggers margin optimization and calculates the allocation of *user defined futures* (trades provided in the upload) to move into an OTC sequestered account to minimize portfolio risk

Portfolios generated from the provided futures and option portfolio following optimization:

- Optimized portfolio (Portfolio type + -OPT): Optimization of the current portfolio. Description field in the Portfolio Summary is assigned "Optimized."
- Original portfolio is margined with recommended futures.

> **Note**: See Portfolio Type Options to see portfolio types that may or may not be optimized.

Portfolio Summary | My Cleared Trades | Add | Remove | Remove All | View | Export Summary | Templates

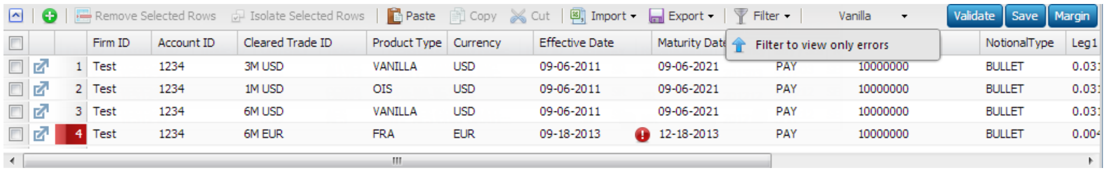
	Saved On	Name	Description	Account	Firm	Margin Type	#Trades	NPV	Margin Result
☐	03-10-2023	Portfolio Test Aggrega...		Aggregate	Test	IRS/SEG	8		$ 5,296,338
☐	03-10-2023	Portfolio Test Aggrega...	Optimized	Aggregate	Test	IRS/SEG-SEQ...	12		$ 3,151,935

To optimize a portfolio:

1. Load trades into the Trade Grid.
2. Select **Optimize** in the **Trade Grid**. Optimization portfolios are created.

Trade Validation Errors

If a required field is not entered, or if entered data is incorrect, the field(s) will be flagged as an error during validation. Error cells are marked with a , the cell is surrounded with red, and an error message displays. Select **Okay**, update errors and validate the trade again.



Trade Validation Rules

There are minimal validation rules that apply to all products, and validation rules that are IRS specific. For a list of required and interdependent fields for each product, see Layout Reference.

General Validation Rules

- Trades within a portfolio must have the same Firm IDs and the same Account IDs.
- To merge portfolio trades, both portfolios must have the same Firm IDs and the same Account IDs.

Interest Rate Swap Trade Validation Rules

Start and Maturity Date Validations

Note: Default stub values are assigned as shown below if these fields are not assigned.

- Values not supported in CME CORE are highlighted.
- The time between the Start Date and Maturity Date of the trade must be a multiple of the Calculation Frequency:
  - **Scenario 1**

    START_DT = 12/15/2011

    MAT_DT = 12/15/2012

    CALC_FREQ = QTR (3M)

    In this scenario, 12 months is divisible by 3. No Stub will exist on this swap.
  - **Scenario 2**

    START_DT = 12/15/2011

    MAT_DT = 2/15/2013

    CALC_FREQ = QTR (3M)

    In this scenario, 14 months is not divisible by 3. So, a stub of “ShortInitial” is assigned to this swap.

  If the time between the Start Date and Maturity Date of the trade is NOT a multiple of the Calculation Frequency, a default STUB_TYPE value of “ShortInitial” is assigned to the trade.

Zero Coupon Validations / Defaults

CME CORE supports only USD, EUR, BRL and GBP-denominated zero coupon swaps.

- If a ZC Swap exists in the uploaded portfolio, the appropriate fields that define this product type must be included: LEG_PAY_FREQ, LEG_CALC_FREQ, LEG_ROLL_CONV.

- If LEG_CALC_FREQ = 1T then:
  - LEG_PAY_FREQ is set to 1T
  - LEG_ROLL_CONV is set to NONE

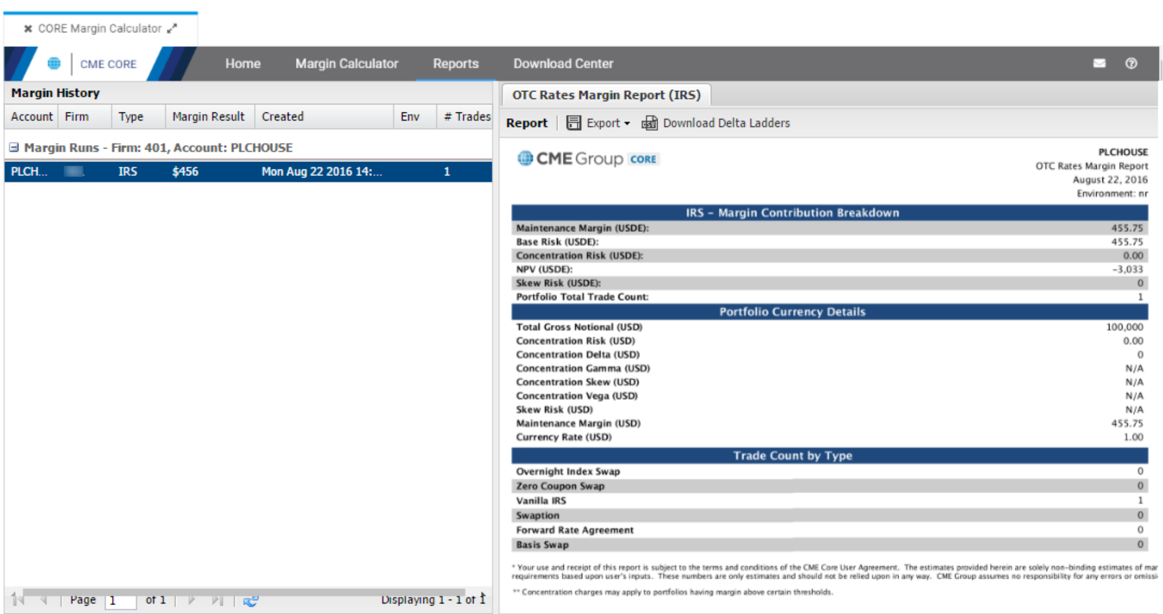
Overnight Index Swap (OIS) Validations / Defaults

- Overnight Index Swaps are defined as the following:
  - USD-Federal Funds-H.15-OIS-COMPOUND
  - EUR-EONIA-OIS-COMPOUND
  - GBP-WMBA-SONIA-COMPOUND
  - JPY-TONA-OIS-COMPOUND
- For OIS swaps, the floating LEG_INDEX_TERM field must equal 1D on the upload file.
- For the floating leg only, if LEG_CALC_FREQ = 1T then:
  - LEG_RESET_FREQ is set to 1T

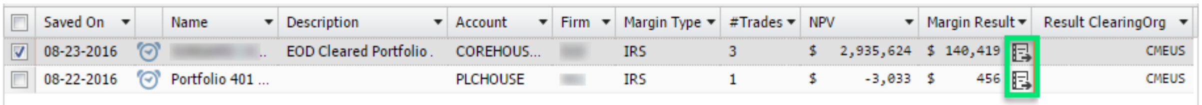
Reports

Using the Reports functionality, users can view summary trade and margin calculation information, for the following asset classes.

- Interest Rate Swap Margin
- Foreign Exchange
- Delta Ladder
- Futures and Options
- Portfolio Margining
- Margin Optimizer



In addition to accessing reports from the Reports tab, reports for portfolios on the Rates Calculator screen may be accessed by selecting the reports icon that appears to the right of the reports after they have been run.



To select a report:

1. Select **Reports.**

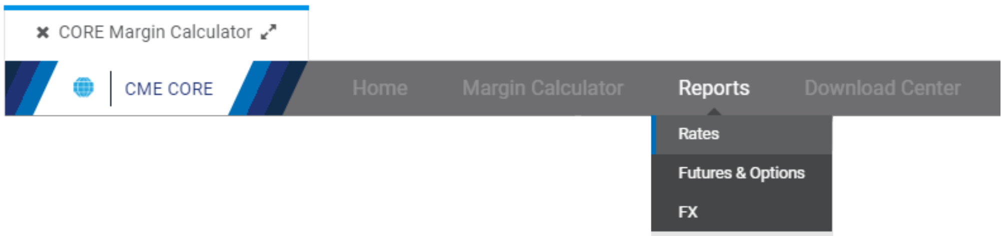
> **Note**:Double-click **Reports** to lock the Reports menu and keep the product selections visible until another main menu option is selected.

2. Select the product report to view.
3. In the **Margin History** list, double-click a Margin Run. The corresponding report displays.

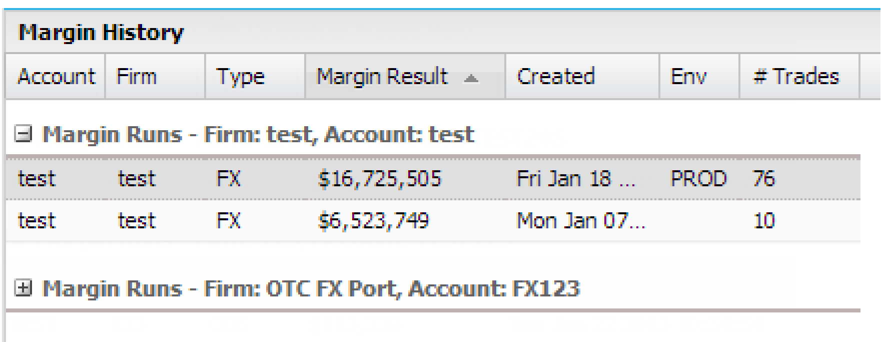
View Reports

To select a report:

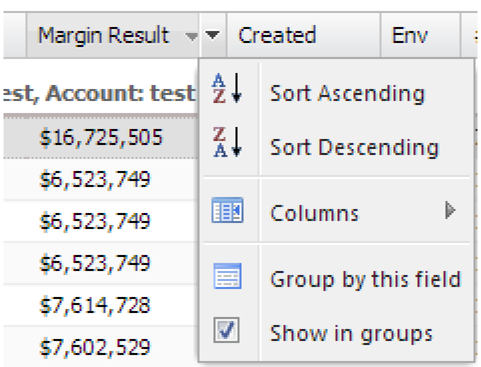
1. From the **Main Menu**, select **Reports** and then select the report type to view.



Reports are listed along the left side of the page by Portfolio (Firm / Account) in order of most recent portfolio creation. All margins run for each portfolio are listed within the portfolio in create date order.



To sort by any column, hover over the column heading, select the arrow that appears to the right of the column, and select sort, grouping or column selections from the menu.



2. From the **Margin Run** list, select the row of the report to view. Report appears in window to right of list.

Report Descriptions

- Interest Rate Swap
- Foreign Exchange (FX)
- Delta Ladder
- Futures and Options
- Portfolio Margining
- Margin Optimizer

Export Reports

Use the Report View to export margin reports to a pdf or Excel file.

The Export menu provides the following functionality:

Report Icon	**Description**
Excel	Save report to an excel file.
Adobe Acrobat PDF	Save report to an Adobe Acrobat .pdf file.

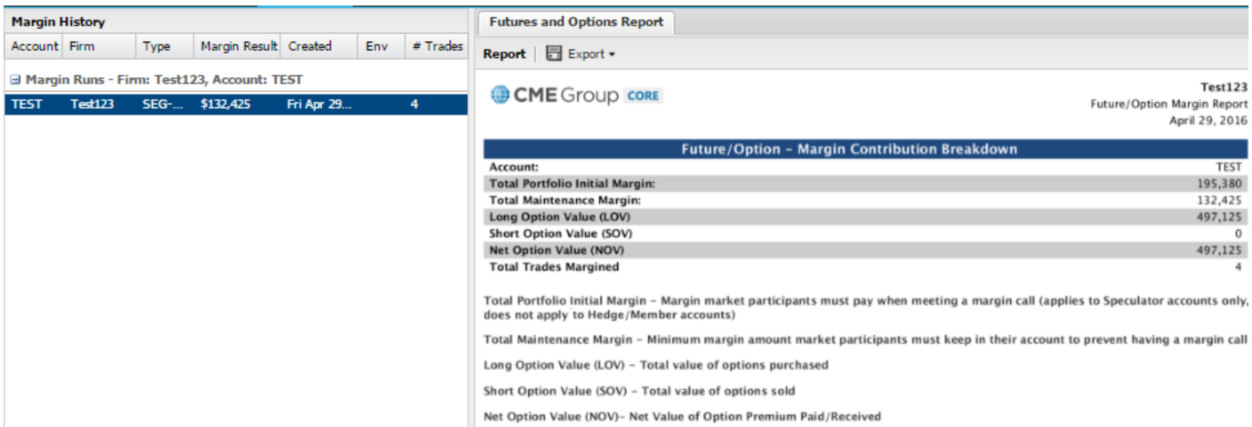
Interest Rate Swap Margin Results

The result set for IRS and Portfolio Margining generates the following reports:

- IRS Margin Report

IRS Margin Report

The Portfolio Margin report provides summary trade information, including Total Gross Notional for each currency.



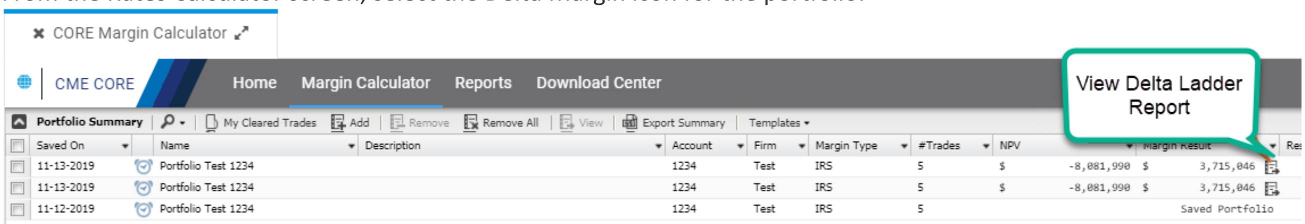
Delta Ladder Report

The result set for Delta Ladder generates the following reports:

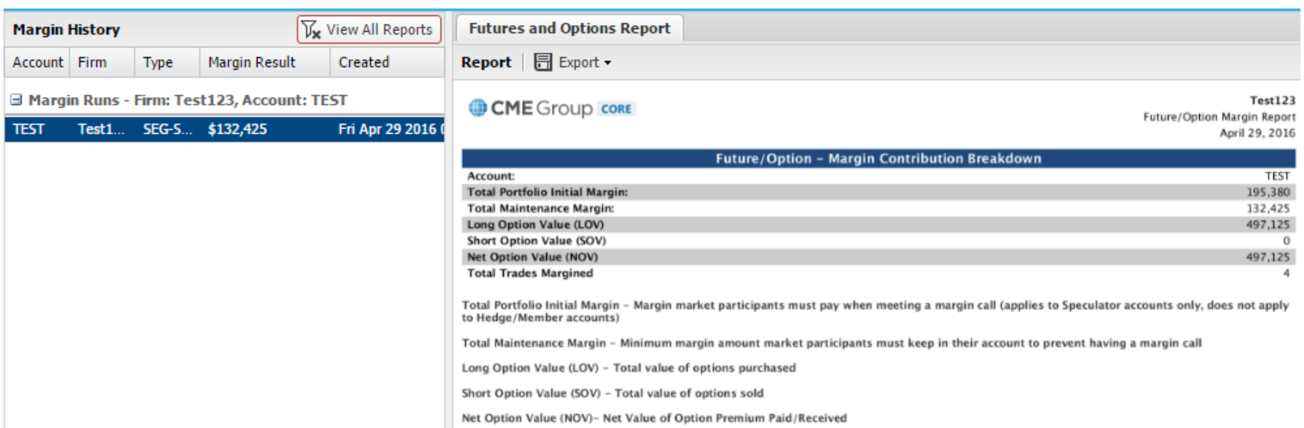
- Delta Ladder Margin Details
- Delta Ladder Margin Scenario Analysis - Profit and Loss

Delta Ladder Margin Details

From the Rates Calculator screen, select the Delta Margin icon for the portfolio.



For the given portfolio, the Delta Ladder - Margin Contribution appears.



The **Delta Ladders Histogram Report** contains Account Information: including Account, Maintenance, Concentration and Initial Margin Requirements, Number of Tenor Curves.

Futures and Options Results

The Futures and Options Margin Report displays:

- Total Portfolio Initial Margin - Margin market participants must pay when meeting a margin call (applies to Speculator accounts only, does not apply to Hedge/Member
- accounts)
- Total Maintenance Margin - Minimum margin amount market participants must keep in their account to prevent having a margin call
- Long Option Value (LOV) - Total value of options purchased
- Short Option Value (SOV) - Total value of options sold
- Net Option Value (NOV)- Net Value of Option Premium Paid/Received

CME Group CORE

Test
Future/Option Margin Report
April 09, 2014
Environment: PROD

Future/Option – Margin Contribution Breakdown	
Account:	123
Total Portfolio Initial Margin:	2,328,375
Total Maintenance Margin:	2,116,250
Long Option Value (LOV)	5,000
Short Option Value (SOV)	0
Net Option Value (NOV)	5,000
Total Trades Margined	4

Portfolio Margin Details Report

The Portfolio Margin Details Report provides a comparison of the costs saved or incurred between margining the IRS trades and/or Delta Ladder curves and Futures and Options portfolios separately, and margining the IRS portfolio and/or Delta Ladder and Futures and Options portfolios together.

The Portfolio Margin Details Report may be generated for the following portfolio types:

- IRS Trades & Futures (SEQ) Portfolio Margin Details
- DL & Futures (SEQ) Portfolio Margin Details
- IRS Trades & DL & Futures (SEQ) Portfolio Margin Details

When the Cross Margin option in the Futures and Options grid is checked, the trade will be margined against the IRS trades and/ or Delta Ladder and HVAR is used to calculate results. Margins for unchecked Futures and Options are calculated using CME SPAN.

Margin Amounts without Portfolio Margining

Margin Amounts without Portfolio Margining	=	Interest Rate Swap **AND / OR** Delta Ladder	+ (plus)	Portfolio Margin Futures (FUT)	+ (plus)	IR Futures and Options (OPT)

Note: The Portfolio Margin Futures do NOT have the Cross Margin box checked. The Margin Type field will fill with FUT when the portfolio is saved. Interest Rate Futures and Options are cross-margined with the Interest Rate Swaps, and the Cross Margin box is checked. When the portfolio is saved, the Margin Type field will show OPT.

Margin Amounts with Portfolio Margining (Cross-margining)

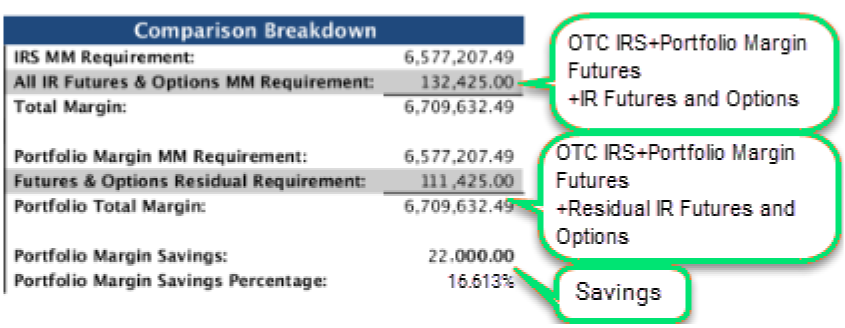
Margin Amounts with Portfolio Margining	=	Cross-margined OTC IRS AND / OR Delta Ladder and Portfolio Margin Futures (IRS + OPT and/or DL + OPT) Reduce the total margin payment required by transferring excess margin from one account to another.	+ (plus)	Residual IR Futures and Options (FUT) Interest Rate Futures and Options not cross-margined with Interest Rate Swaps.

Savings

Savings	=	Margin Amounts without Portfolio Margining	- (minus)	Margin Amounts with Portfolio Margining

Portfolio Margin Results Breakdown

Portfolio Margining in CME CORE approaches initial margin calculation from a total cost savings perspective.



Comparison Breakdown	
IRS MM Requirement:	6,577,207.49
All IR Futures & Options MM Requirement:	132,425.00
Total Margin:	6,709,632.49
Portfolio Margin MM Requirement:	6,577,207.49
Futures & Options Residual Requirement:	111,425.00
Portfolio Total Margin:	6,709,632.49
Portfolio Margin Savings:	22,000.00
Portfolio Margin Savings Percentage:	16.613%

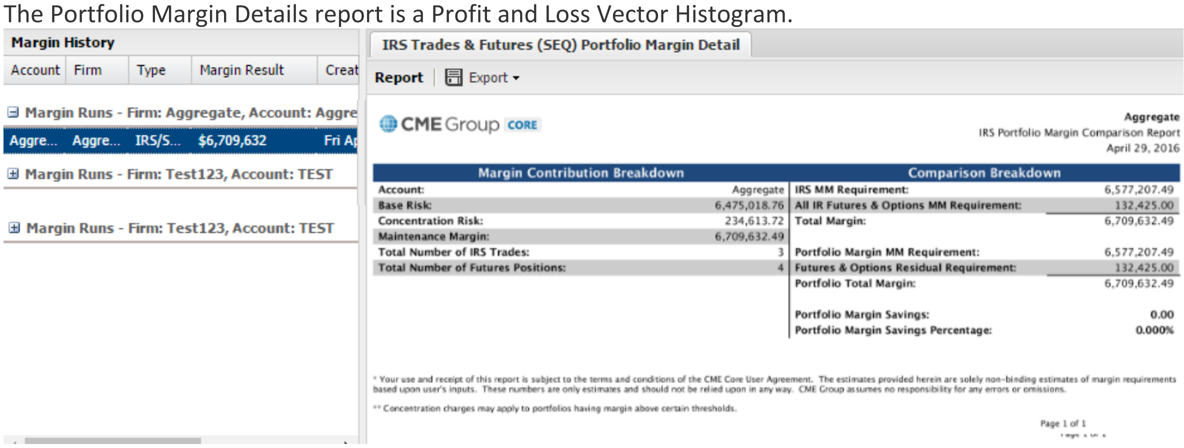
Example: OTC IRS - The comparison is the same for Delta Ladder or IRS and Delta Ladder.

Portfolio Margin Results Comparison Breakdown

- The first set of totals represents the margins for OTC IRS and/or Delta Ladder, Portfolio Margin Futures and Futures and Options initial margin calculated as separate portfolios.
- The second set of totals represents the calculated margin with the OTC IRS and/or Delta Ladder and Portfolio Margin Futures calculated together, and the Residual Futures and Options calculated separately.
- The **Portfolio Margin Savings** is the savings achieved between the two calculations.

Portfolio Margin Details Report

The Portfolio Margin Details report is a Profit and Loss Vector Histogram.



Example: OTC IRS - The report is the same for Delta Ladder or IRS and Delta Ladder.

Portfolio Margin Optimization Details Report

The Portfolio Margin Optimization Details Report performs portfolio margining of all IRS Swaps and/or Delta Ladder curves with interest rate futures and options to mimize initial margin requirements.

When the Cross Margin option in the Futures and Options grid is checked, the trade will be margined against the Delta Ladder curves and/ or IRS trades, and HVAR is used to calculate results. Margins for unchecked Futures and Options are calculated using CME SPAN.

Margin Amounts without Margin Optimization

Margin Amounts without Margin Optimization	=	Delta Ladders **AND/OR** IRS Trades	+ (plus)	Portfolio Margin Futures (FUT)	+ (plus)	IR Futures and Options (OPT)

Note: The Margin Optimization Futures do NOT have the Cross Margin box checked. The Margin Type field will fill with FUT when the portfolio is saved. Interest Rate Futures and Options are cross-margined with the Interest Rate Swaps, and the Cross Margin box is checked. When the portfolio is saved, the Margin Type field will show OPT.

Margin Amounts with Margin Optimization (Cross-margining)

Margin Amounts with Margin Optimization	=	Cross-margined Delta Ladder and/or OTC IRS and Portfolio Margin Futures (DL and/or OTC IRS + OPT) Reduce the total margin payment required by transferring optimized positions from one account to another.	+ (plus)	Residual IR Futures and Options (FUT) Interest Rate Futures and Options not cross-margined with Interest Rate Swaps.

Savings

Savings	=	Margin Amounts without Opimization	- (minus)	Margin Amounts with Optimization

Portfolio Margin Optimization Detail Report Breakdown

Portfolio Margining in CME CORE approaches initial margin calculation from a total cost savings perspective.

Optimization Breakdown	
Initial Portfolio Margin IM Requirement:	263,659.71
Initial Futures & Options Residual	100,925.00
Total Margin:	364,584.71
Optimized Portfolio Margin IM Requirement:	189,732.46
Optimized Futures & Options Residual	0.00
Optimized Portfolio Total Margin:	189,732.46
Portfolio Margin Savings:	174,852.26
Portfolio Margin Savings Percentage:	47.959%

Delta Ladder + Portfolio Margin Futures
+ IR Futures and Options Residual

Delta Ladder
+ Optimized Futures and Options

Savings

Example: Delta Ladder - The same is true for IRS trades, or IRS and Delta Ladder.

Margin Optimizer Results Comparison Breakdown

- The first set of totals represents the margins for Delta Ladder (or IRS or both), Portfolio Margin Futures and IR Futures and Options initial margin calculated as separate portfolios.
- The second set of totals represents the calculated margin with Delta Ladder (or IRS or both) and assuming the recom-

mended transfer of Futures into Swap Portfolios.

- The **Portfolio Margin Savings** is the difference between the totals of the two calculations.

Portfolio Margin Optimization Detail Report

The Portfolio Margin Optimization Detail report compares initial margin requirement with optimized margin requirement and achievable portfolio margin savings.

CME Group CORE

Swaption
IRS Portfolio Margin Optimization Report

Margin Contribution Breakdown		Optimization Breakdown	
Account:	All_Direction_SimpleUpload	**Initial Portfolio Margin IM Requirement:**	6,822,707.56
Initial Base Margin Requirement:	930,331.35	**Initial Futures & Options Residual**	0.00
Concentration Margin Requirement:	0.00	**Total Margin:**	6,822,707.56
Total Portfolio IM Requirement:	930,331.35		
Total Number of IRS Trades:	3	**Optimized Portfolio Margin IM Requirement:**	930,331.35
Total Number of Futures Positions:	59	**Optimized Futures & Options Residual**	0.00
		Optimized Portfolio Total Margin:	930,331.35
		Portfolio Margin Savings:	**5,892,376.21**
		Portfolio Margin Savings Percentage:	**86.364%**

Position Optimization Report

The Postion Optimization Report breaks down CME Cleared OTC IRS to receive savings as described in the initial report. These are the future positions that are transferred to the IRS portfolio.

CME Group CORE

Aggregate
Positions Optimization Report
April 09, 2014
Environment: PROD

Firm Id	Acct Id	Exchange	Ticker	Product Name	CC Code	Period Code	Put/Call	Strike	Und. Period Code	Before Net Positions (FUT)	Before Net Positions (OTC)	Optimized Future Net Positions	Optimized Irs Net Positions
Aggregate	Aggregate	CME	GEZ8	EURODOLLAR FUTURES	ED	201812				-500.00		-500.00	0.00
Aggregate	Aggregate	CME	GEZ5	EURODOLLAR FUTURES	ED	201512				-500.00		-500.00	0.00
Aggregate	Aggregate	CME	GEZ4	EURODOLLAR FUTURES	ED	201412				-500.00		0.00	-500.00
Aggregate	Aggregate	CME	GEZ7	EURODOLLAR FUTURES	ED	201712				-500.00		-500.00	0.00

Portfolio Field Requirements

Each product has different field requirements. Select below to see product layout requirements:

- Interest Rate Swaps
- Foreign Exchange
- Futures and Options

Layout Reference for IRS

Reference layouts contain long / short name, description, and required /optional values for Interest Rate Swaps.

- Basic Layout - provides the mimimal number of fields required for an IRS swap.
- Simple Layout - provides a sImple layout for an IRS swap.
- Extended Layout - provides a layout for all fields that can be displayed for any type of IRS.

The OTC Product List contains general swap product information and additional product specifications for:

- Fixed / Float IRS
- Zero Coupon Swap (ZCS)
- Basis Swap
- Overnight Index Swap (OIS)
- Forward Rate Agreement (FRA)
- Calendars and ISDA / FPML codes

Reference for Basic Layout (Interest Rate Swaps)

This file is a subset of the Trade Register (Extended) Template and Simple Template reference files. Index, Index Tenor, Pay Frequency and Spread values are generated based on industry standards for most OTC IRS product types.

Field	Description	Req / Opt	Sample Values
Firm ID	ID of the firm	Required	
Account ID	The account the trade belongs to	Required	
Cleared Trade ID	CME Group assigned Trade ID for the trade	Optional	
Product Type	Product Type	Required	**Vanilla, OIS, Zero Coupon, Basis, FRA**
Currency	Standard Currency Code	Required	**USD - US Dollar (day 1)**
Effective Date	Start (Effective) Date of the swap. This is the date when the accruals begin	Required	**US format 8/2/2023**
Maturity Date	Maturity Date of the swap. This is the last day of the swap, usually the last coupon payment for the types of swaps	Required	**US format 8/2/2023**

Field	Description	Req / Opt	Sample Values
	supported day 1		
Direction	Direction of the swap from the position accounts perspective.	required	**P - Payer of the Fixed Rate** **R - Receiver of the Fixed Rate**
Notional	Represents the notional amount of the swap	Required.	
Leg 1 Fixed Rate	The fixed rate assigned to swap	Required	

Reference for Simple Layout (Interest Rate Swaps)

This file is a subset of the Trade Register (Extended) reference file. Additional Leg One and Leg Two information is populated on trade validation. Applies to Vanilla, OIS and Zero Coupon product types. There is also a Basic Layout Reference, which shows the minimal required fields.

Field	Description	Req / Opt	Sample Values
Firm ID	ID of the firm	Required	
Account ID	The account the trade belongs to	Required	
Cleared Trade ID	CME Group assigned Trade ID for the trade	Optional	
Product Type	Product Type	Required	**Vanilla, OIS, Zero Coupon, Basis, FRA**
Currency	Standard Currency Code	Required	**USD - US Dollar (day 1)**
Effective Date	Start (Effective) Date of the swap. This is the date when the accruals begin	Required	**US format 8/2/2023**
Maturity Date	Maturity Date of the swap. This is the last day of the swap, usually the last coupon payment for the types of swaps supported day 1	Required	**US format 8/2/2023**
Direction	Direction of the swap from the position accounts perspective.	required	**P - Payer of the Fixed Rate** **R - Receiver of the Fixed Rate**
Notional	Represents the notional amount of the swap	Required.	
Leg 1 Fixed Rate	The fixed rate assigned to swap	Required	
Leg1 KnownAmount	Current value of a sum to be paid / received on a future date. **Note:** Displays for Zero Coupon and Extended	Applicable to Zero Coupon products	

Field	Description	Req / Opt	Sample Values
	View only.		
Leg 2 Index	The index of the floating leg	Required	
Leg2 IndexTenor	How frequently the rate for the floating leg is reset.	Required	**1 M** **3 M** **6 M**
Leg1 PayFreq	Frequency at which interest is paid on the fixed leg.	Required	**1 M** **1 Y** **3 M** **6 M**

Layout Reference for Trade Register (Extended) View

Complete list of OTC IRS fields. Required fields vary by product.

Additional references include:

- Basic Layout Reference, which shows the minimal required fields
- Simple Layout Reference for fields that correspond to the IRS Simple Template.

IRS Fields

Field	Description	Req / Opt	Sample Values
Firm ID	ID of the firm	Required	
Account ID	The account the trade belongs to	Required	
Portfolio ID	The portfolio name	Optional	
Cleared Trade ID	CME Group assigned Trade ID for the trade	Optional	
Product Type	Product Type	Required	**Vanilla, OIS, Zero Coupon, Basis, FRA**
Currency	Standard Currency Code	Required	**USD - US Dollar (day 1)**
Start Date	Start (Effective) Date of the swap. Date when accruals begin	Required	**US format 8/2/2023**
Maturity Date	Maturity Date of the swap. Last day of the swap, usually the last coupon payment for the types of swaps supported day 1	Required	**US format 8/2/2023**
Direction	Direction of the swap from the position accounts perspective.	required	**P - Payer of the Fixed Rate** **R - Receiver of the Fixed Rate**
Notional	Represents the notional amount of the swap	Required.	

Field	Description	Req / Opt	Sample Values
Fixed Rate	The fixed rate assigned to swap	Required	
Floating Index	The index of the floating leg	Required	**1M LIBOR** **3M LIBOR** **6M LIBOR**
Floating Index Tenor	How frequently the rate for the floating leg is reset.	Required	**1 M** **3 M** **6 M**
Fixed Pay Frequency	Frequency at which interest is paid on the fixed leg.	Required	**-2 D** **0 D** **1 W** **2 W** **1- 11 M** **1 Y**
Source	Platform from which the trade was received	Required	**BLOOMBERG, MARKIT_ WIRE, TRADE_WEB, CME**
Leg1			
LEG1_TYPE	Fixed or Float leg	Required	**FIXED** **FLOAT**
LEG1_CCY	Currency of the leg	Required	**USD**
LEG1_START_ DATE_ADJ_BUS_ DAY_CONV	Adjustment to effective date. ALWAYS NONE	Required	**NONE**
LEG1_MAT_ DATE_ADJ_BUS_ DAY_CONV	Adjustments to Maturity Date	R	**NONE** **FOLLOWING** **MODFOLLOWING** **PRECEDING** **MODPRECEDING**
LEG1_MAT_ DATE_ADJ_CAL	Calendars to use for MAT DATE Adjustment	Required	**USNY** **GBLO** **USNY,GBLO**
LEG1_PAY_FREQ	Coupon Payment Frequency	R	**1M** **3M** **6M** **1Y**
LEG1_PAY_REL_ TO	Payment relative to the beginning or end of the period	R	**BEG_PER** **END_PER**
LEG1_PAY_ADJ_ BUS_DAY_CONV	Business day convention to use to adjust the payment date if the date falls on a holiday	R	**NONE** **FOLLOWING** **MODFOLLOWING** **PRECEDING** **MODPRECEDING**
LEG1_PAY_ADJ_	Calendars used to apply the business	R	**USNY**

Field	Description	Req / Opt	Sample Values
CAL	day convention for payments		**GBLO** **USNY,GBLO**
LEG1_DAYCOUNT	Day count convention to use for calculation of periods	R	**30/360** **ACT/360** **ACT/365.FIXED** **ACT/ACT.ISDA** **30E/360.ISDA**
LEG1_CALC_PER_ADJ_BUS_DAY_CONV	Business day convention for calculation Period date adjustements	O (Required only of this is a float leg)	**NONE** **FOLLOWING** **MODFOLLOWING** **PRECEDING** **MODPRECEDING**
LEG1_CALC_PER_ADJ_CAL	Calendars to use for calculation period date adjustment	O (Required only of this is a float leg) "	**USNY** **GBLO** **USNY,GBLO**
LEG1_CALC_FREQ	Calculation Frequency also known as the compounding frequency for compounded swaps	O (Required only of this is a float leg)	**1W** **2W** **1M** **2M** **3M** **6M** **12M**
LEG1_COMP_METHOD	Specify the method used for compounding if this is a compounded leg	O (Required only of this is a float leg and a compounded swap)	**None** **Flat**
LEG1_INDEX	Index specification	Required only if LEG1_TYPE = "FLOAT"	**USD-LIBOR-BBA**
LEG1_INDEX_TENOR	Index Tenor	Required only if LEG1_TYPE = "FLOAT"	**1M** **3M** **6M**
LEG1_RESET_FREQ	Frequency of the rate reset	O (Required only of this is a float leg)	**1M** **3M** **6M**
LEG1_RESET_REL_TO	Specify if the reset is relative to the beginning of the period or end of the period	O (Required only of this is a float leg)	**BEG_PER** **END_PER**
LEG1_RESET_DATE_ADJ_BUS_DAY_CONV	Date Adjustment on the reset dates	O (Required only of this is a float leg)	**NONE** **FOLLOWING** **MODFOLLOWING** **PRECEDING** **MODPRECEDING**
LEG1_RESET_DATE_ADJ_CAL	Calendars to use for reset date adjustment	O (Required only of this is a float leg)	**USNY** **GBLO** **USNY,GBLO**
LEG1_FIXING_	Offset to use to come up with the	O (Required only of	

Field	Description	Req / Opt	Sample Values
DATE_OFFSET	fixing date	this is a float leg)	
LEG1_FIXING_ DAY_TYPE	The type of days to use to find the fixing date	O (Required only of this is a float leg)	**Business Calendar**
LEG1_FIXING_ DATE_BUS_DAY_ CONV	Adjustment to use for fixing date	O (Required only of this is a float leg)	**NONE FOLLOWING MODFOLLOWING PRECEDING MODPRECEDING**
LEG1_FIXING_ DATE_ADJCAL	Calendars to use when adjusting the fixing date	Required only if LEG1_ TYPE = "FLOAT"	**USNY GBLO USNY,GBLO**
LEG1_START_ DATE	Effective Date of this leg	Required	**US format 8/2/2023**
LEG1_MAT_DATE	Maturity Date of this leg	Required	**US format 8/2/2023**
LEG1_NOTIONAL	Notional Amount	R	
LEG1_FIXED_RATE	FIXED Rate	Required only if LEG1_ TYPE = "FIXED"	
LEG1_ROLL_CONV	Roll convention to end / start period on	R	**1-30 IMM EOM**
LEG1_SPREAD	Spread to apply on top of the index	O (Required only if this is float leg and a spread is applied)	
LEG1_STUB_TYPE	Type of Stub	O (Required only if there is a initial or final stub)	**ShortFinal LongInitial LongFinal NONE SPECIFIC BOTH**
LEG1_FIRST_REG_ PERIOD_START_ DATE	First regular period start date on this leg. This is when the stub period ends and regular periods begin	O (Required only if there is a initial stub)	**US format 8/2/2023**
LEG1_LAST_REG_ PERIOD_END_ DATE	Last regular period start date on this leg. This is when the regular periods end and the stub period starts	O (Required only if there is a final stub)	**US format 8/2/2023**
LEG1_INITIAL_ STUB_RATE	Initial Stub Rate	O (Required only if there is a initial stub).	
LEG1_INITIAL_ STUBRATE_ INDEX1	For Initial Stub specify the index and tenor to be used for this stub period	O (Only present if index and tenor is used for stub period rate on float leg)	**1W - 2W 1M - 11M 1Y**

Field	Description	Req / Opt	Sample Values
LEG1_INITIAL_STUBRATE_INDEX2	For Initial Stub specify the second index and tenor to be used for interpolating rate for this period	O (Only present if CME Group has to interpolate between two terms for stub period rate on float legs)	**1W - 2W** **1M - 11M** **1Y**
LEG1_FINAL_STUBRATE_INDEX1	For Final Stub provide the index and tenor to be used for this stub period	O (Only present if index and tenor is used for stub per on float leg)	**1W - 2W** **1M - 11M** **1Y**
LEG1_FINAL_STUBRATE_INDEX2	For Final Stub specify the second index and tenor to be used for interpolating rate for this period	O(Only present if CME Group has to interpolate between two terms for stub period rate on float legs)	**1W - 2W** **1M - 11M** **1Y**
LEG1_CURRENT_PERIOD_RATE	Populated with the current floating period rate	O (Only present if this is the float leg).	
LEG1_FINAL_STUB_INT_RATE	The actual rate to be used for the final stub period whether it is interpolated or based off an index	O (Present only in case of initial stub)	
LEG1_ACCRUED_INT	Accrued interest for the current leg as of the current valuation date	O (Not present if the accruals have not started)	
LEG1 KnownAmount	Current value of a sum to be paid / received on a future date.	Applies to Zero Coupon Trades.	
Leg2			
LEG2_TYPE	Fixed or Float leg	Rt or product.	**fixed** **float**
LEG2_CCY	Currency of the leg	R	**USD**
LEG2_START_DATE_ADJ_BUS_DAY_CONV	Adjustment to effective date. ALWAYS NONE.	R.	**None**
LEG2_MAT_DATE_ADJ_BUS_DAY_CONV	Adjustments to Maturity Date	R	**NONE** **FOLLOWING** **MODFOLLOWING** **PRECEDING** **MODPRECEDING**
LEG2_MAT_DATE_ADJ_CAL	Calendars to use for MAT DATE Adjustment	Required	**USNY** **GBLO** **USNY,GBLO**

Field	Description	Req / Opt	Sample Values
LEG2_PAY_FREQ	Coupon Payment Frequency	R	**1M** **3M** **6M** **1Y**
LEG2_PAY_REL_ TO	Payment relative to the beginning or end of the period	R	**BEG_PER** **END_PER**
LEG2_PAY_ADJ_ BUS_DAY_CONV	Business day convention to use to adjust the payment date if the date falls on a holiday	R	**NONE** **FOLLOWING** **MODFOLLOWING** **PRECEDING** **MODPRECEDING**
LEG2_PAY_ADJ_ CAL	Calendars used to apply the business day convention for payments	R	**USNY** **GBLO** **USNY,GBLO**
LEG2_DAYCOUNT	Day count convention to use for calculation of periods	R	**30/360** **ACT/360** **ACT/365.FIXED** **ACT/ACT.ISDA** **30E/360.ISDA**
LEG2_CALC_PER_ ADJ_BUS_DAY_ CONV	Business day convention for calculation Period date adjustements	O (Required only of this is a float leg)	**NONE** **FOLLOWING** **MODFOLLOWING** **PRECEDING** **MODPRECEDING**
LEG2_CALC_PER_ ADJ_CAL	Calendars to use for calculation period date adjustment	O (Required only of this is a float leg) "	**USNY** **GBLO** **USNY,GBLO**
LEG2_CALC_FREQ	Calculation Frequency also known as the compounding frequency for compounded swaps	O (Required only of this is a float leg)	**1W** **2W** **1M** **2M** **3M** **6M** **12M**
LEG2_COMP_ METHOD	Specify the method used for compounding if this is a compounded leg	O (Required only of this is a float leg and a compounded swap)	**None** **Flat**
LEG2_INDEX	Index specification	Required only if LEG2_ TYPE = "FLOAT"	**USD-LIBOR-BBA.**
LEG2_INDEX_ TENOR	Index Tenor	Required only if LEG2_ TYPE = "FLOAT"	**1M** **3M** **6M**
LEG2_RESET_ FREQ	Frequency of the rate reset	O (Required only of this is a float leg)	**1M** **3M** **6M**

Field	Description	Req / Opt	Sample Values
LEG2_RESET_REL_TO	Specify if the reset is relative to the beginning of the period or end of the period	O (Required only of this is a float leg)	**BEG_PER** **END_PER**
LEG2_RESET_DATE_ADJ_BUS_DAY_CONV	Date Adjustment on the reset dates	O (Required only of this is a float leg)	**NONE** **FOLLOWING** **MODFOLLOWING** **PRECEDING** **MODPRECEDING**
LEG2_RESET_DATE_ADJ_CAL	Calendars to use for reset date adjustment	O (Required only of this is a float leg)	**USNY** **GBLO** **USNY,GBLO**
LEG2_FIXING_DATE_OFFSET	Offset to use to come up with the fixing date	O (Required only of this is a float leg)	
LEG2_FIXING_DAY_TYPE	The type of days to use to find the fixing date	O (Required only of this is a float leg)	**Business** **Calendar**
LEG2_FIXING_DATE_AdjBUS_DAY_CONV	Adjustment to use for fixing date	O (Required only of this is a float leg)	**NONE** **FOLLOWING** **MODFOLLOWING** **PRECEDING** **MODPRECEDING**
LEG2_FIXING_DATE_AdjCal	Calendars to use when adjusting the fixing date	Required only if LEG2_TYPE = "FLOAT"	**USNY** **GBLO** **USNY,GBLO**
LEG2_START_DATE	Effective Date of this leg	Required	**US format 8/2/2023**
LEG2_MAT_DATE	Maturity Date of this leg	Required	**US format 8/2/2023**
LEG2_NOTIONAL	Notional Amount	R	
LEG2_FIXED_RATE	FIXED Rate	Required only if LEG2_TYPE = "FIXED"	
LEG2_ROLL_CONV	Roll convention to end / start period on	R	**1-30** **IMM** **EOM**
LEG2_SPREAD	Spread to apply on top of the index	O (Required only if this is float leg and a spread is applied)	
LEG2_STUB_TYPE	Type of Stub	O (Required only if there is a initial or final stub)	**ShortFinal** **LongInitial** **LongFinal** **NONE** **SPECIFIC BOTH**
LEG2_FIRST_REG_PER_START_DATE	First regular period start date on this leg. This is when the stub period ends	O (Required only if there is a initial stub)	**US format 8/2/2023**

Field	Description	Req / Opt	Sample Values
	and regular periods begin		
LEG2_LAST_REG_PER_END_DATE	Last regular period start date on this leg. This is when the regular periods end and the stub period starts	O (Required only if there is a final stub)	**US format 8/2/2023**
LEG2_INITIAL_STUB_RATE	Initial Stub Rate	O (Required only if there is a initial stub).	
LEG2_INITIAL_STUBRATE_INDEX1	For Initial Stub specify the index and tenor to be used for this stub period	O (Only present if index and tenor is used for stub per on float leg)	**1W - 2W** **1M - 11M** **1Y**
LEG2_INITIAL_STUBRATE_INDEX2	For Initial Stub specify the second index and tenor to be used for interpolating rate for this period	O(Only present if CME Group has to interpolate between two terms for stub period rate on float legs)	**1W - 2W** **1M - 11M** **1Y**
LEG2_FINAL_STUBRATE_INDEX1	For Final Stub provide the index and tenor to be used for this stub period	O (Only present if index and tenor is used for stub per on float leg)	**1W - 2W** **1M - 11M** **1Y**
LEG2_FINAL_STUBRATE_INDEX2	For Final Stub specify the second index and tenor to be used for interpolating rate for this period	O(Only present if CME Group has to interpolate between two terms for stub period rate on float legs)	**1W - 2W** **1M - 11M** **1Y**
LEG2_CURRENT_PERIOD_RATE	Populated with the current floating period rate	O (Only present if this is the float leg).	
LEG2_ACCRUED_INT	Accrued interest for the current leg as of the current valuation date	O (Not present if the accruals have not started)	
LEG2_FINAL_STUB_INT_RATE	The actual rate to be used for the final stub period whether it is interpolated or based off an index	O (Present only in case of initial stub)	
LEG2_ACCRUED_INT	Accrued interest for the current leg as of the current valuation date. Next indicates that the interest accrual starts on the effective date instead of the following day.	O (Not present if the accruals have not started)	

IRS Swap Guide

Following is a categorized list of IRS Swap field names, description and sample values. For additonal product specific specifications refer to the downloadable IRS OTC product scope.

Long Name	Short Name	Description	Sample Values
Leg Specific			
Type of Leg	LEG_TYPE	Designates fixed leg versus floating rate leg or 'FRA'	**FIXED**
Currency	LEG_CCY	Currency of the leg	**USD**
Start Date Adjusted Business Day Convention	LEG_START_ DATE_ADJ_ BUS_DAY_CONV	Business day convention used to adjust effective date if the date falls on a holiday or weekend	**MODFOLLOWING**
Maturity Date Adjusted Business Day Convention	LEG_MAT_ DATE_ADJ_ BUS_DAY_CONV	Business day convention used to adjust maturity date if the date falls on a holiday or weekend	**MODFOLLOWING**
Maturity Date Adjusted Calendar	LEG_MAT_ DATE_ADJ_CAL	Calendar(s) used to adjust maturity date	**USNY**
Payment Frequency	LEG_PAY_FREQ	Coupon payment frequency	**3M**
Payment Relative To	LEG_PAY_REL_ TO	Payment relative to the beginning or end of the period.	**BEG_PER**
Payment Adjusted Business Day Convention	LEG_PAY_ADJ_ BUS_DAY_CONV	Business day convention used to adjust the payment date if the date falls on a holiday or weekend.	**MODFOLLOWING**
Payment Date Adjusted Calendar	LEG_PAY_ADJ_ CAL	Calendar(s) used to apply the business day convention for payments	**USNY**
Payment Days Offset	LEG_PAY_DAYS_ OFFSET	Offset used to determine the payment date	**2D**
Payment Day Type	LEG_PAY_DAY_ TYPE	The type of days to use to find the payment date	**Business**
Day Count Convention	LEG_DAYCOUNT	Day count convention to use for calculation of periods	**30/360**
Calculation Period Adjusted Business Day Convention	LEG_CALC_PER_ ADJ_BUS_DAY_ CONV	Business day convention for calculation of Period date adjustments	**MODFOLLOWING**
Calculation Period Adjusted Calendar	LEG_CALC_PER_ ADJ_CAL	Calendar(s) used for calculation of period date adjustment	**USNY**
Calculation Frequency	LEG_CALC_ FREQ	Calculation Frequency, also known as the compounding frequency for compounded swaps	**3M**

Long Name	Short Name	Description	Sample Values
Compounding Method	LEG_COMP_ METHOD	The method used for compounding	Flat
Floating Index	LEG_INDEXL	Floating Index specification	**GBP-LIBOR-BBA**
Floating Index tenor	LEG_INDEX_ TENOR	Floating Index Tenor	**3M**
Reset Frequency	LEG_RESET_ FREQ	Frequency of the rate reset	**1M**
Reset Date Relative to	LEG_RESET_ REL_TO	Specifies reset relative to the beginning of the period or end of the period	**BEG_PER**
Reset Date Adjusted Business Day Convention	LEG_RESET_ DATE_ADJ_ BUS_DAY_CONV	Business day convention used to adjust the reset date if the date falls on a holiday or weekend.	**MODFOLLOWING**
Reset Date Adjusted Calendar	LEG_RESET_ DATE_ADJ_CAL	Calendar(s) used for calculation of reset date adjustment	**GBLO**
Fixing Date Offset	LEG_FIXING_ DATE_OFFSET	Offset used to determine the fixing date	**2D**
Fixing Day Type	LEG_FIXING_ DAY_TYPE	The type of days to use to find the fixing date	**Business**
Fixing Date Business Day Convention	LEG_FIXING_ DATE_BUS_ DAY_CONV	Date adjustment used to determine the Reset date	**PRECEDING**
Fixing Date Calendar	LEG_FIXING_ DATE_CAL	Calendars to use when adjusting the fixing date	**USNY, GBLO**
First Period Fixing Date Offset	INITIAL_FIXING_ DATE_OFFSET	Applies to first period only. Offset used to determine the fixing date	**2D**
First Period Fixing Day Type	INITIAL_FIXING_ DAY_TYPE	Applies to first period only. The type of days to use to find the fixing date	**Business**
First Period Fixing Date Business Day Convention	INITIAL_FIXING_ DATE_BUS_ DAY_CONV	Applies to first period only. Date adjustment used to determine the Reset date	**PRECEDING**
First Period Fixing Date Calendar	INITIAL_FIXING_ DATE_CAL A	Applies to first payment period only. Calendars to use when adjusting the fixing date	**GBLO**
Calculation Period Number of Days (FRA)	CALC_PER_ NUMBER_OF_ DAYS	The number of days from the adjusted start date to the adjusted end date calculated in accordance with the applicable day count fraction	**183**

Long Name	Short Name	Description	Sample Values
FRA Discounting	FRA_ DISCOUNTING	Specifies whether discounting applies and, if so, what type	**ISDA**
Averaging Method	LEG_ AVERAGING_ METHOD	Specifies method of averaging used on Fed Funds leg	**Weighted**
Rate Cutoff Days Offset	LEG_RATE_ CUTOFF_DAYS_ OFFSET	Specifies the number of days to apply the final fixing rate	**-2D**
Rate Cutoff Days Day Type	LEG_RATE_ CUTOFF_DAY_ TYPE	The type of days used to apply the Rate Cutoff Days Offset	**Business Calendar**
FX Fixing Rate Source	CALC_PER_ NUMBER_OF_ DAYS	The source of FX rate for non-deliverable coupon amounts	**BRL.PTAX/BRL09**
FX Fixing Date Offset	LEG_FX_ FIXING_DATE_ OFFSET	Offset from maturity to find the FX Fixing Date	**-1D**
FX Fixing Day Type	LEG_FX_ FIXING_DAY_ TYPE	Business or calendar	**Business**
FX Fixing Date Business Day Convention	LEG_FX_ FIXING_DATE_ BUS_DAY_CONV	Business day convention to determine the FX Fixing Date	**PRECEDING**
FX Fixing Rate Calendar	LEG_FX_ FIXING_DATE_C	Holiday calendars used to determine the FX Fixing Date	**BRBD, USNY**
Trade Specific			
Start Date	LEG_START_ DATE	Effective date of the leg (or FRA)	**8/2/2023**
Maturity Date	LEG_MAT_DATE	Maturity date of the leg (or FRA)	**8/2/2023**
Roll Convention	LEG_ROLL_ CONV	• Roll convention determines the reset date of the swap • **IMM** always refers to the third Wed-nesday of the Mar, June, Sept, Dec months	**15**
Spread	LEG_SPREAD	Spread to apply on top of the floating index	**0.5**
Notional	LEG_NOTIONAL	Notional amount of the leg	**1000000**
Fixed Rate	LEG_FIXED_ RATE	The fixed rate of the leg	
Initial Rate	LEG_INITIAL_	Initial rate of the leg	

Long Name	Short Name	Description	Sample Values
	RATE		
Future Value Notional	LEG_FUTURE_VALUE_NOTIONAL	Notional value as at the maturity date	**1000000**
Settlement Currency	LEG_SETTLEMENT_CCY	Cashflows settle in this currency	**USD**
Stub Specific			
Stub Type	LEG_STUB_TYPE	Designates the type of stub.	**ShortInitial**
First Regular Period Start Date	LEG_FIRST_REG_PER_START_DATE	First regular period start date on this leg. This is when the stub period ends and the regular periods start	**8/2/2023**
Last Regular Period End Date	LEG_LAST_REG_PER_END_DATE	Last regular period start date on this leg. This is when the regular periods end and the stub period starts	**8/2/2023**
Initial Stub Rate	LEG_INITIAL_STUB_RATE	Initial Stub Rate	
Initial Stub Rate of Second Index	LEG_INITIAL_STUBRATE_INDEX2	For Initial Stub specify the second index and tenor to be used for interpolating rate for this period	**2W**
Final Stub Rate of First Index	LEG_FINAL_STUBRATE_INDEX1	For Final Stub provide the index and tenor to be used for this stub period	**1M**
Final Stub Rate of Second Index	LEG_FINAL_STUBRATE_INDEX2	For Final Stub specify the second index and tenor to be used for interpolating rate for this period	**1W**
Notional Step Schedule			
Initial Value	LEG_INITIAL_VALUE	Original Notional Amount	**10000000**
Step Date	LEG_STEP_DATE	The date on which the associated stepValue becomes effective. This day may be subject to adjustment in accordance with the business day convention and calendar(s) of the Calculation Period. 10/12/2023	**10/12/2023**
Step Value	LEG_STEP_VALUE	The non-negative amount which becomes effective on the associated stepDate.	**8000000**

Layout Reference for Foreign Exchange

Field	Description	Req / Opt	Sample Values
Firm	ID of the firm	Required	All values must be the

Field	Description	Req / Opt	Sample Values
			same for a given portfolio
Account	The account the trade belongs to	Required	All values must be the same for a given portfolio
Ticker	Ticker associated with the product	Required; filled in conjunction with Short Currency, Long Currency, Exchange, CC Code	
Short Notional	Notional Amount for Short side.	Required	Any number value
Long Notional	Notional Amount for Long side.	Required	Any number value
Short Currency	Currency of the Short side.	Required; filled in conjunction with Ticker, Long Currency, Exchange, CC Code	
Long Currency	Currency of the Long side.	Required; filled in conjunction with Ticker, Short Currency, Exchange, CC Code	
Exchange	Exchange used for swap.	Required; filled in conjunction with Ticker, Short Currency, Long Currency, CC Code	
CC Code	Combined Commodity Code.	Required; filled in conjunction with Ticker, Short Currency, Long Currency, Exchange	

Layout Reference for Futures and Options

Field	Description	Req / Opt	Sample Values
Firm	ID of the firm	Required	
Account	The account the trade belongs to	Required	
Exchange	Name of Exchange	Required; must match Product Name and Combined Commodity Code	
Ticker Symbol	Ticker symbol associated with the product	Optional	
Product Name	Name of Product.	Required; must match Exchange and Combined Commodity Code	Eligible Futures: interest rate futures and options
CC Code	Combined Commodity Code.	Required; must match Exchange and product	
Period Code	Value date for consummating the forward transaction (contract date).	required	
Put / Call	Whether the trade is a put or call.	Optional	
Strike	Strike price for options	Optional	
Underlying	Period Code for the Underlying product.	Optional	

Field	Description	Req / Opt	Sample Values
Period Code			
Net Positions	Net Positions' determines the direction: negative equals a short position, positive equals a long position.	required	