

# CME Optimizer Software Detailed Release Notes

## Optimizer Version 17.0 Release Notes

Version: 17.0.0.0

Release Date: September 27, 2021

Mandatory Build: Y

Mandatory Cutover Date: **November 15, 2021**

### Enhancements

- Incorporates new portfolio margin eligible products Eris SOFR-based swap futures, targeted for production go-live soon (advisory forthcoming).
  - List of Eris SOFR-based swap futures Globex/Clearing Codes: YIA, YIB, YIC, YIT, YIW, YIY, YIL, YID, YII, YIO, YIE.
    - See all eligible products [here](#).
  - These products are eligible to transfer to OTC accounts to achieve risk offsets.
  - This build of Optimizer will generate futures transfers in the above products and consider them during Optimization.
  - Users who do not include Eris SOFR-based Swap futures in the positions.csv file today should add these contracts to achieve optimal results.
- Incorporates support for Bloomberg Short-Term Bank Yield Index (BSBY) – based USD interest rate swaps, scheduled for production go-live November 15, 2021.
- Incorporates support for Singapore Overnight Rate Average (SORA) – based SGD interest rate swaps, scheduled for product go-live November 15, 2021.
- Supports limited forwards-compatibility for future Optimizer releases by introducing a multi-version support inside Optimizer's interpretation of compatible market data sets.
  - This change is internal only and should not impact firm workflows.
- Reduced installation footprint:
  - Installer file (MSI) approx. 75 MB
  - Installation folder (post-installation) approx. 450 MB
  - Note that the sample market data has been significantly reduced and only supports a limited set of contracts. If you require a full market data set to facilitate testing prior to NR launch dates, then please reach out to [cme.core@cmegroup.com](mailto:cme.core@cmegroup.com) for further information.
    - Date of samples file is August 20, 2021.

### Fixes

- Optimizer version 17 adds validation logic for invalid dates in the position.csv input file TradeDate field. Prior Optimizer versions defaulted transfer output to an un-tradable 1/1/0001 date when an improper TradeDate format was supplied. The TradeDate field is now expected to be in date format: yyyyymmdd, mm/dd/yyyy, or m/d/yyyy. Optimizer version 17 produces an error at the portfolio level if the TradeDate field is not in these formats. The new expected error is:

```
Invalid trade date format detected: '<<invalid format>>'. Expected yyyyMMdd or MM/dd/yyyy or M/d/yyyy
```

### Configuration Changes

- Due to firm feedback on preferred default trade exclusions, Optimizer version 17 incorporates updates the default configurations in the EventExclusions section of the configuration.json file. Please note these configurations are suggestions only and firms can update exclusion configurations to meet their use cases. To better understand exclusion configurations please refer to the User Guide [here](#).
  - For treasury products:
    - Changes the BeginEventType exclusion attribute to be first position/intent date (enum = 17).
    - This was previously first notice date. Delivery for treasuries can begin as early as First Intent Day, one day before first notice day.
    - Example updated config:

```
{ "Enabled": true, "Name": "First Position Date - Treasury Roll", "BeginEventType": 17, "DaysBefore": 0, "EndEventType": 7, "DaysAfter": 0, "Type": "FUT", "Exchange": "CBT", "Codes": [ "17", "21", "25", "26", "TN", "UBE" ] },
```

- For MAC swap futures products:
  - Changes the BeginEventType exclusion attribute to be last trade date (enum = 7) and the EndEventType to be last delivery date (enum=14).
  - This was previously beginning at First Intent Date, which is about a week prior to delivery for these products.
  - Example updated config:

```
{ "Enabled": true, "Name": "Last Intent Date - MAC DSF", "BeginEventType": 7, "DaysBefore": 0, "EndEventType": 14, "DaysAfter": 0, "Type": "FUT", "Exchange": "CBT", "Codes": [ "F1U", "B1U", "T1U", "N1U" ] },
```

- For Eurodollar options:

- Changes the DaysBefore exclusion attribute to be 1 day.
- This was previously 0 days before LTD which was identified as too close to E&A.
- Example updated config:

```
{ "Enabled": true, "Name": "Last Trade Date - ED Option Expiration", "BeginEventType": 7, "DaysBefore": 1, "EndEventType": 999, "DaysAfter": 0, "Type": "OOF", "Exchange": "CME", "Codes": [ "ED", "E0", "E2", "E3", "E4", "E5" ] }
```

- There are no default additions to the TradeEvents section of the configuration.json file to support new Eris product trade event exclusions, however, users who want to exclude these products for any valid trade event can create a new custom exclusion based on the logic defined in the User Guide [here](#).
  - Eris products are cash-settled, hence, no exclusions were deemed necessary by default.
- Removes span.ini and orgmast.xml from the Plugins/Optimizer directory. These file is now supplied in the market data zip file and users will not need to specify their locations.
- Removes the following configurations which were deprecated or made redundant in this or a prior version:
  - "ShowTransferOrigin"
  - "ShowTotalSavings"
  - "MaxNumberOfIterations"
  - "SpanIniFilesFolder" (see above note)
  - "RiskManagerConfigsEncoded"

## Testing Considerations

- Please note Optimizer version 17 is a bundled release, meaning multiple CME product enhancements are covered in a single release. The delivery dates for updated sets of market data in the New Release (NR) environment are:
  - September 27, 2021: Optimizer software delivery – includes sample inputs.
    - Firms can begin their test by installing the latest build and testing to ensure sample data runs without error.
  - October 13, 2021 (EOD): Updated Optimizer inputs including BSBY and SORA swaps in New Release environment available via secure FTP.
    - Firms should test BSBY/SORA swaps beginning this date.
  - October 20, 2021 (EOD): Updated Optimizer inputs including Eris SOFR-based swap futures in New Release environment available via secure FTP.
    - Firms should test Eris SOFR-based futures beginning this date.

## Out of Scope

- Required Optimizer input files.
- Exclusion logic in the configuration.json for the new Eris SOFR-based swap futures. Users who want to exclude these products for any valid trade event can create a new custom exclusion in the configuration.json file based on the logic defined in the User Guide [here](#).

## Optimizer Version 16.0 Release Notes

Version: 16.0.0.0

Release Date: March 4, 2021

Mandatory Build: Y

Mandatory Cutover Date: April 26, 2021

## Enhancements

- Incorporates new portfolio margin eligible products SR1 (SOFR 1-month futures) and SR3 (SOFR 3-month futures).
  - SR1 and SR3 products eligible to transfer to OTC accounts to achieve risk offsets.
  - This build of Optimizer will generate SR1 and SR3 futures transfers and consider SR1 and SR3 during Optimization.
  - Users who do not include SR1 and SR3 in the positions.csv file today should add these contracts to achieve optimal results.
  - See all eligible products [here](#).
- Updates to liquidity add-on computations for SOFR exposure.

## Fixes

- None

## Configuration Changes

- Updates the default configuration for options eligibility.
  - This build assumes Eurodollar options are eligible to optimize by default.

- Firms who wish to exclude all options may utilize the standard Exclusions Product configuration in the configuration.json file described [here](#) or simply carry forward their version 15 config file.
- Reverts change to default location for program files span.ini and orgmast.xml from the 'Inputs' directory to the 'Plugins/Optimizer' directory. This is consistent with all builds of Optimizer prior to Version 15.
- See Configuration Changes in version 15.1 below (if not already installed).

## Optimizer Version 15.2 Release Notes

Version: 15.2.0.0

Release Date: December 16, 2020

Mandatory Build: N

Notes: Firms must take v15 (described below), v15.2 is optional but recommended

### Enhancements

- Minor updates to logging which improves the logged warnings for products which cannot be validated.
- Updates the header fields in the MarginSummaryYYYYMMDD.csv file to read "Span for all Futures and Options" instead of "Span for all Futures."
- See Enhancements in version 15.1 below (if not already installed).

### Fixes

- Fixes an issue related to complete account close-out/netting:
  - Overview: If a portfolio is NettingEligible = Y (netting is enabled) and all positions net to zero, then Optimizer is generating an error instead of generating the appropriate netting transfers.
  - Example:
    - Account A is 100 long Dec 10-year treasury, which is optimized in OTC account
      - No other positions in this account
    - Account A closes out; i.e. 100 short position is booked in the futures side account
    - EOD position is 0,0 for Account A
    - Optimizer generates an error for this account, processes other accounts
  - Out of scope:
    - Standard netting logic for accounts not undergoing a completed close-out of positions.
- This build fixes the above by allowing netting transfers to occur for accounts undergoing a complete close-out and does not generate an error for this use case.
- **Interim workaround:** Firms experiencing this issue can monitor their log files for the condition "SUCCESSwithERRORS" and work with their back office staff to treat the close-out as they would today if the Optimizer failed to run on the day of a close-out. This may be a manual T+1 action to close out the position in FEC.
- See Fixes in version 15.1 below (if not already installed).

### Configuration Changes

- None
- See Configuration Changes in version 15.1 below (if not already installed)

See also: [Pre-installation Checklist and Installation Instructions in version 15.0 release notes below.](#)

## Optimizer Version 15.1 Release Notes

Version: 15.1.0.0

Release Date: November 11, 2020

Mandatory Build: N

Notes: Firms must take v15 (described below), v15.1 is optional

### Enhancements

- Configuration support for Net Option Value (NOV) capping/SPAN flooring (see configuration notes below).

### Fixes

Optimizer v15.1 addresses two issues with transfer records generated for options. Both changes impact attributes which are not required by CME clearing to clear options transfer records and therefore have no impact on front end clearing of options trades. Firms must evaluate if either issue presents any impact to their back office processing. If so, it is recommended firms use Optimizer v15.1 (*in place of Optimizer 15*) on the December 7, 2020 production date.

- Optimizer v15.1 removes the optional FIXML attribute "CFI" from the fixmlTransfersyyyyymmdd.txt file for all transfer records. In prior versions of Optimizer, this attribute was a fixed value expressed as CFI="FXXXXX" for both futures and options on futures, but this value is not relevant for options. This attribute is produced correctly in clearing confirmation/trade acknowledgement messages from CME and therefore was not required for Optimizer transfer records, hence its removal.
- Optimizer v15.1 fixes an issue which incorrectly described the SecType attribute in the Undly block (underlying security type) for options as "OOF." The correct value for underlying security type for options on futures is "FUT." Optimizer v15.1 describes the underlying security type for options as "FUT" as expected. This attribute is optional for inbound trade messages to CME and has no impact on clearing confirmation /trade acknowledgement messages, which do not include this field.

Sample updated option transfer record:

```
<FIXML v="5.0 SP2" xv="109" cv="CME.0001" s="20090815">
  <TrdCaptRpt RptID="900003" TrdID="900003" TransTyp="0" RptTyp="0" TrdTyp="3" TrdHandlInst="8"
  OrigTrdDt="2020-06-03" LastQty="10" LastPx="0" TrdDt="2020-11-11" MLegRptTyp="1" TxnTm="2020-11-11T10:52:
  38.0654511" MsgEvtSrc="API">
    <Hdr SID="1Z9" TID="CME" SSub="CME" TSub="CME" Snt="2020-11-11T10:52:38.0654511"/>
    <Instrmt ID="E3" SecTyp="OOF" MMY="202012" StrkPx="97.5" PutCall="0" Exch="CME"/>
    <Undly Src="H" SecTyp="FUT" MMY="202312"/>
    <RptSide Side="2" ClOrdID="PM001" InptDev="API" CustCpcty="4" SesID="RTH" SesSub="X"
  OrdTyp="M">
      <Pty ID="CME" R="22"/>
      <Pty ID="CME" R="21"/>
      <Pty ID="1Z9" R="1"/>
      <Pty ID="OPTMZ5" R="24">
        <Sub ID="1" Typ="26"/>
      </Pty>
      <Pty ID="973" R="17"/>
      <Pty ID="CME123" R="48">
        <Sub ID="1" Typ="26"/>
        <Sub ID="4" Typ="4000"/>
      </Pty>
    </RptSide>
  </TrdCaptRpt>
</FIXML>
```

## Configuration Changes

Please note technical details about this configuration can be found in the [Optimizer User Guide](#).

- Optimizer v15.1 adds a new configuration property to control net option value capping/SPAN flooring in the Optimizer solution decision.
  - Property Name: FloorSpanForFinalMarginCheck
  - Type: Boolean
  - Default Value: True
  - A value of "true" means that Optimizer caps NOV.
  - A value of "false" means that Optimizer does not cap NOV (same behavior as prior builds)

```
"FloorSpanForFinalMarginCheck": true
```

- Background:
  - Optimizer iterates through multiple solution states to find the best account savings. At the end of the Optimizer software workflow, it reviews possible solutions and selects one based on the lowest margin.
  - Net Option Value can act as a credit against computed market risk, and can lead to a SPAN Margin less than 0.
  - During margin settlement, total available net option value for a given portfolio is capped at the total Risk Maintenance Requirement using this formula:
    - If Risk Maintenance Requirement (RRM) is > or = total Net Option Value, then Total Requirement = RRM – NOV
    - If Risk Maintenance Requirement (RRM) < total Net Option Value, then Total Requirement = 0 due to NOV capping
    - For example, if an account's computed risk factors are:
      - RRM = \$1,000,000
      - NOV = \$1,200,000
      - Then total requirement = \$0, ANOV was capped to \$1,000,000

- Optimizer v15.1 allows users to specify whether the Optimizer should cap the net option value similar to the above when it makes its solution state decision.
  - For a given account, example 1: "FloorSpanForFinalMarginCheck": true
    - Optimized solution 1: IRS margin: 5,000,000; SPAN margin: 0 (capped); Total margin: 5,000,000
    - Optimized solution 2: IRS margin: 0; SPAN margin: 0 (capped); Total margin: 0
    - Optimizer chooses solution 2 with capping logic on
  - For the same account example 2: "FloorSpanForFinalMarginCheck": false
    - Optimized solution 1: IRS margin: 5,000,000; SPAN margin: -15,000,000 (uncapped); Total margin: -10,000,000
    - Optimized solution 2: IRS margin: 0; SPAN margin: -9,000,000 (uncapped); total margin: -9,000,000
    - Optimizer chooses solution 1 with capping logic off
    - Prior versions of Optimizer also choose this solution

## Optimizer Version 15.0 Release Notes

Version: 15.0.0.0

Release Date: October 28, 2020 (see adoption timeline below)

### Enhancements

This version of Optimizer support listed options in portfolio margining.

- Updates to System Requirement (see [User Guide](#))
- Updates to Optimizer input files

- Input File Contents/Number of Required Files
  - Optimizer version 15 requires 9 input files to run
    - All inputs will be required
  - Updated input file set is larger in size than prior versions of Optimizer
    - Version 15 input file set is ~ 700 MB in size, including one compressed file containing both existing and new input (details in grid below)
      - Uncompressed size is ~2.2 GB
      - Optimizer software will decompress the new zip automatically - not user intervention will be required.
      - Optimizer v14 previously required 13 files to run with a much smaller file size footprint
      - Firms with good network connectivity (dedicated circuits, 10 MB/s or higher) should expect reasonable (observed ~1 minute) transfer duration from FTP whereas firms connecting via internet should consider direct connectivity
- There are no impacts to the firm-produced Positions.csv input file
  - Firms should continue to include options in the positions.csv file as normal. Firms not included options in the input file should add options.
- Input File Publishing Timeline
  - New Optimizer input zip file will be published by 6 pm CT. The file latency is driven by increased computation load when CME Clearing produces options market data.
  - Timeline details for both ITD and EOD files is in the grid below.

Optimizer 15 Input File Impacts (all times CT)

Current File Name(s) – Production***	New File Name(s) – Production***	Location	Current Publishing Time	Projected Publishing Time	Current size	Projected Size	Changes for this build?
IRSPNL_[firm ID]_yyyymmdd_ITD/EOD.csv	Same as current	Firm FTP	ITD: 5:30 pm EOD: 6:30 pm	Same as current	Depends on number accounts	Same as current	No
IRSGammaLadder_[firm ID]_yyyymmdd_ITD/EOD.csv	Same as current	Firm FTP	ITD: 5:30 pm EOD: 6:30 pm	Same as current	Depends on number accounts	Same as current	No
IRSVegaLadder_[firm ID]_yyyymmdd_ITD/EOD.csv	Same as current	Firm FTP	ITD: 5:30 pm EOD: 6:30 pm	Same as current	Depends on number accounts	Same as current	No
IRSDL_[firm ID]_yyyymmdd_ITD/EOD.csv	Same as current	Firm FTP	ITD: 5:30 pm EOD: 6:30 pm	Same as current	1 Depends on number accounts	Same as current	No
IRSTimeValue_[firm ID]_yyyymmdd_ITD/EOD.csv	Same as current	Firm FTP	ITD: 5:30 pm EOD: 6:30 pm	Same as current	Depends on number accounts	Same as current	No
IRSSkewSensitivity_[firm ID]_yyyymmdd_ITD/EOD.csv	Same as current	Firm FTP	ITD: 5:30 pm EOD: 6:30 pm	Same as current	Depends on number accounts	Same as current	No
IRSFutureScenariosPnL_yyyymmdd.csv** IRSMargin_SkewScenarios_yyyymmdd.csv Futures_Delta_yyyymmdd.csv**	cme_optimizer_marketdata_yyyymmdd.zip* (contains several market data files)	FTP: /pub/IRS	EOD: 5:30 pm (no ITD File)	EOD: 6:00 pm (no ITD file)	10 MB (all files together)	600-700 MB Compressed 2.2 GB Uncompressed	<ul style="list-style-type: none"> <li>New file Name</li> <li>Increased size</li> <li>Fewer Files to download</li> </ul>

Base_Curves_yyyyymmdd.csv							
cme_rloptimizercfg_yyyyymmdd.csv							
cme.yyyyymmdd.s/e.cust.spn.zip	Same as current	FTP: /pub /SPAN/XML	Early: 4 pm EOD: 6 pm	Same as current	18 MB Compressed 200 MB Uncompressed	Same as current	No
Positions.csv	Same as current	Firm-produced	Firm-dependent	Same as current	Firm-dependent	Same as current	No

\*New Files

\*\*Files being decommissioned or replaced

\*\*\*All test region (NR) file names are the same but include ".nr" at the end.

### 3. Updates to Optimizer output files

- Optimizer will produce options transfer records in both Optimizer transfer output file formats (.csv and .txt)
- Options will be transferred at 0 price to mitigate movement of premium for Optimizer's post-trade allocations.
- Output impact detail:
  - csvTransfersyyyymmdd\_[run number].csv
    - File describes Optimizer transfer records in csv format
    - File will be updated to include options transferred at 0 price.
    - Similar to futures transfer records, options transfer records can generate with TransferOrigin = Optimizer, Netting, or Exclusion
    - Please note there are no new fields in the report
    - Sample:
 

PbaAccountID	SegTmID	PmTmID	SegAccountID	PmAccountID	AccountType	ProductCode	ProductType	OptionExpiration	FutureExpiration	CallPut	Strike	Bought	Sold	TradeDate	ExchangeCode	Price	TransferOrigin
1234		10/050	SEGACCOUNT	PMAACCOUNT	SEG	ED	OOF	202009	202009	C	99.5	100	0	5/21/2020	CME		0/Optimizer
  - fixmlTransfersyyyymmdd\_[run number].txt
    - File describes Optimizer transfer records in fixml format. Firms typically use this file to transmit transfer records to CME via standard message queue channels.
    - File will be updated to include options transferred at 0 price.
    - Sample updated transfer record with highlighted additional fields for options:

## Fixes

- No fixes in this release.

## Configuration Changes

Optimizer version 15 re-imagines the Optimizer's existing exclusion configurations. Please note technical details about the new configurations can be found in the [Optimizer User Guide](#).

Optimizer's standard exclusion logic will be updated to include:

- **Exclusions by performance bond account (PBAccount / margin account):**
  - When Enabled = true, Optimizer users can specify an account identifier or a string of identifiers as well as a product type (i.e. options) from the positions.csv which Optimizer will exclude from Optimization.
  - To be used when a specific account owner would like to limit Optimization, for instance to prevent options from Optimizing. Users can simply remove an account from the positions.csv input file if no Optimization should occur.
  - The default is Enabled = false
  - See more in [Optimizer User Guide](#)
- **Exclusions by product exchange:**
  - When Enabled = true, Users can specify a product exchange (CME, CBT, etc.) or a string of product exchanges and Optimizer will exclude all line items in the positions.csv file which contain products found in that product exchange from Optimization.
  - The default is Enabled = false
  - See more in [Optimizer User Guide](#)
- **Exclusions by product type alone or product type and product code:**
  - When Enabled = true, Users can specify a product type (FUT, OOF, etc.) or a string of product types and Optimizer will exclude all line items in the positions.csv file with that product type from Optimization.
  - Users can specify a product type and a product code (41, TN, etc.) or a string of product codes and Optimizer will exclude all line items in the positions.csv file with that product type and product code from Optimization.
  - The default is Enabled = true and excluded products = OOF
    - Note: options in portfolio margining is pending regulatory approval, hence options will be **disabled** by this flag by default.
  - See more in [Optimizer User Guide](#)
- **Exclusions by trade event:**
  - When Enabled = true, users can specify a trade lifecycle event (First Intent Date, Option Expiration date, etc.) and a window of days prior to that trade lifecycle event to establish an exclusion window for a product or string of products and Optimizer will exclude all products inside the exclusion window specified for that product.

- The default is Enabled = true
- See more in [Optimizer User Guide](#)



In addition to the standard exclusion logic above, Optimizer version 15 supports exclusion of options undergoing early exercise and assignment. Please note technical details about this configuration can be found in the [Optimizer User Guide](#).

- **Non-standard exclusion logic: early exercise**
  - When Enabled = true, Optimizer will exclude any options strikes which experienced an early exercise based on the clearing POS699C file (option exception summary report)
  - POS699C is included in the new cme\_optimizer\_marketdata zip file
  - Exclusion impacts short and long options positions and for excluded strikes, including those which are not assigned in the random assignment process
  - CME expects clearing firms to use this exclusion logic for the day 1 go live only. This exclusion logic **should be turned off** when firms are ready to go live with performing exercise and assignment in OTC accounts.
  - Firms not using this flag should make sure to be familiar with the other standard exclusion flags, described previously in this document.
  - The default is Enabled = true (v15 only)

## Pre-installation Checklist

1. Please ensure that your system adheres to the minimum system requirement as described in the [CME Optimizer Software User Guide](#).
2. CME Optimizer 15 is designed to install side-by-side with existing CME Optimizer installations.
3. If you have a prior version of CME Optimizer installed, please ensure that the application is not running.

## Installation Instructions

To install CME Optimizer 15.0.0.0 perform the following steps:

1. Download CME Optimizer 15.0.0.0. It is available to download from CME CORE. Detailed instructions can be found in the [CME Optimizer Software User Guide](#), 'Downloading Optimizer' section.
2. Log onto the system where the software is to be installed. You should log on as an administrative user.
3. Double-click on the Optimizer 15 installer (filename: Optimizer.15.0.0.0.msi), this will start the installation process.
4. Follow the on-screen instructions:
5. You must accept the End-User License Agreement (EULA) to install Optimizer 15:
6. Accept the default installation location or optionally change it:
7. You can choose to automatically run the Optimizer 15 Samples once the installation completes:

## Troubleshooting

If you run into issues during the installation, please refer to the guidance below. Alternatively, reach out to our [cme.core@cmegroup.com](mailto:cme.core@cmegroup.com) for further assistance:

1. Verify that you have the correct privileges to install software on the target system and that security software/policies are not preventing software from being installed
2. Verify that you have the minimum system requirements for hardware and operating system
3. Verify that you have installed the software prerequisites and that a system reboot has been performed
4. If the installer starts, but fails to complete, try running the MSI with logging enable from the command-line e.g. PowerShell:

.\Optimizer.15.0.0.0.msi /log installer.log

5. If the installer log does not point to a localized issue, then forward the log to [cme.core@cmegroup.com](mailto:cme.core@cmegroup.com) for further investigation (see below).

## Suggested Test Cases

Below is a set of suggested tests for Optimizer 15 adoption. The test cases and acceptance criteria here are suggestions only. Clearing firms are responsible for Optimizer on their own infrastructure. Please review above impacts prior to running test scenarios. Additional tests should be devised to understand the impacts of options in portfolio margin accounts - those can be decoupled from Optimizer tests.

Test Case	Description	Acceptance Criteria
<ul style="list-style-type: none"> <li>Install Optimizer, Run Samples</li> </ul>	Install Optimizer on application server and run the provided input sample files.	<ol style="list-style-type: none"> <li>Optimizer should install without error</li> <li>Optimizer should run samples without error</li> <li>Output of sample run should contain standard output files.</li> </ol>
<ul style="list-style-type: none"> <li>Optimizer input files Test</li> </ul>	Access Optimizer input files required to run version 15	<ol style="list-style-type: none"> <li>Files should be available over secure FTP</li> <li>Firm should be able to access files on secure FTP</li> <li>Files should transfer without error</li> </ol>
<ul style="list-style-type: none"> <li>Optimizer test run with new input files</li> </ul>	<p>In Optimizer input directory:</p> <ol style="list-style-type: none"> <li>Load Production files from firm FTP</li> <li>Load NR cme_optimizer_marketdata .zip file</li> <li>Load Production positions.csv file</li> <li>Run optimizer</li> </ol>	<ol style="list-style-type: none"> <li>Optimizer should run without error</li> </ol>
<ul style="list-style-type: none"> <li>Optimizer compare margin</li> </ul>	Using results from Optimizer test run above, compare to production results (total savings estimate file)	<ol style="list-style-type: none"> <li>Margin before figures should match using same inputs</li> <li>Margin after figures can differ for portfolios with options (if option eligibility is on) - reach out to <a href="mailto:cme.core@cmegroup.com">cme.core@cmegroup.com</a> with requests for analysis.</li> </ol>
<ul style="list-style-type: none"> <li>Enhanced exclusion logic - Early Exercise exclusion</li> </ul>	<p>Ensure the early exercise exclusion is Enabled = true in configuration.json file being used by the Optimizer (this will be 'true' by default).</p> <p>Input mock portfolio in Optimizer wherein a strike is being flagged for early exercise (CME to assist with input data set to use).</p> <p>Run Optimizer.</p>	<ol style="list-style-type: none"> <li>Optimizer should run without error</li> <li>Output transfer record should contain transfer of excluded product from the PM account (if present in PM account in input position file)</li> </ol>
<ul style="list-style-type: none"> <li>Enhanced exclusion logic - Trade Event exclusions</li> </ul>	<p>Update the Trade Events - Enabled - Events list is set up as expected for production go live. The defaults may or may not suit your use case.</p> <p>Input mock portfolio in Optimizer wherein a product is undergoing a trade lifecycle event and is flagged for exclusion (CME to assist with input data set to use).</p> <p>Run Optimizer.</p>	<ol style="list-style-type: none"> <li>Optimizer should run without error</li> <li>Output transfer record should contain transfer of excluded product from the PM account (if present in PM account in input position file)</li> </ol>
<ul style="list-style-type: none"> <li>Enhanced exclusion logic - product exclusion - listed options</li> </ul>	<p>Update the Product -Enabled - Exclusions Type = "OOF" to Enabled = false in configuration.json file being used by the Optimizer (this will be 'true' by default). This action turns OFF the options exclusion and allows options to Optimize.</p> <p>Input positions.csv and other new inputs used in the new input test above.</p> <p>Run Optimizer.</p>	<ol style="list-style-type: none"> <li>Optimizer should run without error.</li> <li>Output will contain portfolio margin and transfers including listed options in PM account.</li> </ol>
<ul style="list-style-type: none"> <li>Enhanced exclusion logic - other types tested as necessary</li> </ul>	Review all enhanced exclusion logic, if required test these similar to above exclusions.	



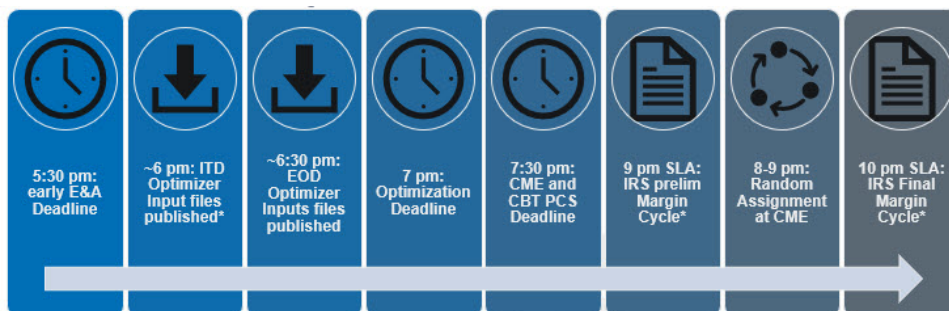
<ul style="list-style-type: none"> <li>• End to End Test</li> </ul>	<p>Build a positions.csv file for an account present in both NR and production.</p> <p>Include both options and futures.</p> <p>Run end to end Optimizer workflow using this positions file as input. Review trades in clearing system.</p>	<ol style="list-style-type: none"> <li>1. Optimizer should run for this account without error.</li> <li>2. Generated transfers should be fed to CME via MQ</li> <li>3. Generated transfers should process in CME Clearing NR</li> <li>4. Transfers should be processed in clearing firm side books and records.</li> </ol>
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## Operational Clearing Changes Related to Optimizer 15

- ITD/EOD Clearing Cycle/File Impacts

See impacts to Optimizer input files above, this section describes changes to files which are published by the clearing system but are not used as impacts to Optimizer software.

- EOD listed derivatives in cleared swap account report impacts:
  - POS542, describing listed derivatives in cleared swap accounts, will be enhanced to include options fields describing option strike and put/call indicator
    - New fields will be present at the end of the file
- EOD IRS Margin file impacts
  - IRSMR3 and MR files will be expanded to include one new field: Available Net Option Value
    - Field will be present at the end of the file
  - CME will publish two versions of the EOD IRSMR3 file:
    - Existing IRSMR3 file will be considered the preliminary file
      - File name: IRSMR3\_[firm id]\_yyyymmdd.csv (no change)
      - SLA: 9 pm CT (no change)
        - File generally publishes earlier than SLA (~8 pm CT)
      - Firms who have no options in OTC accounts can continue to interact with this file
    - New final IRSMR3 file, capturing EOD E&A activity, will also be published
      - Proposed new file name: IRSMR3\_FINAL\_[firm id]\_yyyymmdd.csv
      - SLA: 10 pm CT
        - File may publish earlier than SLA
      - Firms with options in OTC accounts should begin using this version of the file
    - Sample reports provided upon request
  - CME Clearing EOD timeline (portfolio margin program and daily E&A) is below.



\* Indicates timeline has changed or this item is new.

## Adoption Timeline (TBC)

- New Release, October 28, 2020
- Production, December 7, 2020

## CME Core Impacts

- CME CORE will be enhanced to allow for options in MarginType = OTC / Cross-margin flag on
- Because existing workflows allow users select 'Optimize' for accounts which include options, there are no changes to portfolio inputs
- CME CORE Optimizer report output will contain options which are selected by Optimizer to move to a cleared swap OTC account
  - Note options fields Strike, Put/Call and Und. Period Code already exist in CORE's User-Defined Optimization report, so no new fields are required

## Margin API Impacts

- The Margin API will be enhanced to allow for options in MarginType = OTC
- Because existing workflows allow users to send accounts with options to the Optimize feature, there are no changes to portfolio inputs

- Margin results from the Optimize feature will contain options which are selected by Optimizer to move to a cleared swap OTC account
  - Here is a sample report including options.

## **Optimizer Version 14.0 Release Notes**

Version: 14.0.0.0

Release Date: 28th May 2020 (see adoption timeline below)

### **Enhancements**

- Supports €STR discounting curve - more information about the discounting transition at CME is [here](#)
- Netting behavior updated to net the positions with the net quantity closest to zero
- Added support for an optional pass-through 'memo' field in the positions.csv file
  - Header and field values are firm-defined and entirely optional
- Updates to field TrdHandlInst in output transfer record from TrdHandlInst="2" to TrdHandlInst="8"
  - This change is related to an FECPlus change described [here](#).

### **Fixes**

- Fixes a bug which prevented ERIS positions from being margined properly

### **Configuration Changes**

- No configuration changes in this release.

### **Pre-installation Checklist**

1. Please ensure that your system adheres to the minimum system requirement as described in the [CME Optimizer Software User Guide](#).
2. CME Optimizer 14 is designed to install side-by-side with existing CME Optimizer installations.
3. If you have a prior version of CME Optimizer installed, please ensure that the application is not running.

### **Installation Instructions**

To install CME Optimizer 14.0.0.0 perform the following steps:

1. Download CME Optimizer 14.0.0.0. It is available to download from CME CORE. Detailed instructions can be found in the [CME Optimizer Software User Guide](#), 'Downloading Optimizer' section.
  1. Note users do not need to uninstall the prior version of Optimizer (v13). Optimizer 14 can be installed and run side by side with Optimizer 13 for users who install in production prior to the mandatory production deadline.
2. Log onto the system where the software is to be installed. You should log on as an administrative user.
3. Double-click on the Optimizer 14 installer (filename: Optimizer.14.0.0.0.msi), this will start the installation process.
4. Follow the on-screen instructions:
5. You must accept the End-User License Agreement (EULA) to install Optimizer 14:
6. Accept the default installation location or optionally change it:
7. You can choose to automatically run the Optimizer 14 Samples once the installation completes:

### **Troubleshooting**

If you run into issues during the installation, please refer to the guidance below. Alternatively, reach out to our [core.core@cmegroup.com](mailto:core.core@cmegroup.com) for further assistance:

1. Verify that you have the correct privileges to install software on the target system and that security software/policies are not preventing software from being installed
2. Verify that you have the minimum system requirements for hardware and operating system
3. Verify that you have installed the software prerequisites and that a system reboot has been performed
4. If the installer starts, but fails to complete, try running the MSI with logging enable from the command-line e.g. PowerShell:

```
.\Optimizer.14.0.0.0.msi /log installer.log
```

5. If the installer log does not point to a localized issue, then forward the log to [core@cmegroup.com](mailto:core@cmegroup.com) for further investigation (see below).

### **Operational Changes for Optimizer 14**

- No new files
- Changes to existing files:
  - €STR curve details will publish in existing Optimizer input files: "Base\_Curves . . .", "IRSDL . . .", "cme\_rloptimizercfg . . ."

## Adoption Timeline

- New Release: May 28, 2020
- Production: July 27, 2020

## Optimizer Version 13.1 release notes

Version: 13.1.0.46

Release Date: 13th December 2019

### Fixes

1. SNT date not applied to transfers generated from treasury rolls.
2. Single net transfers not generated in FIXML and CSV transfers when MoveDecision and/or NettingMoveDecision was set to SNT.
3. Transfers showing negative transfer amount.

### Enhancements

- New transfer origin 'Exclusion' for CSV transfers. Applicable to transfers generated from product and/or treasury roll exclusions.
- New configuration property added to configuration.json called "ExclusionMoveDecision" which can be used to control exclusion transfer behavior (see matrix and sample below).

### Configuration Changes

Change Type	Section	Property Name	Data Type	Values	Default Value	Notes
New Property	Defaults	ExclusionMoveDecision	String	LIFO FIFO SNT	LIFO	<p>The transfer allocation method for transfers that are created when a given portfolio is enabled for product and/or treasury roll exclusions.</p> <p>LIFO: Last in First Out</p> <p>FIFO: First in First Out</p> <p>SNT (single net transfer): Optimizer creates one transfer per contract with today's trade date and trade price. This should be used for portfolios expressed as net position only (not trade-level).</p>

### Pre-installation Checklist

1. Please ensure that your system adheres to the minimum system requirement as described in the [CME Optimizer Software User Guide](#).
2. During the installation, the installer will remove any prior versions of CME Optimizer 13 and install the latest version.
3. If you have a prior version of CME Optimizer 13 installed, please ensure that the application is not running.
4. If you use the default configuration or input/output directories in "C:\Program Files\CME Group\CME Optimizer 13", then it is recommended that you backup these assets before installing this update.

### Installation Instructions

To install CME Optimizer 13.1.0.46 perform the following steps:

1. Download CME Optimizer 13.1.0.46. It is available to download from CME CORE. Detailed instructions can be found in the [CME Optimizer Software User Guide](#), 'Downloading Optimizer' section.
2. Log onto the system where the software is to be installed. You should log on as an administrative user.
3. Double-click on the Optimizer 13 installer (filename: Optimizer.13.1.0.46.msi), this will start the installation process.

4. Follow the on-screen instructions:

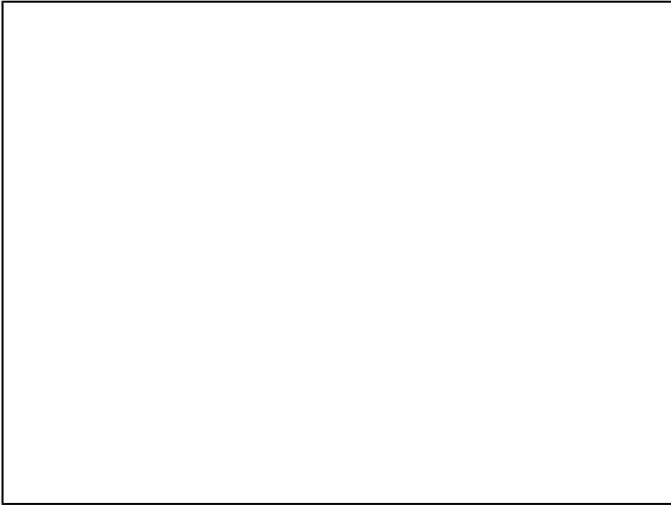


5. You must accept the End-User License Agreement (EULA) to install Optimizer 13:



6. Accept the default installation location or optionally change it:





7. You can choose to automatically run the Optimizer 13 Samples once the installation completes:

8. Once installation has completed, it is best practice to reboot the PC on which the software is installed.

## Troubleshooting

If you run into issues during the installation, please refer to the guidance below. Alternatively, reach out to our [cme.core@cmegroup.com](mailto:cme.core@cmegroup.com) for further assistance:

1. Verify that you have the correct privileges to install software on the target system and that security software/policies are not preventing software from being installed
2. Verify that you have the minimum system requirements for hardware and operating system
3. Verify that you have installed the software prerequisites and that a system reboot has been performed
4. If the installer starts, but fails to complete, try running the MSI with logging enable from the command-line e.g. PowerShell:

```
.\Optimizer.13.1.0.46.msi /log installer.log
```

5. If the installer log does not point to a localized issue, then forward the log to [core@cmegroup.com](mailto:core@cmegroup.com) for further investigation (see *below*).

## Configuration Sample (fragment)

```
{
  "Defaults": {
    "ExclusionMoveDecision": "LIFO"           // New Property
  }
}
```

## Optimizer Version 13.0 release notes

Mandatory Production Release target date August 26, 2019

See also **new** [Optimizer User Guide](#).

### **New features for Optimizer 13 include:**

1. Fully integrated CME IRS margin model. Prior versions approximated IRS risk using delta ladder inputs.
2. Some users may see additional efficiencies compared to prior versions.

### **Operational Changes for Optimizer 13 include:**

1. New Optimizer input files will be required to run version 13, summarized below:
  - a. csv is being decommissioned and will no longer be available for download
  - b. xml will no longer be an input to Optimizer 13, but it is not being decommissioned.
2. The Configuration file is migrated from XML to JSON format.
3. The output log file is updated to reflect the re-written Optimizer architecture.
4. The output margin reports references to HVaR are replaced by VaR.

### **Adoption Timeline (TBC):**

Dissimilar to prior installations, users can keep Optimizer 12 installed while installing version 13 in order to run either version under the new plug-in architecture. Due to the large quantity of changes, a new Optimizer User guide has been published [here](#). For general details about the Portfolio Margin program, see [here](#). For detailed release notes please see [here](#).

### **CME CORE Impacts**

CME CORE Rates User Interface will be impacted in the following ways:

- Deprecation of the Ideal Optimizer Report in the 'Optimize' feature
  - This report provided a list of futures not present in the account which would reduce total IRS-based risk to its maximum efficiency.
  - Other standard Optimize feature reports will continue to be available.
- 'Optimize' feature will be available in the test region in August.