

Messaging Efficiency Program

Version 11.1





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Executive Summary

To continue to encourage responsible messaging practices, ensure efficient market operations, allow for broad market participation, and foster high quality liquid markets, CME Group adopted revisions to the CME Globex Messaging Efficiency Program (Program) which became effective trade date October 1, 2024.

From an operational perspective, the Program provides transparent messaging thresholds in selected product groups and contract months via a weighted messaging scoring system and measures volume ratios at the CME Globex firm level which serve as the basis for comparison against tiered established product group benchmarks during combined Regular (RTH) and Extended Trading Hours (ETH) trading.

Section 16 of this document outlines how the Program will be applied to partner exchanges whose products are traded on the CME Globex platform.

1. Program Application

The Program measures volume ratios at the CME Globex firm level. A CME Globex firm is identified by the three-character alpha-numeric value transmitted in positions four through six of iLink tag 49-SenderCompID on the message **to** CME Globex, and iLink tag 56-TargetCompID on the message **from** CME Globex.

Clearing and trading firms often request separate CME Globex firm IDs to differentiate iLink session order flow originating from different business units or customers to increase the granularity needed for operational support and/or risk management purposes.

CME Group strongly encourages and expects CME Globex firms to monitor intraday messaging and volume levels to avoid incurring surcharges.

2. Aggregation

Customers may request, or CME Group at its discretion may choose, to aggregate the messaging and volume of multiple CME Globex firms in circumstances where the customer executes its business under more than one CME Globex firm. In these circumstances, aggregation will begin as of the first of the month following the decision to move forward with the aggregation.

Customers who fail aggregation will be responsible for surcharges at the individual CME Globex firm and product group levels.

Market participants who use multiple CME Globex Firm IDs with common business ownership and are interested in aggregation may contact <u>Global Account Management</u> for additional information and registration.



3. Scoring System

To encourage more efficient messaging behavior and increase market liquidity, the Program incorporates a messaging scoring system across the entire CME Globex trading session.

The Program scoring system establishes a CME Globex firm's messaging score based on the specific message type submitted, time of day, front or back month, and outright or spread. The raw message count for each type of message submitted is multiplied by a predefined weighting factor; weighted messaging is then totaled to calculate the messaging score. The following order types and pre-defined factors are included in a CME Globex firm's messaging score:

Order Type (RTH Lead Month)	Tag-Message Type	Pre- Defined Factor
New Order	Tag 35- MsgType=D	0
Order Modification	Tag 35- MsgType=G	1
Order Cancellation	Tag 35- MsgType=F	3
Order Mass Action Request	Tag 35- MsgType=CA	3*number of orders cancelled
Fill and Kill	Any order eliminated with Tag 59 = 3 Fill and Kill	3
MinQty	Any order eliminated with Tag 110- MinQty	3

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Order Type (RTH Back Month or Spreads)	Tag-Message Type	Pre- Defined Factor
New Order	Tag 35- MsgType=D	0
Order Modification	Tag 35- MsgType=G	0.1
Order Cancellation	Tag 35- MsgType=F	0.3
Order Mass Action Request	Tag 35- MsgType=CA	0.3*number of orders cancelled
Fill and Kill	Any order eliminated with Tag 59 = 3 Fill and Kill	0.3
MinQty	Any order eliminated with Tag 110- MinQty	0.3

		Pre-
Order Type (ETH Front Month,	Tag-Message	Defined
Back Month or Spreads)	Туре	Factor
New Order	Tag 35- MsgType=D	0
Order Modification	Tag 35- MsgType=G	0.1
Order Cancellation	Tag 35- MsgType=F	0.3
Order Mass Action Request	Tag 35- MsgType=CA	0.3*number of orders cancelled
Fill and Kill	Any order eliminated with Tag 59 = 3 Fill and Kill	0.3
MinQty	Any order eliminated with Tag 110- MinQty	0.3

The calculation of the raw message count and messaging score are as follows:



Raw message count (Orders + Modifications + Cancellations + Eliminations) (ETH & RTH combined)

Messaging score ETH (# of modifications * .1) + (# of order cancellations * .3) + (#FAK or FOK orders eliminated * .3).

Messaging score RTH (# of modifications) + (# of order cancellations * 3) + (#FAK or FOK orders eliminated * 3).

Time of day Extended Trading Hours (ETH) are defined as any time not included in RTH. Regular Trading Hours (RTH) are defined as the hours between 7:00 a.m. and 4:00 p.m. Central Time (CT).

Front or back/deferred month listings are identified in the <u>CME Reference Data API</u>. All front month contracts will be identified with a Boolean flag of either "Y" or "N".

Outright or spread where an outright is a single contract month that is not part of a defined spread trade. A spread represents messaging consisting of multiple contract months and or products.

Due to internal processing procedures, spread volume for the Program will be multiplied by a factor of 3x and an example is as follows:

Trade of 100, Spread A:B

MEP volume applied to the appropriate Product Group as:

- Spread = 100
- Leg A = 100
- Leg B = 100

In the example above, a total of 300 contracts would count toward MEP calculations.

The following are excluded from the CME Globex Messaging Efficiency Program messaging score calculation:

- New orders
- CME Globex firms submitting 50,000 or fewer daily messages during combined RTH and ETH trading session per product group

4. Volume Ratio

The volume ratio measures the ratio between a CME Globex firm's messaging score and the CME Globex firm's traded volume in a particular product group during the hours in which the Program is in effect. The CME Globex firm's volume ratio serves as the basis for comparison against the established product group benchmark.

Volume Ratio =
$$\frac{\text{Total Globex firm messaging score}}{\text{Total Globex firm volume}}$$

For purposes of this Program, the messaging score and volume ratio are calculated during combined ETH and RTH trading.



5. Product Group Benchmarks

Each quarter, CME Group determines the product group benchmark for a given product group based on the business needs of the market and on observed performance over several time periods. In addition to considering past market behavior, CME Group also takes into account the unique dynamics of each market as well as the level of messaging needed to enhance liquidity.

CME Group applies the Program to product groups which exhibit inefficient messaging traffic. The particular product groups subject to the Program and the corresponding product group benchmarks are established and announced each quarter unless business circumstances for a particular product or product group require changes to be implemented more frequently. Current <u>product group benchmarks</u> are available on the CME Group website.

Any changes to the product group benchmarks will be communicated via the CME Globex Notices and/or GCC Targeted communication. Sign up to receive CME Globex Notices.

6. Messaging Tiers and Expanded Product Group Benchmarks

To continue to encourage broad market participation and quality messaging, CME Group revised the following raw daily messaging tiers and expanded product group benchmarks beginning trade date July 1, 2024.

Raw Daily Messaging Tiers	Product Group Benchmark
≤50,000 Raw Daily Messages	Not Applicable
50,001-100,000 Raw Daily Messages	3X Product group benchmark
100,001-150,000 Raw Daily Messages	2X Product group benchmark
>150,000 Raw Daily Messages	Product group benchmark

Under the Program, as the amount of messaging from a CME Globex firm rises, their messaging efficiency must increase.

Please refer to the CME Group website for a complete list of <u>product group benchmarks</u> to which the Program applies.

7. Options

Options product groups messaging and volume which are not part of a mass quote and are included in the CME Globex Messaging Efficiency Program are scored in the same manner as futures product groups.



To further encourage responsible messaging practices during all trading hours in which the CME Globex platform is available, CME Group extended the Messaging Efficiency Program (MEP) to selected equity options product groups for market participants submitting mass quotes starting trade date **October 1, 2024**.

Mass quoting as part of the Program will be evaluated, applied and enforced as follows:

- CME Globex Firm ID, three-character alpha-numeric value transmitted in positions four through six of iLink tag 49-SenderCompID on the message to CME Globex, and iLink tag 56-TargetCompID on the message from CME Globex.
- During all trade dates and RTHs in which the CME Globex trading platform is open and does not adhere to the MEP Holiday Calendar.
- Only product groups listed under CME Globex Mass Quote Messaging Efficiency Program Benchmarks are included in the MQ MEP.
- CME Group reserves the right to add or remove mass quote related product groups at its discretion and will announce changes via CME Globex Notice and/or GCC Targeted Message.
- Unless otherwise stated, all exclusions, exemptions, exceptions, and aggregation as noted in this document for the Program do **not** apply to mass quoting.
- Mass Quote Entries Volume Ratio- Measures the ratio between total Number of Entries divided by total
 volume in a particular or aggregated product group. Total Number of Entries can be arrived by summing the
 quotes within MsgType 35=i.
- Pass/Fail is measured on monthly data. At the end of a calendar month, if a firm's Mass Quote Entries
 Volume Ratio exceeds the designated mass quote ratio for a product group level, a surcharge of \$1,000 will
 be applied for each daily breach of the designated mass quote product group benchmark.
- CME Group will send designated Executing Firm MEP Contacts, an email on a T+1 basis for any instances
 where the CME Globex Firm ID exceeded the mass quote product group benchmark. In instances where
 there is no executing firm MEP contact on record, the Clearing MEP Contact and/or Front Office Admin will
 be sent the email and should forward it to the proper end client contact(s).
- Refer to Appendix B for Mass Quote Glossary for additional information.
- For participants with more than one Mass Quote-eligible iLink tag 49-SenderCompID permissioned for the same instrument group, CME Group permits a maximum aggregate resting quote quantity, per side and price level, that is equal to the instrument's maximum order size.
- Please note the aggregate resting quote quantity is calculated across all of the participant's tag 49-SenderCompIDs.
- Refer to Appendix C for examples involving compliant and non-compliant quoting behavior. Mass quote
 users who do not follow CME Group's guidelines are subject to lose their market maker and/or mass
 quote privileges.



8. Message Quality

The Program is applied to market participants as defined in Section 1; however, CME Group expects responsible, quality messaging from all market participants across all products at all times.

To address cases of extreme, low quality messages which do not generate corresponding volume and may negatively impact markets trading on CME Globex, CME Group, at its discretion, may also apply the Program at more granular levels (e.g., account, Operator ID (Tag 50), or iLink Session ID). In such cases, CME Group will advise the participant accordingly.

Notwithstanding the above, pursuant to Rule 579.A., the <u>Global Command Center</u> has the authority to take any action deemed appropriate to preserve market integrity in CME Group markets, including but not limited to, restricting customer access to CME Globex or any other actions deemed to be in the best interest of the Exchange.

CME Group expects CME Globex firms to monitor intraday messaging and volume levels to avoid incurring surcharges.

9. Reporting

CME Group analyzes messaging activity and trading volume and produces the results for a CME Globex firm whenever the CME Globex firm exceeds a product group benchmark for a given trade date. Results are available in the Firm Administrator Dashboard (FADB) and segregated by product group with a status for each product group. The following status values may be reported:

- AUTO_WAIVED
- Pass_on_Aggregation
- Pass on Monthly
- Potential
- Surcharge Applied

In addition, CME Globex data in the Firm Administrator Dashboard is divided by the following categories so that the origin of the messaging and trading activity is easily identifiable:

- CME Globex firm
- iLink Session ID
- Account number
- Operator ID (Tag 50)
- EMT

Daily email notifications are available on a T+1 basis and are distributed to registered administrators of the clearing firm as well as registered recipients of the CME Globex firm.

Requests by CME Globex firms to receive direct e-mail notifications and/or access to the Firm Administrator Dashboard are granted at the sole discretion of the applicable CME Globex Firm Administrator.



10. Notices and Surcharges

If a CME Globex Firm ID's volume ratio exceeds the established product group benchmark and all exemption types have been exhausted or are not applicable, CME Group will levy a surcharge of \$1,000 per product group, per day.

Please refer to Sections 14 and 15 regarding surcharges and penalties associated with the Excessive Messaging Threshold (EMT).

Surcharges in the Firm Administrator Dashboard are identified with the value Surcharge_Applied along with the corresponding incident number. Surcharges also appear on the administrative group's monthly billing statement from CME Group as MPS (Messaging Program Surcharge).

In instances where the MEP surcharges of a non-clearing firm's administrative group remain unpaid, those surcharges may be billed to the current clearing firm of record for the related CME Globex Firm ID.

Clearing firms may alter the Messaging Efficiency Program surcharges they bill to their customers provided they do not misrepresent the amount of the charges billed to them by CME Group in accordance with this Program.

11. Exceptions

To account for unusual market conditions, the following are exceptions to the CME Globex Messaging Efficiency Program.

 CME Globex firms will automatically receive a waiver of two daily surcharges per product group, per calendar month. No action on the part of the CME Globex firm is necessary in this regard and any applicable waivers will be applied at the end of each calendar month.

This waiver will not apply to surcharges for daily product group volume ratios greater than six times the listed product group benchmark at the applicable tier level for the product group on the day which the violation occurred.

- The Program will not be applied on certain dates before/on/after US recognized holidays. Please refer to the <u>CME Globex Messaging Efficiency Program Holiday Calendar</u> as to when Program ratios for all product groups included in the Program will not be calculated.
- All daily surcharges for a CME Globex firm during a given calendar month will be automatically waived if its
 volume ratio in a particular product group for the entirety of a calendar month is less than or equal to the
 applicable listed product group benchmark.

This waiver will not apply to surcharges for daily product group volume ratios greater than six times the listed product group benchmark at the applicable tier level for the product group on the day which the incident occurred.

To calculate this exception, the following will be used when determining a CME Globex firm's monthly MEP volume ratio:

 CME Group will score ETH and RTH messaging and ETH and RTH volume in each applicable product group on all days in which the MEP is in effect during a calendar month and a CME Globex firm has recorded raw messaging in a applicable product group.



- Combined ETH and RTH Average raw messaging in each applicable product group for the calendar month will determine the tier level calculation and assignment.
- Σ of ETH and RTH monthly messaging score / Σ of ETH and RTH monthly volume

The calculation of this exception per applicable product group is as follows:

ETH Monthly Volume Ratio = ((# of order modifications *.1) + (# of order cancellations *.3) + (# FAK or FOK order types *.3)) for a calendar month / ETH Volume for a calendar month

Combined with:

RTH Monthly Volume Ratio = ((# of order modifications *1) + (# of order cancellations *3) + (# FAK or FOK order types *3)) for a calendar month / RTH Volume for a calendar month

*Only counting days when the MEP is enforced and a CME Globex firm has submitted raw messaging in a particular product group.

- Market participants designated by CME Group as Registered Market Makers in SOFR futures, 30 Day Federal Fund futures and E-mini S&P 400 futures or enrolled in other Exchange programs designed to promote liquidity may be exempt from standard product group benchmarks. But will be held to the parameters in the Excessive Messaging Thresholds (EMT). Please refer to Sections 14 and 15 in this document for EMT related information.
 - Market participants who believe they are designated by CME Group as Registered Market Makers or enrolled in other Exchange programs designed to promote liquidity and exempt from standard product group benchmarks should verify their status with an Exchange representative and request a written confirmation of the specific product group benchmarks that apply to them.

12. Request for Waiver of Surcharges

A clearing firm or an approved CME Globex firm administrative manager may submit a Request for Waiver (RFW) of a surcharge via email or the Firm Administrator Dashboard if the market participant believes there was a compelling justification for exceeding the applicable messaging threshold. Waiver requests for the MEP and the EMT must be submitted between the first and 10th business day of the month following the month in which the Messaging Program surcharge occurred. CME Group will carefully consider well justified RFWs and will subsequently notify the firm admin manager of CME Group's decision.

RFWs are not required until the previous months' monthly ratio has been calculated and applied. If a CME Globex firm's exceptions are not waived based on their monthly ratio, user's will have 10 business days from the last calendar day of the month for the previous month's activity to submit an RFW.

In the event an RFW is denied or not applicable, the surcharge(s) will be billed at the end of the second calendar month following the date the volume ratio was exceeded and will appear in the Firm Administrator Dashboard as Surcharge_Applied as well as the administrative group's monthly billing statement from CME Group as MPS (Messaging Program Surcharge).



13. Related Programs

In addition to the CME Globex Messaging Efficiency Program, all market participants should be aware of the following programs and guidelines:

- Messaging Controls
- CME Globex Port Closure
- Trading at Settlement and Trading at Marker Transactions
- Mass Quoting
- iLink Session ID Policy and Operational Guidelines

Market participants are strongly encouraged to review the specific documentation pertaining to these programs and guidelines to ensure compliance.

14. iLink Session ID Excessive Messaging Threshold (EMT)

To encourage responsible messaging practices during all trading hours in which the CME Globex platform is available, CME Group added an Excessive Messaging Threshold (EMT) to the CME Globex Messaging Efficiency Program for iLink Session IDs which took effect trade date October 28, 2019.

Please refer to section 16 in this document for EMT related information for Partner Exchanges.

The EMT is part of the Messaging Efficiency Program but does not recognize the MEP holiday calendar.

For example:

- Presidents Day is recognized within the MEP holiday calendar on Friday, Sunday, and Monday.
- Within EMT, Presidents Day would not be recognized.
 - Friday would be a normal EMT calculation.
 Sunday restart until the early halt on Monday, would be another EMT calculation.
 Monday night restart through the close on Tuesday, would be yet another EMT calculation.

The associated EMT calculations pertaining to iLink Session IDs are as follows:

- Raw Message Count (Orders + Modifications + Cancellations + Eliminations)
- Messaging Score (# of modifications) + (# of order cancellations * 3) + (#FAK or FOK orders eliminated * 3).
- $Volume\ Ratio\ = \frac{i Link\ Session\ ID\ Product\ Group\ Messaging\ Score}{i Link\ Session\ ID\ Product\ Group\ Volume}$

Both the raw message count and messaging scores are calculated and applied at the CME Globex iLink Session ID level and are in effect during all trade dates and hours in which the CME Globex platform is open.

CME Group reserves the right to add or remove product groups at its discretion. Unless otherwise stated, all futures and options product groups available on the CME Globex platform are included in the EMT.

Unless otherwise stated, all exclusions, exceptions, and aggregation as noted in this document for the Program do **not** apply to the EMT.



Any iLink Session ID which exceeds a raw message count of one million for a CME Globex trade date and a volume ratio >500:1 in each individual product group subject to the EMT, may be subject to the following escalations:

- \$10,000 surcharge per occurrence
- iLink session port closure with accompanying \$1,000 port closure fee

iLink Session ports will be reopened upon Global Command Center (GCC) determination that the detrimental behavior has been corrected.

The GCC will require a written explanation ensuring the customer has a complete understanding of the system failure.

In addition to the explanation, the GCC will require detailed information as to what mitigating and programmatic steps the customer will put in place to ensure the offending activity does not occur again.

Subsequent surcharges and any port closure will trigger a referral to market regulation for consideration of charges for the violation of Exchange rules.

15. CME Globex Firm ID Excessive Messaging Threshold (EMT)

To encourage responsible messaging practices during all trading hours in which the CME Globex platform is available, CME Group added an Excessive Messaging Threshold (EMT) to the CME Globex Messaging Efficiency Program for CME Globex Firm IDs which took effect January 26, 2020.

Please refer to section 16 in this document for EMT related information for partner exchanges.

The EMT is part of the Messaging Efficiency Program but does not recognize the MEP holiday calendar.

For example:-

- Presidents Day is recognized within the MEP holiday calendar on Friday, Sunday, and Monday.
- Within EMT, Presidents Day would not be recognized.
 - Friday would be a normal EMT calculation.
 Sunday restart until the early halt on Monday, would be another EMT calculation.
 Monday night restart through the close on Tuesday, would be yet another EMT calculation.

The associated EMT calculations pertaining to CME Globex Firm IDs are as follows:

- Raw Message Count (Orders + Modifications + Cancellations + Eliminations)
- Messaging Score (# of modifications) + (# of order cancellations * 3) + (#FAK or FOK orders eliminated * 3).
- Volume Ratio =
 Globex Firm ID Product Group Messaging Score
 Globex Firm ID Product Group Volume

Both the raw message count and messaging scores are calculated and applied at the CME Globex Firm ID level and are in effect during all trade dates and hours in which the CME Globex platform is open.

CME Group reserves the right to add or remove product groups at its discretion. Unless otherwise stated, all futures and options product groups available on the CME Globex platform are included in the EMT.



Unless otherwise stated, all exclusions, exceptions, and aggregation as noted in this document for the Program do **not** apply to the EMT.

Any CME Globex Firm ID which exceeds a raw message count of 10 million for a CME Globex trade date and a volume ratio >500:1 in each individual product group subject to the EMT, may be subject to the following escalations:

- \$10,000 surcharge per occurrence
- iLink session port closure with accompanying \$1,000 port closure fee

iLink session ports will be reopened upon Global Command Center (GCC) determination that the detrimental behavior has been corrected.

The GCC will require a written explanation ensuring the customer has a complete understanding of the system failure.

In addition to the explanation, the GCC will require detailed information as to what mitigating and programmatic steps the customer will put in place to ensure the offending activity does not occur again.

Subsequent surcharges and any port closure will trigger a referral to market regulation for consideration of charges for the violation of Exchange rules.

16. Partner Exchanges

The breadth of products available on CME Globex continues to grow, including the regular listing of new CME Group exchange products and products of our global exchange partners.

To promote efficient messaging and foster high quality, liquid markets, each partner exchange, in coordination with CME Group, is responsible for determining appropriate messaging practices for its CME Globex-listed products.

CME Group may publish and administer this Program on behalf of a partner exchange; however, the Program product group benchmarks are governed by the rules of the partner exchange listing the product group.

The iLink session Excessive Messaging Threshold (EMT) is applicable to partner exchanges and the associated EMT calculations pertaining to partner exchange iLink Session IDs are as follows:

- Raw Message Count (Orders + Modifications + Cancellations + Eliminations)
- Messaging Score (# of modifications) + (# of order cancellations * 3) + (#FAK or FOK orders eliminated * 3).
- Volume Ratio =
 \[\frac{i Link Session ID Product Group Messaging Score}{i Link Session ID Product Group Volume} \]

Any iLink Session ID which exceeds a raw message count of one million for a CME Globex trade date and a volume ratio >500:1 in each individual product group subject to the EMT, may be subject to the following escalations:

- Warning notification stating iLink session ID(s) exceeded EMT threshold
- Second warning notification stating associated market participant a GCC port closure will result if a third instance occurs within a rolling 12-month period
- iLink session port closure with accompanying \$1,000 port closure fee

iLink session ports will be reopened upon Global Command Center (GCC) determination that the detrimental behavior has been corrected.



The GCC will require a written explanation ensuring the customer has a complete understanding of the system failure.

In addition to the explanation, the GCC will require detailed information as to what mitigating and programmatic steps the customer will put in place to ensure the offending activity does not occur again.

Subsequent surcharges and any port closure will trigger a referral to market regulation for consideration of charges for the violation of Exchange rules.



Appendix A – Frequently Asked Questions

Introduction

1. What is the CME Globex Messaging Efficiency Program?

The CME Globex Messaging Efficiency Program (Program) is a business program designed to encourage responsible messaging practices by CME Globex market participants that support efficient market operations and foster high quality, liquid markets.

From an operational perspective, the Program provides transparent messaging thresholds in selected product groups and contract months via a weighted messaging scoring system and measures volume ratios at the CME Globex firm level which serve as the basis for comparison against tiered established product group benchmarks during combined Regular (RTH) and Extended Trading Hours (ETH) trading.

2. What are the Excessive Messaging Thresholds?

The Excessive Messaging Thresholds (EMT) are applied at both the iLink Session ID and CME Globex Firm ID levels and are in effect during all trade dates and hours in which the CME Globex platform is open.

Unless otherwise stated, all exclusions, exemptions, exceptions, and aggregation as noted in this document for the Program do **not** apply to the EMT. Please refer to sections 14 and 15 in this document for EMT related information

3. What is the purpose of the Program?

- To enhance market performance for all participants in specified product groups by addressing excessive, lesser quality messaging
- To encourage all market participants to actively monitor and appropriately control their message flow into the CME Globex system
- To control the growth of infrastructure expenses for market participants as markets grow and participation increases

4. During what hours does the Program apply?

Unless otherwise stated, message scoring and the volume ratio are calculated for all messaging and volume that occur during combined Regular (RTH) and Extended Trading Hours (ETH) trading.

5. What are RTH and ETH?

Regular Trading Hours (RTH) are defined as the hours between 7:00 a.m. and 4:00 p.m. Central Time (CT). Extended Trading Hours (ETH) are defined as any time not included in RTH.

6. How is a product group's front month identified?

Front or back/deferred month listings are identified in the <u>CME Reference Data API</u>. All front month contracts are identified with a Boolean flag of either "Y" or "N".

7. Is the program enforced during holidays?

The Program will not be applied on US-recognized holidays in which CME Globex trading is abbreviated. Please refer to the CME Globex Notices for announcements as to when Program parameters will not be enforced or the CME Globex Messaging Efficiency Program Holiday Calendar.



Excessive Messaging Thresholds (EMT) and options mass quoting are part of the Messaging Efficiency Program **but do not recognize the MEP holiday calendar.**

8. At what level are the Program's messaging ratios measured?

The Program measures the ratio between a CME Globex firm's messaging score and the CME Globex firm's traded volume in a particular product group during combined Regular (RTH) and Extended Trading Hours (ETH) trading.

9. Are CME Group options product groups included in the Program?

Yes, some options product groups are included in the Program. Please refer to Section 7 in this document for detailed information.

10. Are mass quotes included in the Program? To further encourage responsible messaging practices during all RTHs in which the CME Globex platform is available, CME Group extended the Messaging Efficiency Program (MEP) to selected equity options product groups for market participants submitting mass quotes starting trade date October 1, 2024. Please refer to Section 7 as well as Appendices B and C for additional information.

11. Are CME Group partner exchange products included in the Program?

Each partner exchange, in coordination with CME Group, is responsible for determining appropriate messaging practices for its CME Globex-listed products.

CME Group may publish and administer this Program on behalf of a partner exchange; however, the Program product group benchmarks are governed by the rules of the partner exchange listing the product group.

The iLink session Excessive Messaging Threshold (EMT) is applicable to partner exchanges. Please refer to Section 16 in this document for additional information.

12. Does the Program incorporate any exclusions?

Please refer to this document for detailed information and note certain waivers will not apply to surcharges for daily product group volume ratios greater than six times the listed product group benchmark at the applicable tier level for the product group on the day which the violation occurred.

Volume Ratio and Product Group Benchmarks

13. What order types are included when determining a CMEGlobex firm's messaging score? Please refer to Section 3 in this document for specific order types.

14. What is the volume ratio?

The volume ratio measures the ratio between an CME Globex firm's messaging score and the CME Globex firm's traded volume in a particular product group during the hours the Program is in effect. The Globex firm's volume ratio serves as the basis for comparison against the established product group benchmark.

Volume Ratio =
$$\frac{\text{Total Globex firm messaging score}}{\text{Total Globex firm volume}}$$

15. What are product group benchmarks?

Each quarter, or as needed and announced by CME Group, CME Group determines the product group benchmark for a given product group based on the needs of the market and on observed performance over



several time periods. In addition to considering past market behavior, CME Group also takes into account the unique dynamics of each market as well as the level of messaging needed to enhance liquidity.

The particular product groups subject to the Program and the corresponding product group benchmarks are established and announced each quarter, unless business circumstances for a particular product or product group require changes to be implemented more frequently.

Current product group benchmarks are available on the CME Group website and changes to the product group benchmarks are announced in the CME Globex Notices. Register to receive CME Globex Notices.

Market participants designated by CME Group as **registered market makers** in SOFR futures, 30 Day Federal Fund futures, and E-mini S&P 400 futures, or enrolled in other Exchange programs designed to promote liquidity may be exempt from standard product group benchmarks. But will be held to the parameters in the Excessive Messaging Thresholds (EMT). Please refer to Sections 14 and 15 in this document for EMT related information.

Market participants who believe they are designated by CME Group as **registered market makers** or enrolled in other Exchange programs designed to promote liquidity and exempt from standard product group benchmarks should verify their status with an Exchange representative and request a written confirmation of the specific product group benchmarks that apply to them.

16. Which entities' messages are measured for purposes of the Program?

The Program measures volume ratios at the CME Globex firm level. A CME Globex firm is identified by the three-character alpha-numeric value transmitted in positions four through six of iLink tag 49-SenderCompID on the message **to** CME Globex and iLink tag 56-TargetCompID on the message **from** CME Globex.

In cases where a single entity is submitting messages via more than one CME Globex firm number, CME Group will consider requests to aggregate multiple CME Globex firm numbers when applying Messaging Efficiency Program parameters. Please contact Global Account Management for additional information.

CME Group also reserves the right to aggregate CME Globex firms for purposes of determining whether a product group benchmark has been exceeded in circumstances where a single entity is sending in messages via more than one execution firm number.

CME Group, in its discretion, may also apply the Program at more granular levels (e.g. account, Tag 50 or iLink session ID) if a high messaging participant is not set up with its own execution firm number. In such cases, CME Group will advise the participant accordingly.

Notices and Surcharges

17. How will I know if I am adhering to the Program?

CME Group analyzes market participant messaging activity and volume, and produces daily reports which detail results at the CME Globex firm level, as well as at the iLink Session ID, account and Tag 50 levels. These reports are available for viewing in the Firm Administrator Dashboard for each CME Globex firm ID. **CME Group also strongly encourages market participants to establish mechanisms to monitor intraday messaging and volume levels relative to relevant product group benchmarks to avoid incurring surcharges**. Market participants who are unsure of their performance relative to this Program should consult their clearing firm.

Requests by CME Globex firms to receive direct e-mail notifications and/or access to the Firm Administrator Dashboard are granted at the sole discretion of the applicable CME firm administrator.



18. What is the associated surcharge for exceeding a product group benchmark?

If a CME Globex firm's daily volume ratio exceeds the established product group benchmark and all exceptions have been exhausted or are not applicable, CME Group will levy a surcharge of \$1,000 per product group, per day.

Exception types are defined in the Program document and note that certain waivers will not apply to surcharges for daily product group volume ratios greater than six times the listed product group benchmark at the applicable tier level for the product group on the day which the violation occurred.

19. How are potential surcharge notifications disseminated?

Potential surcharge notifications are emailed on a daily basis to clearing and CME Globex firm personnel who have been entered into the Firm Administrator Dashboard. Clearing firms generally pass these surcharges on to the client responsible for the excessive messaging.

Program Parameters

20. What is a CME Globex firm in the context of the Program?

A CME Globex firm is identified by the three-character alpha-numeric value transmitted in positions 4 through 6 of iLink tag 49-SenderCompID on the message **to** CME Globex and iLink tag 56-TargetCompID on the message **from** CME Globex.

21. What is an example of the daily messaging scoring tiers and expanded product group benchmarks? As the following table illustrates, this feature of the Program shows that as the amount of messaging from a market participant rises, their efficiency must increase.

Raw Daily Messaging Tiers	Product Group Benchmark
≤50,000 Raw Daily Messages	Not Applicable
50,001-100,000 Raw Daily Messages	3X Product group benchmark
100,001-150,000 Raw Daily Messages	2X Product group benchmark
150,000 Raw Daily Messages	Product group benchmark

22. How can a CME Globex firm keep track of its messaging and volume statistics?

The Firm Administrator Dashboard provides firm admin managers and authorized CME Globex firm users with the ability to view messaging and volume statistics on a T+1 basis for product groups included in the Program.

CME Group strongly encourages and expects CME Globex firms to monitor intraday messaging and volume levels to avoid incurring surcharges.

Firm Administrator Dashboard and Notifications

23. What is the Firm Administrator Dashboard (FADB)?

The <u>Firm Administrator Dashboard (FADB)</u> allows firm admin managers and registered CME Globex firm users to view registration information for select CME Group services, iLink session performance and capacity metrics and Messaging Efficiency Program statistics through a single web interface.



24. How can a CME Globex firm gain access to the FADB?

Interested parties should contact their firm admin manager to obtain FADB access.

25. How do authorized users log into the FADB?

- Navigate to the CME Group Login page
- 2. Enter your CME Group Login and Password

26. How do I obtain a CME Group Login and Password?

- Create a CME Group Login and profile.
- Login to CME Group Account and request a token.
- Give your CME Group Login and token to your firm admin manager.
- If you do not know who your firm admin manager or registered entity admin manager is, please contact Global Account Management.

27. Will CME Group provide CME Globex firms with the ability to monitor their messaging on a real-time basis?

Various third party software providers offer customers the capability to track the number of messages they submit on a real-time basis.

28. Are CME Globex firms eligible to receive their messaging surcharge notifications directly from CME Group?

Yes, CME Globex firms are eligible to receive their Program surcharge notifications directly from CME Group at the discretion of their firm admin manager. Interested parties should contact their firm admin manager to obtain the necessary permission.

Request for Waivers and Program Administration

29. What is a Request For Waiver (RFW)?

When a product group benchmark has been exceeded and results in a potential surcharge, a firm admin manager or a CME Globex firm representative may submit a Request for Waiver (RFW) if the firm believes that there is a compelling justification for having exceeded the messaging threshold.

30. How is a RFW submitted?

Firm admin managers or approved CME Globex firm users who have access to the Firm Admin Dashboard have the ability to enter RFWs directly into the tool.

Please note RFWs are not required until the previous month's monthly ratio has been calculated and applied. If a CME Globex firm's exceptions are not waived based on their monthly ratio, user's will have 10 business days from the last calendar day of the month to submit an RFW for the previous month's activity.

31. Who is responsible for payment of Program surcharges?

In the event an RFW is denied or not applicable, surcharge(s) will be billed to the administrative owner of the CME Globex Firm ID at the end of the second calendar month following the date the volume ratio was exceeded and the Firm Administrator Dashboard will reflect the appropriate RFW status.

Additional Information

32. Are there any other messaging related programs which market participants should be aware of?



In addition to the CME Globex Messaging Efficiency Program, all market participants should be aware of the following programs and guidelines:

- Messaging Controls
- CME Globex Port Closure
- Trading at Settlement and Trading at Marker Transactions
- Mass Quoting
- iLink Session ID Guidelines

Market participants are strongly encouraged to review the specific documentation pertaining to these policies and guidelines in order to ensure compliance.

33. Where can I obtain additional Program information?

Additional information is available on the CME Group Messaging Efficiency Program landing page.

34. Who do I contact for more information?

Please contact the Global Command Center at 1.800.438.8616) or Global Account Management.



Appendix B - Mass Quote Glossary

- Mass Quote Count (tag 35-MsgType=i)- Number of Mass Quotes messages submitted to generate bid/ask pairs and two-sided markets.
- Mass Quote Entries Accepted (on Quote Ack, tag 35-MsgType=b, tag 9772)- The number of MQ entries
 accepted by the engine. If a mass quote market participant submits one MQ message containing 15 quote
 entries, but 10 of the quote entries were rejected, the count would equal five quote entries accepted by the
 engine.
- Mass Quote Entries Canceled (on Quote Cancel Ack, tag 35-MsgType=b, tag 9772)- The number of quotes
 actually canceled by the engine. If a mass quote market participant enters one quote cancel (35=Z) to cancel
 a single product group, and 10 quotes are actually canceled, this would equate to 10 quote entries canceled.
- Mass Quote Entries Rejected (on Quote Ack, tag 35-MsgType=b, tag 295)- The number of quote entries rejected.
- Mass Quote Entries Total (tag 295-NoQuoteEntries)- The total number of quote entries included in each MQ (35=i) message. Single and double side quotes are counted as one quote entry.
- Mass Quote Entry Volume Total volume that originates from a MQ message.
- Mass Quote Entries Volume Ratio- Measures the ratio between total Number of Entries divided by total
 volume in a particular or aggregated product group. Total Number of Entries can be arrived by summing the
 quotes within MsgType 35=i.
- Mass Quote Messaging Thresholds All mass quote messaging is measured in messages per second (MPS) over a three second window. If an iLink session exceeds the mass quote threshold, subsequent mass quote messages will be rejected via a Session Level Reject (tag 35-MsgType=3) message until the mass quote MPS rate falls below the threshold. On a best-efforts basis, CME Group will cancel all resting quotes when an iLink session exceeds the Mass Quote reject threshold. Reject threshold is 400 MPS. Logout threshold is 750 MPS.
- Mass Quote Session- An iLink session used to establish a logical connection to CME Globex for order routing which has been permissioned by CME Group to submit mass quotes for particular options product group(s).
- Mass Quote Product Group Benchmark- The particular mass quote product group benchmarks are
 established and announced each quarter unless business circumstances for a particular product or product
 group require changes to be implemented more frequently. Current mass quote product group benchmarks
 are listed on the last page of the product group benchmarks file available on the CME Group website.

Any changes to the product group benchmarks will be communicated via the <u>CME Globex Notices</u> and/or <u>GCC Targeted Messaging</u>.



Appendix C - Mass Quote Maximum Aggregate Resting Quote Quantity

Submitting mass quotes allows authorized CME Globex customers to create and maintain a market on a large number of instruments simultaneously. Mass quote messages are accepted only during the continuous trading market state. All resting quotes are canceled during post-session processing.

For participants with more than one mass quote-eligible SenderCompID permissioned for the same product code, CME Group permits a maximum aggregate resting quote quantity, per side and price level, that is equal to the instrument's maximum order size.

The aggregate resting quote quantity is calculated across all the participants' SenderCompIDs.

Mass quote users who do not follow CME Group's guidelines may lose their market maker and/or mass quote privileges. For example:

- Participant A has three mass quote-eligible tag 49 SenderCompIDs for the SR3 product code (SOFR options).
- All three tag 49 SenderCompIDs are quoting top of book in the front month at-the-money call option.
- The sum of the quotes across all three tag 49 SenderCompIDs must be equal to or less than the maximum order size, 49,999 lots.

Approved

- Tag 49 SenderCompID1 rests with 20,000 lots
- Tag 49 SenderCompID2 rests with 20,000 lots
- Tag 49 SenderCompID3 rests with 5,000 lots

Not Approved

- Tag 49 SenderCompID1 rests with 49,999 lots
- Tag 49 SenderCompID2 rests with 20,000 lots
- Tag 49 SenderCompID3 rests with 5,000 lots



Appendix D - Revision History

Version	Date	Author	Description
7.0	8/2/2012	CR	Messaging Efficiency Program
7.1	8/24/2012	CR	Revised Appendix A to state 6x PGB.
7.2	12/18/2012	CR	Revised trading hours, FADB messaging stat availability, Messaging Controls link, and Appendix B.
7.3	12/20/2012	CR	Revised RFW requirements
7.4	5/1/2013	CR	Added holiday exemptions, Eurodollar market maker information, secondary monthly calculation, Asia GAM Hotline, Appendix A & case example benchmarks.
7.5	8/1/2013	CR	Added daily exemption application at month end and state 6x PGB.
7.6	8/12/2013	CR	Revised surcharge monthly billing statement verbiage. Added market maker exemption verification.
7.7	11/1/2013	CR	Added surcharges for aggregated fails at Globex firm level & back month grain exemptions.
7.8	11/5/2013	CR	Revised Messaging Controls hyperlink on page 8.
7.9	1/9/2014	CR	Revised page 7 holiday enforcement.
8.0	7/7/2014	CR	Revised page 8 monthly ratio calculation.
8.1	5/27/15	CR	Replaced the following hyper-links: Holiday Calendar, GCC Port Closure, Trade at Settlement, Mass Quoting, and iLink Session ID Policy and Operational Guidelines.
8.2	7/9/15	CR	Removed Galax-C from the disclaimer.
8.3	2/8/16	CR	Revised verbiage in Section 4 and market maker information in Section 9.
8.4	6/30/16	CR	Revised Section 2 to include Order Mass Action weightings, added product group OP and Section 6 options information.
8.5	11/3/16	CR	Revised page 5 to include KE
8.6	1/9/17	CR	Revised section 2 to include FX futures serial month exemptions.



8.7	4/10/17	CR	Replaced executing firm reference with Globex firm. Revised section 8 to reflect email notifications will no longer contain attachment.
8.8	12/8/17	CR	Revised section 6 to include mass quote maximum aggregate resting quote quantity and associated examples to Appendix B.
8.9	6/27/18	CR	Revised section 2 to reflect mass quote messaging and associated volume are not counted in MEP. Revised section 10 and Appendix B Use Case Calendar Month Volume Ratio Exemption to state waivers are not applied when daily Product Group Volume Ratios greater than six times the listed Product Group Benchmark at the applicable tier level for the product group on the day which the violation occurred.

Version	Date	Author	Description
9.0	7/6/18	CR	Replaced an with a in numerous sections and added Volume Ratio greater than six times the listed Product Group Benchmark verbiage in Appendix A,
9.1	1/17/19	CR	Revised Scoring System section to reflect Time In Force and Min Qty. Revised Eurodollar and Ultra U.S.30 Year Treasury Bond Futures Market Makers CME contact information.
9.2	4/9/19	CR	Revised Section 9 Notices and Surcharges to state billing is applied to registered entity.
9.3	7/8/19	CR	Revised Raw Messaging total in Fail 1 example on page 14.
9.4	9/30/19	CR	Added Raw Message Count definition on page 5.
9.5	10/25/19	CR/EE	Added EMT section.
9.6	10/28/19	CR	Updated various hyper-links throughout doc.
9.7	11/27/19	CR	Updated sections 7, 9 & 13.
9.8	12/17/19	CR	Updated sections 2 & 13.
9.9	1/21/20	CR	Updated section 13 and added section 14, Globex Firm ID EMT.
10.0	10/21/20	CR	Updated sections 2, 9, 10, 13 & 14.
10.1	2/1/21	CR	Updated sections 13 & 14.



10.2	3/29/21	CR	Updated sections 13 & 14.
10.3	4/14/21	CR	Updated sections 13 & 14 to state each individual product group & revised Reference of Tag 50 ID to Operator ID.
10.4	4/1/22	CR	Updated section 10 market maker ratios.
10.5	9/27/22	CR	Updated sections 13, 14 & 15.
10.6	1/24/23	CR	Updated section 10 market maker ratios.
10.7	3/20/23	CR	Updated section 10 market maker ratios.
10.8	3/31/23	CR	Updated section 10 market maker ratios.
10.9	4/27/23	CR	Updated sections 2,13-14 replaced Eurodollar with SOFR.
10.10	5/9/23	CR	Updated section 2 with various exemptions.
10.11	6/27/23	CR	Updated section 2 with metals exemptions.
11.0	6/6/24	CR	Messaging Efficiency Program V3 updates.
11.0	8/29/24	CR	Added mass quoting updates to section 7 and added mass quote glossary.
11.0	9/11/24	CR	Revised front month verbiage on page 7 and Q6 on page 17.
11.0	9/24/24	CR	Revised page 7, Section 3, Raw Message Count, Messaging Score and Time of Day. Page 9, Mass Quote Entries Volume Ratio. Page 22, Appendix B, Mass Quote Entries Volume Ratio.
11.0	9/27/24	CR	Revised Section 7 & Appendix B, Mass Quote Entries Volume Ratio. Section 8 message quality.
11.0	10/1/24	CR	Revised Section 11 Monthly Exception pages 11-12.
11.1	10/23/24	CR	Revised Section 7 & FAQ Q10.

