



CME Globex Messaging Efficiency Program

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Executive Summary

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 January 2, 2013.

From an operational perspective, the Program provides transparent messaging thresholds in selected product groups and measures Volume Ratios at the Globex firm level which serve as the basis for comparison against the established Product Group Benchmark.

Section 13 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 Globex firm level. A 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. Clearing firms often request separate 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.

Customers may request or CME Group at its discretion may choose to aggregate the messaging and volume of multiple Globex firms in circumstances where the customer executes its business under more than one 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 Globex firm level.

2. Scoring System

To encourage more efficient messaging behavior and increase market liquidity, the Program incorporates a messaging scoring system.

The CME Messaging Efficiency Program scoring system establishes a Globex firm’s messaging score based on the specific message type submitted. The raw message count for each type of message submitted is multiplied by a pre-defined weighting factor; weighted messaging is then totaled to calculate the messaging score. The following order types and pre-defined factors are included in a Globex firm’s messaging score:

| Order Type | Tag-Message Type | Pre-Defined Factor |
|---------------------------|--|------------------------------|
| New Order | Tag 35-MessageType=D | 0 |
| Order Modification | Tag 35-MessageType=G | 1 |
| Order Cancellation | Tag 35-MessageType=F | 3 |
| Order Mass Action Request | Tag 35-MessageType=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 |

The calculation of the Raw Message Count and Messaging Score are as follows:

Raw Message Count (Orders + Modifications + Cancellations + Eliminations)

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

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

- New orders
- Mass quote messaging and volume
- Back month messaging in selected Product Groups
 - In Product Group GE, the first 8 quarterly months are used in the calculation, all other expiries are excluded.
 - In Product Group CL, a total of 4 contracts are used in the calculation: The first 3 contract months plus the nearest June or December contract. If June or December are part of the first 3 contract months, then the next June or December will make up the 4th contract.
 - In Product Group OP, the first 4 contracts are used in the calculation.
 - In Product Group NG, a total of 4 contracts are used in the calculation: The first 3 contract months plus the next available January, April, July, or October contract. If a January, April, July, or October contract are part of the first 3 contract months, then the next January, April, July, or October contract will make up the 4th contract.
 - In Product Groups KE, ZC & ZW, a total of 4 contracts are used in the calculation. The front three listed contracts will be included in the calculation as well as the closest July or December contract.
 - In Product Group ZS, which includes only Soybeans as Soymeal and Soy Oil are not included in Messaging Efficiency Program calculations, a total of 4 contracts are used in the calculation. The front three listed contracts will be included in the calculation as well as the closest July or November contract.
 - In futures Product Groups 6A, 6B, 6C, 6E, 6J and 6S, only the quarterly months of March, June, September and December are subject to Messaging Efficiency Program calculations. All other expiries as well as all E-micro Forex products are excluded.
- Globex firms submitting 20,000 or fewer daily messages during RTH in a particular product group.

3. Volume Ratio

The Volume Ratio measures the ratio between a Globex firm's messaging score and the Globex firm's traded volume in a particular product group during the hours in which the Program is in effect, which are set forth below. The Globex firm's Volume Ratio serves as the basis for comparison against the established Product Group Benchmark.

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

For purposes of this Program, the Volume Ratio is calculated for all messaging that occurs during Regular Trading Hours (RTH). RTH is defined as the hours between 7:00 a.m. and 3:15 p.m. Central Time (“CT”).

4. 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 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 [Product Group Benchmarks](#) are available on the CME Group website.

Any changes to the Product Group Benchmarks will be communicated via the CME Globex Notices. If you are not currently receiving the CME Globex Notices, please go to www.cmegroup.com/subscribe to sign up to receive them.

5. Messaging Tiers and Expanded Product Group Benchmarks

To encourage broader market participation by lower messaging Globex firms, CME Group added the following Raw Daily Messaging Tiers and expanded Product Group Benchmarks beginning trade date January 2, 2013.

| Raw Daily Messaging Tiers | Product Group Benchmark |
|----------------------------------|----------------------------|
| ≤20,000 Raw Daily Messages | Not Applicable |
| 20,001-40,000 Raw Daily Messages | 3X Product Group Benchmark |
| 40,001-60,000 Raw Daily Messages | 2X Product Group Benchmark |
| >60,000 Raw Daily Messages | Product Group Benchmark |

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

Please refer to the CME Group website for a complete list of [Product Group Benchmarks](#) to which the Program applies.

6. Options

Options product groups which are included in the CME Globex Messaging Efficiency Program are scored in the same manner as futures product groups. As noted in Section 2, mass quote messaging and associated volume are excluded from options product group scoring calculation.

However, for participants with more than one Mass Quote-eligible iLink tag 49-SenderCompID permitted 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.
- Please refer to [Appendix B](#) 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.

A list of current [Product Group Benchmarks](#) which are included in the CME Globex Messaging Efficiency Program is available on the CME Group website.

7. 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 messaging which does 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, 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 Global Command Center 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 Globex or any other actions deemed to be in the best interest of the Exchange.

8. Reporting

CME Group analyzes messaging activity and trading volume and produces reports for an Globex firm whenever the Globex firm exceeds a Product Group Benchmark for a given trade date. Report data is segregated by product group with a pass/fail status for each product group. The following scenarios may be reported:

- Pass (1) indicates a Globex firm has a raw daily message count > 60,000 and the Volume Ratio is \leq Product Group Benchmark.
- Pass (2) indicates a Globex firm has a raw daily message count between 40,001 – 60,000 and the Volume Ratio is \leq 2X Product Group Benchmark.
- Pass (3) indicates a Globex firm has a raw daily message count between 20,001– 40,000 messages and the Volume Ratio is \leq 3X Product Group Benchmark.
- Pass (0) indicates a Globex firm has a raw daily message count < 20,000 in a specific product group and is therefore automatically exempt from the Product Group Benchmark.
- Fail (1) indicates a Globex firm has a raw daily message count > 20,000 and the Volume Ratio is > the applicable Product Group Benchmark for the applicable Messaging Tier.

In addition, Globex firm reports are divided by the following categories so that the origin of the messaging and trading activity is easily identifiable:

- Globex firm
- iLink Session ID
- Account number
- tag 50

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 Globex firm.

Specific messaging related statistics are broken down by the categories listed above and are available in the Firm Administrator Dashboard.

Requests by 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 Globex firm CME clearing firm administrator.

9. Notices and Surcharges

If a Globex Firm ID's daily 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 13 & 14 regarding surcharges and penalties associated with the Excessive Messaging Threshold (EMT).

Surcharges are identified with the code "MPS" (Messaging Program Surcharge) on the registered entity's monthly billing statement.

In instances where the MEP surcharges of a non-clearing firm registered entity remain unpaid, those surcharges may be billed to the current clearing firm of record for the related 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.

10. Exceptions

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

- Globex firms will automatically receive a waiver of two daily surcharges per calendar month, per exchange grouping (CME/CBOT and NYMEX/COMEX). No action on the part of the 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 U.S. recognized holidays. Please refer to the [CME Globex Messaging Efficiency Program Holiday Calendar](#) as to when Program Ratios for all Product Groups included in the Program will not be calculated.
- All daily surcharges for a Globex firm during a given calendar month will be automatically waived if its Volume Ratio for the entirety of a calendar month is less than or equal to the listed Product Group Benchmark.

To calculate this exception, the following will be utilized when determining a Globex firm's monthly MEP Volume Ratio:

- CME Group will count messaging and volume on all days in which the MEP is in effect during a calendar month and a Globex firm has recorded raw messaging in a particular product group.
- Average raw messaging in each product group for the calendar month will determine the tier level calculation and assignment.

- Σ of monthly messaging score / Σ of monthly volume

The calculation of this exception is as follows:

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

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

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.

- Market participants designated by CME Group as Market Makers or enrolled in other Exchange programs designed to promote liquidity may be exempt from the Program or subject to Product Group Benchmarks that differ from the standard Product Group Benchmarks.
 - Market participants who believe they are included in such a program should verify their status with an Exchange representative and request a written confirmation of the specific Product Group Benchmarks that apply to them.
 - Eurodollar Market Makers receive a Product Group Benchmark Ratio of 15:1 and Ultra U.S.30 Year Treasury Bond Futures Market Makers receive a Product Group Benchmark Ratio of 25:1. Questions pertaining to either product group may be directed to InterestRate@cmegroup.com.

11. Request for Waiver of Surcharges

A clearing firm administrator or an approved Globex firm representative may submit a Request for Waiver (RFW) of a surcharge if the firm believes that 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 clearing firm administrator of CME Group's decision.

In an effort to streamline administration, CME Group enhanced the Firm Administrator Dashboard to give clearing firm administrators and approved Globex firm users the ability to enter RFWs directly into the tool.

RFWs are not required until the previous months' monthly ratio has been calculated and applied. If a 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.

12. 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.

13. iLink Session ID Excessive Messaging Threshold (EMT)

To encourage responsible messaging practices during all trading hours in which the 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.

The EMT is part of the Messaging Efficiency Program but is **in effect during all trade dates and hours in which the Globex platform is open.**

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** = $\frac{\text{iLink Session ID Product Group Messaging Score}}{\text{iLink Session ID Product Group Volume}}$

Both the Raw Message Count and Messaging Scores are calculated and applied at the Globex iLink Session ID level and are in effect during all trade dates and hours in which the Globex platform is open. All product groups contained within the MEP are also included within EMT. There are no exemptions within these products groups for EMT, as there is for MEP. If the product group is included, all instruments and expiries within the group are eligible for EMT.

For example-

- The ZS group MEP calculation does not include ZM or ZL. However, for the EMT calculation, ZM and ZL are included in the ZS group messaging score.
- Within Eurodollar futures, the first 8 quarterly contracts are included in MEP. For EMT, all listed GE instruments and expiries are included.

CME Group reserves the right to add or remove product groups at its discretion and will announce any additions or removals to the marketplace.

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

Any iLink Session ID which exceeds a Raw Message Count of 1 million for a Globex trade date and a Volume Ratio >500:1 in the product groups 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.

14. Globex Firm ID Excessive Messaging Threshold (EMT)

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

The associated EMT calculations pertaining to 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** = $\frac{\text{Globex Firm ID Product Group Messaging Score}}{\text{Globex Firm ID Product Group Volume}}$

Both the Raw Message Count and Messaging Scores are calculated and applied at the Globex Firm ID level and are in effect during all trade dates and hours in which the Globex platform is open. All product groups contained within the MEP are also included within EMT. There are no exemptions within these products groups for EMT, as there is for MEP. If the product group is included, all instruments within the group are eligible for EMT.

For example-

- The ZS group MEP calculation does not include ZM or ZL. However, for the EMT calculation, ZM and ZL are included in the ZS group messaging score.
- Within Eurodollar futures, the first 8 quarterly contracts are included in MEP. For EMT, all listed GE instruments and expiries are included.

CME Group reserves the right to add or remove product groups at its discretion and will announce any additions or removals to the market place.

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

Any Globex Firm ID which exceeds a Raw Message Count of 10 million for a Globex trade date and a Volume Ratio >500:1 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. 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 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.

Appendix A - Sample Globex firm Notice

The following is a sample notice sent by CME Group to Clearing Firm administrators and registered Globex firm individuals in the event of a Messaging Efficiency Program infraction.

CME Globex Messaging Efficiency Program ticket number XXXXXX. Please reference this number when submitting a Request for Waiver (RFW).

In accordance with the CME Globex Messaging Efficiency Program (Program), this notice details potential surcharges levied by CME Group as a result of your Volume Ratio having exceeded the Product Group Benchmarks on the CME Globex platform. Please utilize the Firm Administrator Dashboard to obtain specific messaging details. It is advised that you communicate relevant information to parties whose messaging contributed to exceeding the established Product Group Benchmarks in an effort to avoid surcharges.

1. Your trading activity has exceeded Product Group Benchmarks on:
 - Trade Date:
 - For the Following Product Group:
 - Volume Ratio greater than six times the listed Product Group Benchmark: (No or **Yes**)
 - Potential Surcharge: **\$1000.00**
2. The last prior date that your firm exceeded Product Group Benchmarks was:

CME Group will additionally measure each Globex firm's monthly Volume Ratio. A Globex firm's daily surcharges during a given month will be waived if its Volume Ratio for the entirety of the month is less than or equal to the listed Product Group Benchmark. However, such waivers will not apply to surcharges for daily Volume Ratios greater than six times the listed Product Group Benchmark.

If you believe that there are well justified reasons for the breach of the cited Messaging Efficiency Program Product Group Benchmark threshold that warrant reconsideration of the surcharge, you may submit a Request for Waiver that includes the detailed basis for the request, as well as any steps taken to ensure future compliance with the Messaging Efficiency Program. The Request for

Waiver must also include the Messaging Efficiency Program ticket number and the date of the occurrence.

Requests for reconsideration of surcharges may be sent via email to messagingprogramwaivercommittee@cmegroup.com or entered into the Firm Administrator Dashboard and must be received within 10 business days following the last calendar day of the month in which the surcharge was incurred.

Thank you for your cooperation in addressing the cited messaging issues and ensuring compliance with the CME Group Messaging Efficiency Programs.

If you have any questions, please refer to the [CME Globex Messaging Efficiency Program](#) or contact the following:

- [Global Command Center \(GCC\)](#) at 1.800.438.8616.
- [Global Account Management](#) at 312.634.8700, or +44 203 379 3754 in [Europe](#) or +65-6593-5555 in [Asia](#).

Appendix B - Case Examples

Pass 1: Pass Daily Volume Ratio ≤ Product Group Benchmark

- Product Group = ES
- Product Group Benchmark = 10 (Tier 1)
- Globex firm activity:

| Raw Messaging | Raw Messaging Tier | New Orders | Order Modifications | Order Cancellations | FAK/FOK Orders | Messaging Score | Volume |
|---------------|--------------------|------------|---------------------|---------------------|----------------|-----------------|--------|
| 100,000 | 1 | 10,000 | 89,000 | 500 | 500 | 92,000 | 20,000 |

- Globex firm Messaging Score calculation:
 - $(89,000 * 1) + (500 * 3) + (500 * 3) = 92,000$
- Pass Volume Ratio test:

$$\frac{92,000}{20,000} = 4.6 < 10$$
- Surcharge fee does not apply as Volume Ratio of 4.6 does not exceed Product Group Tier 1 Benchmark of 10.

Pass 2: Pass Daily Volume Ratio = Tier 2 Product Group Benchmark

- Product Group = ES
- Product Group Benchmark = 20 (Tier 2)
- Globex firm activity:

| Raw Messaging | Raw Messaging Tier | New Orders | Order Modifications | Order Cancellations | FAK/FOK Orders | Messaging Score | Volume |
|---------------|--------------------|------------|---------------------|---------------------|----------------|-----------------|--------|
| 45,000 | 2 | 25,000 | 5,000 | 10,000 | 5,000 | 50,000 | 5,000 |

- Globex firm Messaging Score calculation:
 - $(5,000 * 1) + (10,000 * 3) + (5,000 * 3) = 50,000$
- Pass Volume Ratio test:

$$\frac{50,000}{5,000} = 10.0 \leq 20$$
- Surcharge fee does not apply as Volume Ratio of 10 does not exceed Product Group Tier 2 Benchmark of 20.

Pass 3: Pass Daily Volume Ratio = Tier 3 Product Group Benchmark

- Product Group = ES
- Product Group Benchmark = 30 (Tier 3)

- Globex firm activity:

| Raw Messaging | Raw Messaging Tier | New Orders | Order Modifications | Order Cancellations | FAK/FOK Orders | Messaging Score | Volume |
|---------------|--------------------|------------|---------------------|---------------------|----------------|-----------------|--------|
| 21,000 | 3 | 12,000 | 3,000 | 5,000 | 1,000 | 21,000 | 2,000 |

- Globex firm Messaging Score calculation:
 - $(3,000 \times 1) + (5,000 \times 3) + (1,000 \times 3) = 21,000$

- Pass Volume Ratio test:

$$\frac{21,000}{2,000} = 10.5 < 30$$

- Surcharge fee does not apply as Volume Ratio of 10.5 does not exceed Product Group Tier 3 Benchmark of 30.

Pass 0: Pass Low Message Count

- The number of messages by the Globex firm in a specific product group is below the minimum message count threshold.
- Product Group = ES
- Product Group Benchmark = N/A
- Globex firm activity:

| Raw Messaging | Raw Messaging Tier | New Orders | Order Modifications | Order Cancellations | FAK/FOK Orders | Messaging Score | Volume |
|---------------|--------------------|------------|---------------------|---------------------|----------------|-----------------|--------|
| 10,000 | N/A | 8,400 | 1,000 | 500 | 100 | 2,800 | 100 |

- Globex firm Messaging Score calculation:
 - N/A
- Surcharge fee does not apply as 10,000 Raw Messaging < 20,000 messaging threshold and is therefore automatically exempt from the Product Group Benchmark.

Pass: Calendar Month Volume Ratio Exemption; Tier 1 Product Group Benchmark

- A Globex firm's Volume Ratio for the entirety of a calendar month is less than or equal to the listed Product Group Benchmark in the applicable messaging tier.
- Product Group = ES
- Product Group Benchmark = 10 (Tier 1)
- Globex firm activity for the entire calendar month:

| Raw Messaging | Raw Messaging Tier | New Orders | Order Modifications | Order Cancellations | FAK/FOK Orders | Messaging Score | Volume |
|---------------|--------------------|------------|---------------------|---------------------|----------------|-----------------|---------|
| 1,570,000 | 3 | 500,000 | 1,000,000 | 60,000 | 10,000 | 1,210,000 | 405,000 |

- Calendar days where raw messaging occurred: 20
 - Average Daily Messaging = 78,500
 - Volume Ratio never exceeded 6x the Tier 1 Product Group Benchmark on any calendar day where messaging occurred.
- Globex firm Messaging Score calculation for the calendar month:
 - $((1,000,000*1) + (60,000*3) + (10,000*3)) = 1,210,000$

- Pass Volume Ratio test:

$$\frac{1,210,000}{405,000} = 2.9 < 10$$

- All daily surcharges for a calendar month are waived as the Globex firm's monthly messaging score for the applicable calendar month does not exceed Tier 1 Product Group Benchmark of 10 and there no 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.

Fail 1: Fail Volume Ratio

- Market participant exceeds Product Group Benchmark in any of the three messaging tiers.
- Product Group = ES
- Product Group Benchmark = 10 (Tier 1)
- Globex firm activity:

| Raw Messaging | Raw Messaging Tier | New Orders | Order Modifications | Order Cancellations | FAK/FOK Orders | Messaging Score | Volume |
|---------------|--------------------|------------|---------------------|---------------------|----------------|-----------------|--------|
| 122,000 | 1 | 61,000 | 20,000 | 40,000 | 1,000 | 143,000 | 10,000 |

- Globex firm Messaging Score calculation
 - $(20,000*1) + (40,000*3) + (1,000*3) = 143,000$
- Daily Messaging Scoring Tier = 1
- Fail Volume Ratio test:

$$\frac{143,000}{10,000} = 14.3 > 10$$

- Surcharge fee pending. Three different exemption possibilities:
 1. Globex firms are automatically eligible for the waiver of two daily surcharges per calendar month, per exchange grouping (CME/CBOT and NYMEX/COMEX).
 2. CME Group applies Calendar Month Ratio exemption as the monthly Volume Ratio \leq the Product Group Benchmark.
 3. Firm may submit RFW. The decision regarding the waiver request will be dependent on the reason for exceeding the Product Group Benchmark.

Mass Quote Maximum Aggregate Resting Quote Quantity

- Participant A has three Mass Quote-eligible tag 49 SenderCompIDs for the ZE instrument group (Eurodollar 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

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. |