

CME Clearing Q1 2023 Quantitative Disclosures Call

June 2023

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Agenda

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2 Q1 2023 PQD Highlights

3 Review of Key PQDs

4 Q&A

Introduction

CME Clearing: Q1 2023 Quantitative Disclosures Call

CME Clearing provides clearing and settlement services for a broad range of exchange-traded futures and options on futures and cleared swaps

- Chicago Mercantile Exchange Inc. (“CME”) is registered with the Commodity Futures Trading Commission (“CFTC”) as a derivatives clearing organization (“DCO”) and was designated as a systemically important financial market utility under Title VIII of the Dodd-Frank Wall Street Reform and Consumer Protection Act by the Financial Stability Oversight Council
 - CME Clearing is subject to the core principles for DCOs established in the Commodity Exchange Act and the CFTC regulations promulgated thereunder (e.g., Part 39 of CFTC Regulations), including those applicable to systemically important DCOs (e.g. Subpart C of Part 39)
- CME Clearing operates two distinct clearing services that each have their own independent financial safeguards waterfall
 - The Base products financial safeguards waterfall covers the clearing of futures and options on futures and non-IRS cleared swaps
 - The IRS products financial safeguards waterfall covers the clearing of IRS and contracts portfolio margined with IRS

Consistent with Part 39 of the CFTC Regulations, CME Clearing adheres to the CPMI-IOSCO’s *Principles for financial market infrastructures* published in April 2012 (“PFMI”)

- CME Clearing publishes a quantitative disclosures in line with the recommendations laid out under CPMI-IOSCO’s *Public quantitative disclosure standards for central counterparties* (“PQDs”) published in February 2015*
- CME Clearing’s quantitative disclosure document is updated on a quarterly basis and provides a comprehensive view into key quantitative metrics pertaining to CME Clearing’s clearing services

* <https://www.cmegroup.com/clearing/cpmi-iosco-reporting.html>

Q1 2023 Highlights*

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- **0** Actual or Theoretical Default Fund breaches over the observation period (12 months)
- **5** Margin coverage breaches occurred over the observation period (3 months)
- Achieved margin coverage of **99.97%** in Base and **99.97%** in IRS over the observation period (12 months)
- **0** Liquidity coverage breaches over the observation period (12 months)
- **99.9%** operational availability across CME Clearing's core systems over the observation period (12 months)

Financial Resources	
Q4 2022	Q1 2023
\$227 Billion Total Amount of Initial Margin	\$254 Billion Total Amount of Initial Margin
Total Value of Mutualized Default Resources	
\$6.9 Billion Prefunded Participant Contributions	\$7.4 Billion Prefunded Participant Contributions
\$250 Million CME Contributed Capital	\$250 Million CME Contributed Capital
\$12.6 Participant Commitment Resources	\$13.9 Participant Commitment Resources

**Note, this document uses the terminology used in the PQDs for consistency with the published disclosures, which in some cases differs from the CME Group Exchanges Rules – e.g., CME Group Exchange Rules use the term “Guaranty Fund”, opposed to “Default Fund”.*

Review of Key PQDs

Mutualized Default Fund Resources

CME Clearing: Q1 2023 Quantitative Disclosures Call

\$18.1 billion total available mutualized resources as of the end of Q1 2023 in the event of a Base Clearing Member default

Base Financial Safeguards Waterfall

Required Default Fund Contributions	\$4,804,588,702
Designated CME Contribution	\$100,000,000
Assessment Powers	\$13,212,618,930
Total	\$18,117,207,632

\$3.51 billion total available mutualized resources as of the end of Q1 2023 in the event of an IRS Clearing Member default

IRS Financial Safeguards Waterfall

Required Default Fund Contributions	\$2,619,664,549
Designated CME Contribution	\$150,000,000
Assessment Powers	\$743,976,318
Total	\$3,513,640,867

PQD References: 4.1.1, 4.1.4, and 4.1.8

Default Fund Stress Testing Results

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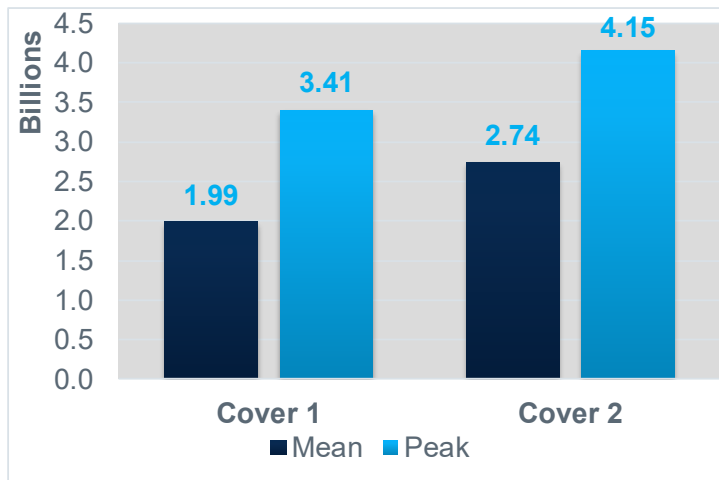
Note, results use a 12 month period.
PQD References: 4.4.3 and 4.4.7

Default Fund Stress Testing Results

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Cover 2 standard **met at all times** for Base Default Fund – i.e., estimated stress losses (in excess of initial margin) never greater than Base Default Fund

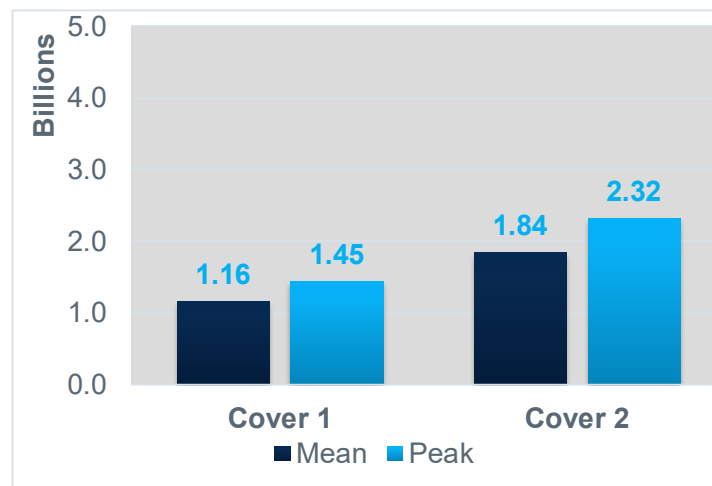
Base Stress Test Loss



Note, results use a 12 month period.
PQD References: 4.4.7

Cover 2 standard **met at all times** for IRS Default Fund – i.e., estimated stress losses (in excess of initial margin) never greater than IRS Default Fund

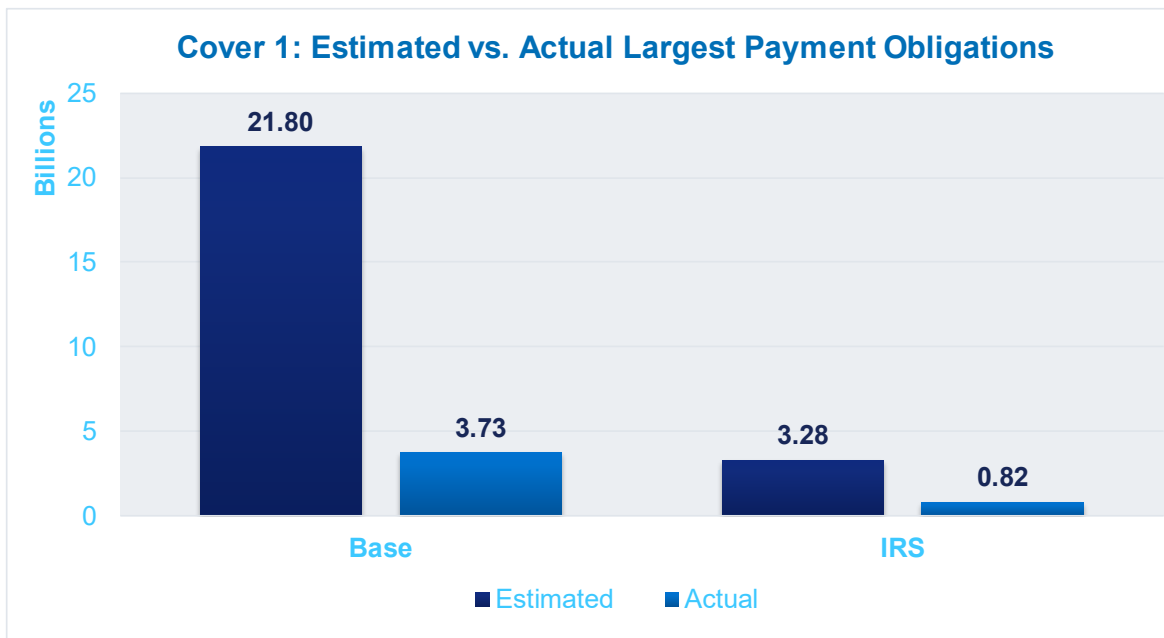
IRS Stress Test Loss



Liquidity Stress Testing Results

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There were no theoretical or actual liquidity coverage breaches during Q1 2023



*Note, largest estimated payment obligations are reported over the reporting quarter, whereas the largest actual payment obligations are reported over the previous 12 months.
PQD References: 7.3.1 and 7.3.4*

Size and Composition of Qualifying Liquidity Resources

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Composition of Qualifying Liquidity Resources – as of the end of Q1 2023	Amount
Cash Deposited at Central Bank of Issue	\$117,329,006,805
Cash Deposited at other Central Banks	0
Cash Deposited at Commercial Banks (Secured) including Reverse Repo	\$1,470,000,000
Cash Deposited at Commercial Banks (Unsecured)	\$8,244,681,963
Secured Committed Lines of Credit (including FX Swaps and Committed Repo)	\$7,500,000,000
Unsecured Committed Lines of Credit	0
Highly Marketable Collateral and Convertible into Cash with Prearranged and Highly Reliable Funding Arrangements	\$32,500,000,000
Other	\$62,445,866,680
Total	\$229,489,555,448

PQD References: 7.1.2 thru 7.1.8

Margin Backtesting Results

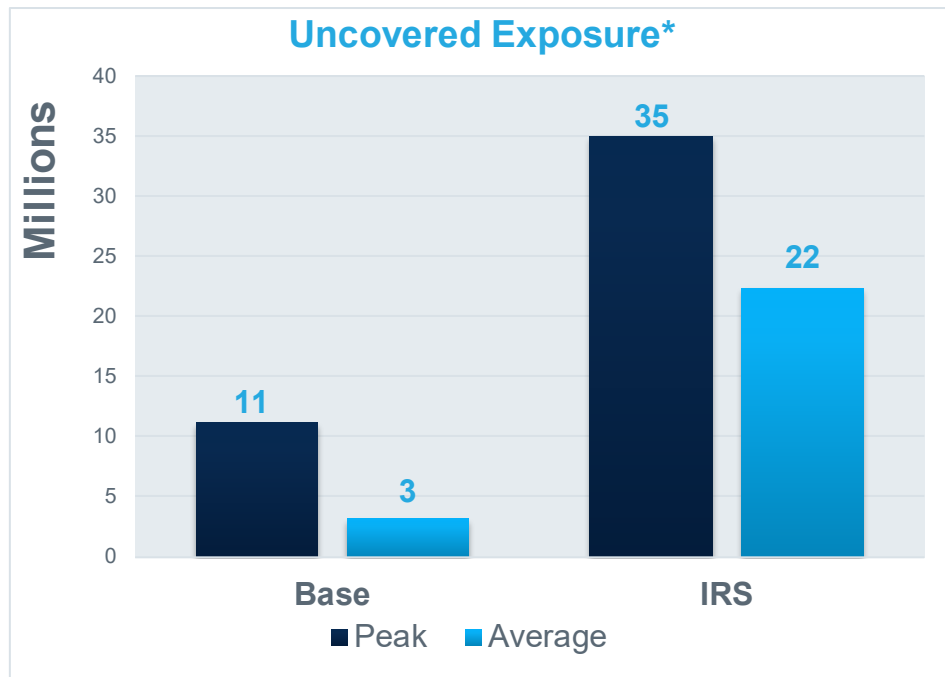
CME Clearing: Q1 2023 Quantitative Disclosures Call

5 margin breaches occurred during Q1 2023

Backtesting Results*

	Base	IRS
# of Margin Breaches	7	3
Achieved Coverage Level	99.97%	99.97%

*Reporting period captures the previous 12 months. One Base margin breach occurred in Q3 2022 and Q4 2022, respectively. Five Base breaches occurred in Q1 2023. Three IRS margin breaches occurred in Q2 2022 and zero occurred in Q1 2023.



PQD References: 6.5.1.1 thru 6.5.5

Initial Margin Required

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\$189 billion total initial margin required as of the end of Q1 2023

Base Products		
	Q4 2022	Q1 2023
House – Net	\$21,178,908,536	\$27,313,539,621
Client – Gross*	\$152,087,399,588	\$161,382,963,623
Total	\$173,266,308,124	\$188,696,503,244

\$36 billion total initial margin required as of the end of Q1 2023

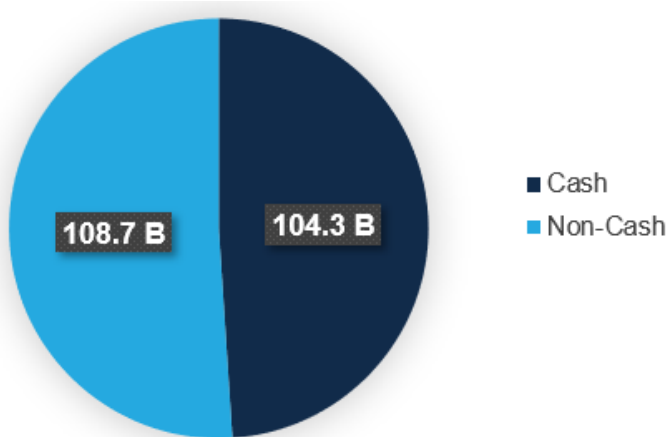
IRS Products		
	Q4 2022	Q1 2023
House – Net	\$6,893,727,279	\$7,571,323,941
Client – Gross*	\$25,924,761,503	\$28,261,289,770
Total	\$32,818,488,782	\$35,832,613,712

**All client margins are required on a gross basis – i.e., client net margining is not permitted.*

Collateral Composition of Initial Margin – Cash vs Non-Cash

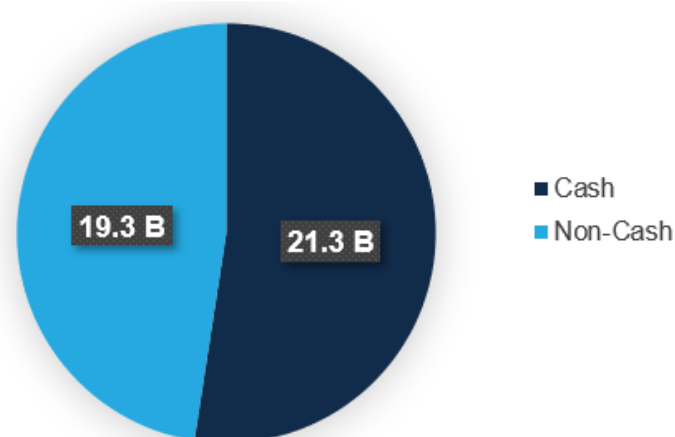
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Base



*93% of Base cash deposited at central banks

IRS



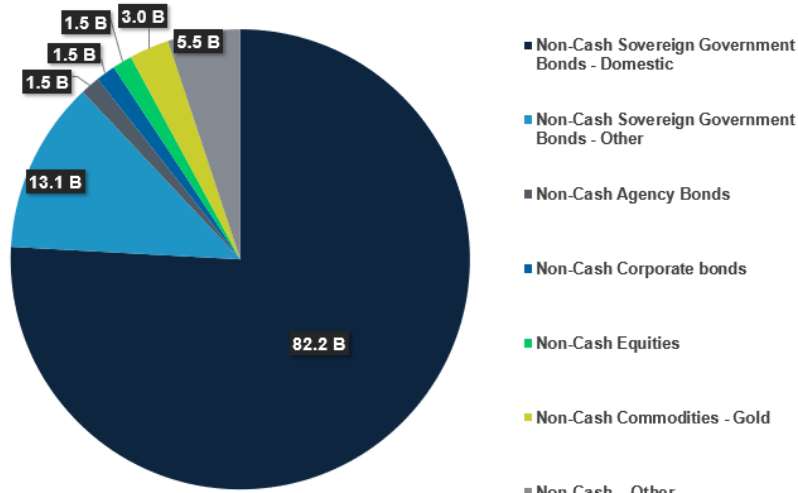
*94% of IRS cash deposited at central banks

Note, figures provided reflect post-haircut amounts as of the end of Q1 2023.
PQD References: 6.2.1 thru 6.2.14

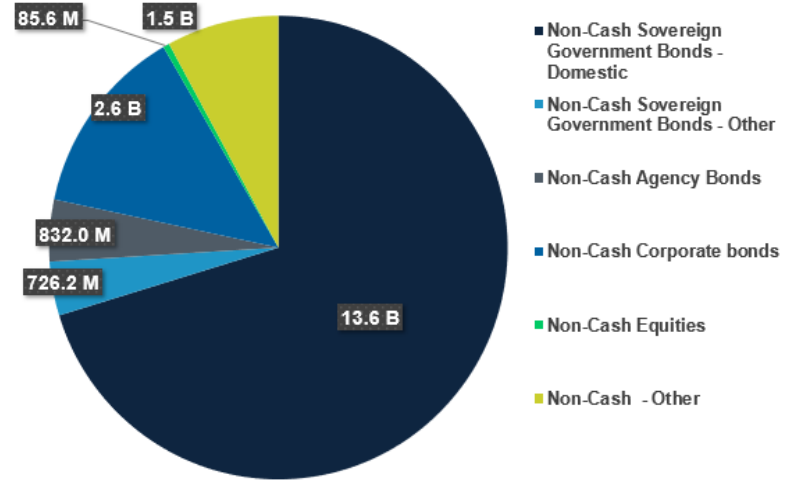
Collateral Composition of Initial Margin – Non-Cash Breakdown

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Base



IRS

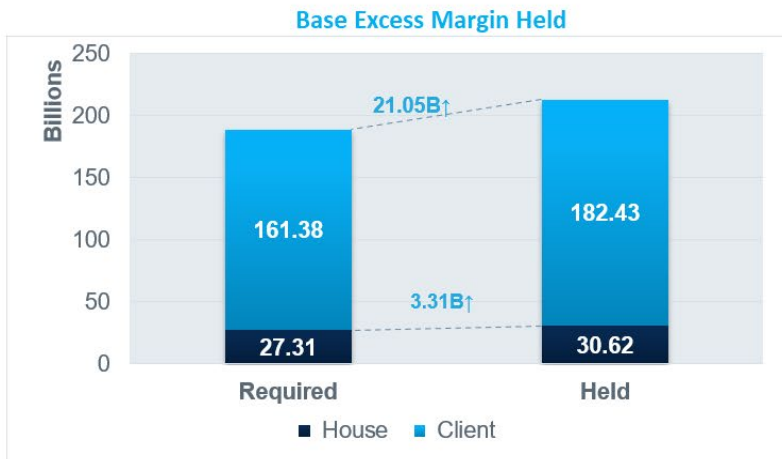


Note 1: Figures provided reflect post-haircut amounts as of the end of Q1 2023.
 Note 2: Non-Cash Sovereign Government Bonds – Domestic are US Treasuries
 PQD References: 6.2.1 thru 6.2.14

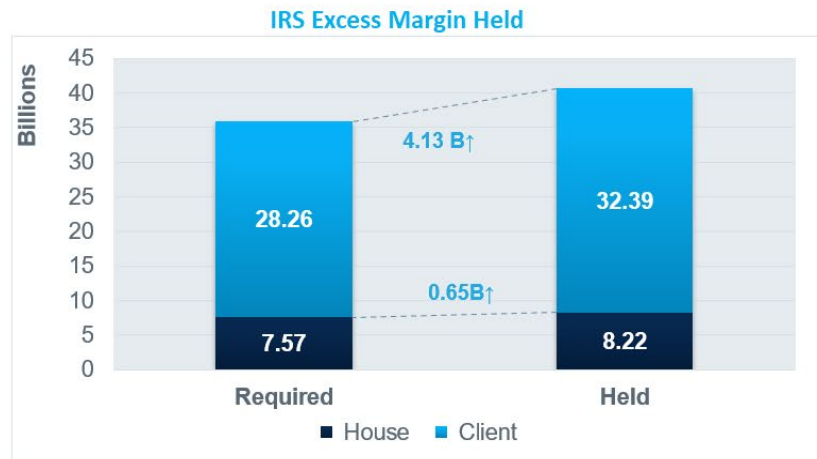
Excess Margin Held

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\$24.3 billion excess margin held for Base products as of the end of Q1 2023



\$4.78 billion excess margin held for IRS products as of the end of Q1 2023

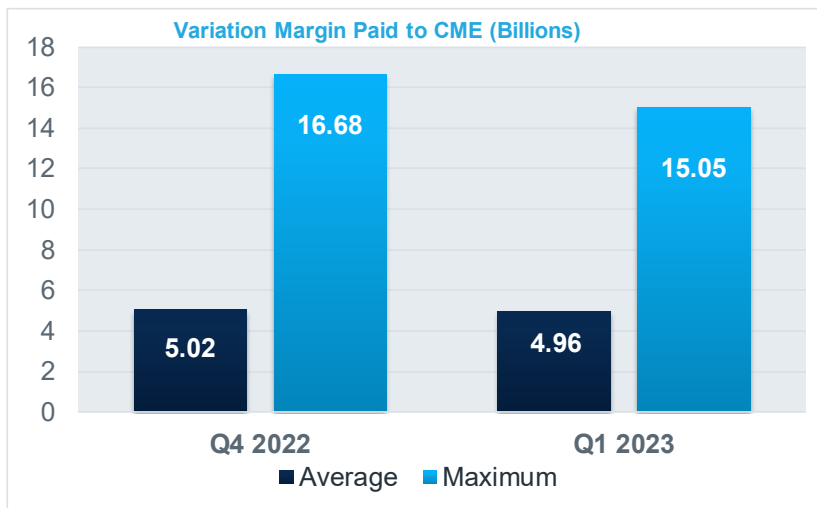


Note, excess margin held is the margin held above the required amount.
 PQD References: [6.1.1](#) and [6.2.15](#)

Settlement Variation Flows/Initial Margin Calls

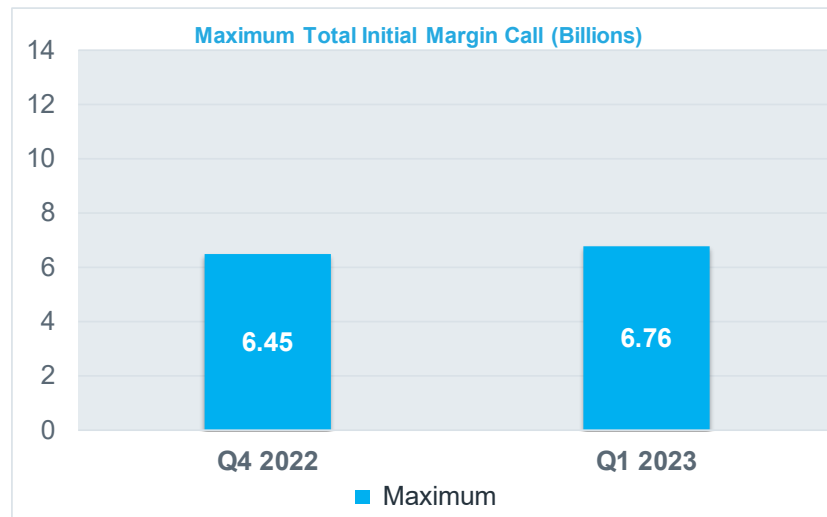
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Average variation paid to CME decreased by 1% and maximum variation paid to CME decreased 10% in Q1 2023.



*Note: figures include any intraday variation payments. Settlement variation is exchanged on a net basis.
PQD References: 6.6.1 and 6.7.1*

Maximum total initial margin call increased by 5% in Q1 2023.



*Note: figures include any intraday initial margin payments. Customer initial margin is collected on a gross basis.
PQD Reference: 6.8.1*

Number of Clearing Members

CME Clearing: Q1 2023 Quantitative Disclosures Call

Clearing membership continues to remain stable at CME Clearing



Note, "Direct" references Clearing Members that only clear house business and "General" references Clearing Members that can also clear for clients.
PQD References: [18.1.1.1](#) and [18.1.1.2](#)

Q & A

Thank you

For questions regarding the CME Clearing's CPMI-IOSCO
Qualitative or Quantitative Disclosures, please contact:

CMEPFMIResponse@cmegroup.com

