

CME Clearing Q3 2020 Quantitative Disclosures Call

January 2021

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Speakers

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MD & Chief Risk Officer CME Clearing

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Agenda

1 Introduction

2 Q3 2020 Highlights

3 Review of Key Disclosures

4 Q&A

Introduction

CME Clearing: Q3 2020 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 defined under the Commodity Exchange Act and 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 primarily covers the clearing of futures and options on futures and non-IRS cleared swaps
 - The IRS products financial safeguards waterfall primarily covers the clearing of IRS and contracts portfolio margined with IRS

Consistent with Part 39 of 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>

Q3 2020 Highlights*

CME Clearing: Q3 2020 Quantitative Disclosures Call

- **0** Default Fund coverage breaches since Q1 2018
- **0** Margin coverage breaches occurred during the Q3 2020 reporting period
- Achieved margin coverage of **99.90%** in Base and **99.72%** in IRS over the previous 12 months
- **0** Collateral haircut breaches during the Q3 2020 reporting period
- **0** Liquidity coverage breaches since the inception of reporting for the PQDs
- **99.99%** operational availability across CME Clearing's core systems over the previous 12 months

Financial Resources

\$214 Billion Total Amount of Initial Margin

Total Value of Mutualized Default Resources

\$8.7 Billion Prefunded Participant Contributions

\$250 Million CME Contributed Capital

\$12 Billion 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 Disclosures

Mutualized Default Fund Resources

CME Clearing: Q3 2020 Quantitative Disclosures Call

\$14.6 billion total available mutualized resources as of the end of Q3 2020 in the event of a Base Clearing Member default

Base Financial Safeguards Waterfall

Required Default Fund Contributions	\$3,905,397,297
Designated CME Contribution	\$100,000,000
Assessment Powers	\$10,739,842,567
Total	\$14,645,239,865

\$5.2 billion total available mutualized resources as of the end of Q3 2020 in the event of an IRS Clearing Member default

IRS Financial Safeguards Waterfall

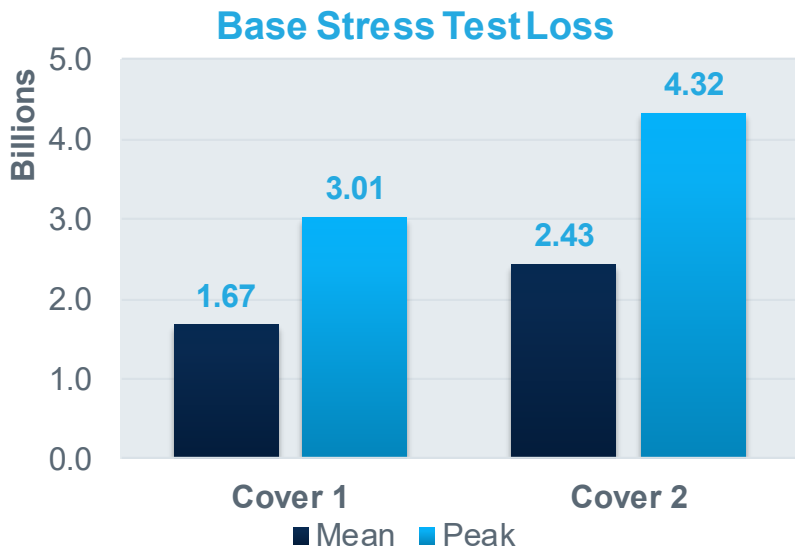
Required Default Fund Contributions	\$3,961,543,672
Designated CME Contribution	\$150,000,000
Assessment Powers	\$1,219,088,012
Total	\$5,180,631,684

PQD References: 4.1.1, 4.1.4, and 4.1.8

Default Fund Stress Testing Results

CME Clearing: Q3 2020 Quantitative Disclosures Call

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



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

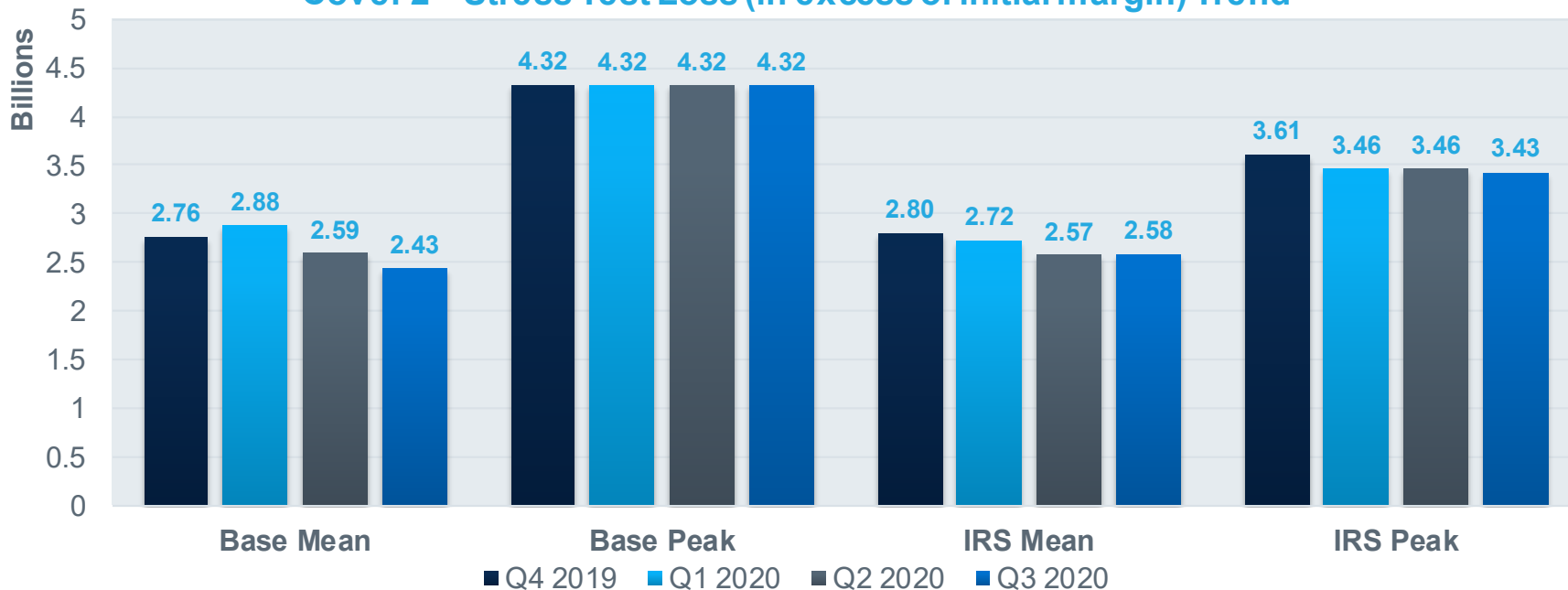
Cover 2 standard **met at all times** for IRS Default Fund – i.e., estimated stress loss (in excess of initial margin) never greater than IRS Default Fund



Default Fund Stress Testing Results

CME Clearing: Q3 2020 Quantitative Disclosures Call

Cover 2 – Stress Test Loss (in excess of initial margin) Trend



Note, results use a 12 month period.

PQD References: 4.4.3 and 4.4.7

Initial Margin Required

CME Clearing: Q3 2020 Quantitative Disclosures Call

\$157 billion total initial margin required as of the end of Q3 2020

Base Products		
	Q2 2020	Q3 2020
House – Net	\$19,812,252,109	\$21,672,600,612
Client – Gross*	\$144,955,410,484	\$135,500,623,467
Total	\$164,767,662,592	\$157,173,224,079

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

\$38.9 billion total initial margin required as of the end of Q3 2020

IRS Products		
	Q2 2020	Q3 2020
House – Net	\$8,849,199,624	\$9,365,934,120
Client – Gross*	\$31,561,198,777	\$29,572,984,266
Total	\$40,410,398,402	\$38,938,918,386

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

PQD Reference: 6.1.1

Initial Margin Held

CME Clearing: Q3 2020 Quantitative Disclosures Call

\$170.9 billion total initial margin held as of the end of Q3 2020

Base Products		
	Q2 2020	Q3 2020
House – Net	\$22,280,246,698	\$24,387,376,979
Client – Gross	\$156,307,961,311	\$146,605,406,740
Total	\$178,588,208,009	\$170,992,783,719

\$42.9 billion total initial margin held as of the end of Q3 2020

IRS Products		
	Q2 2020	Q3 2020
House – Net	\$9,794,564,193	\$9,979,835,909
Client – Gross	\$34,778,564,035	\$32,951,775,703
Total	\$44,573,218,228	\$42,931,611,612

*Note, figures provided reflect post-haircut amounts.
PQD Reference: 6.2.15*

Excess Initial Margin

CME Clearing: Q3 2020 Quantitative Disclosures Call

\$13.8 billion excess initial margin for Base products as of the end of Q3 2020

Base Excess Margin



\$4 billion excess initial margin for IRS products as of the end of Q3 2020

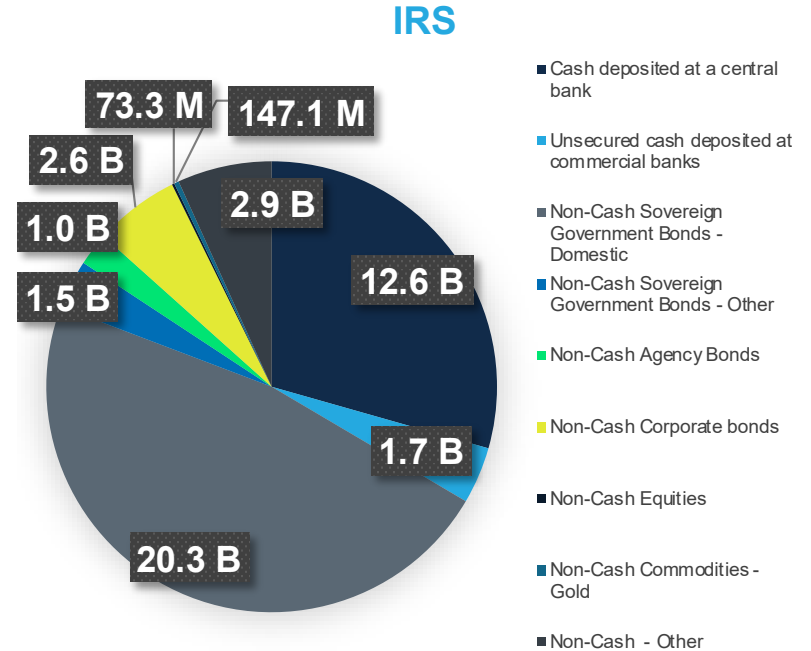
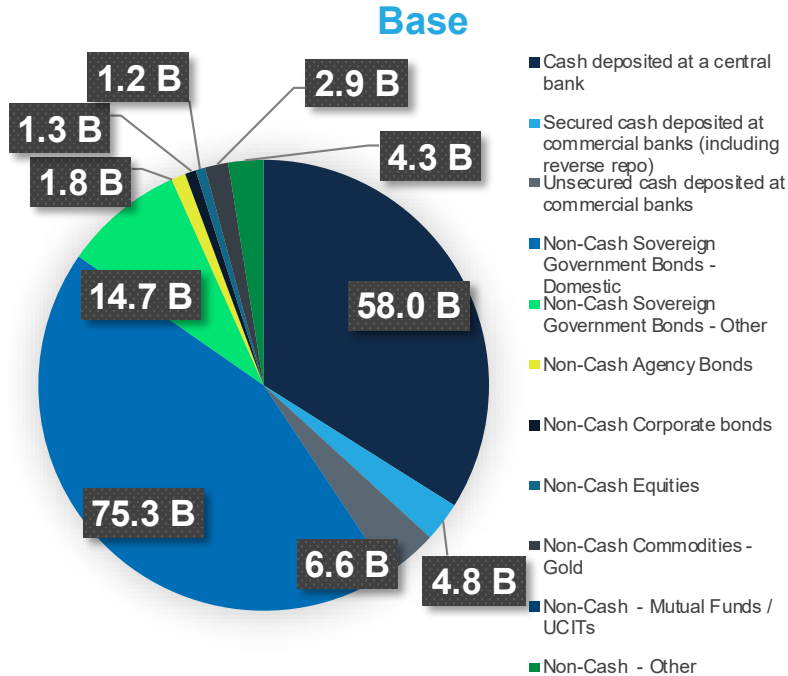
IRS Excess Margin



Note, excess margin is the margin held above the required amount.
PQD References: 6.1.1 and 6.2.15

Collateral Composition of Initial Margin

CME Clearing: Q3 2020 Quantitative Disclosures Call

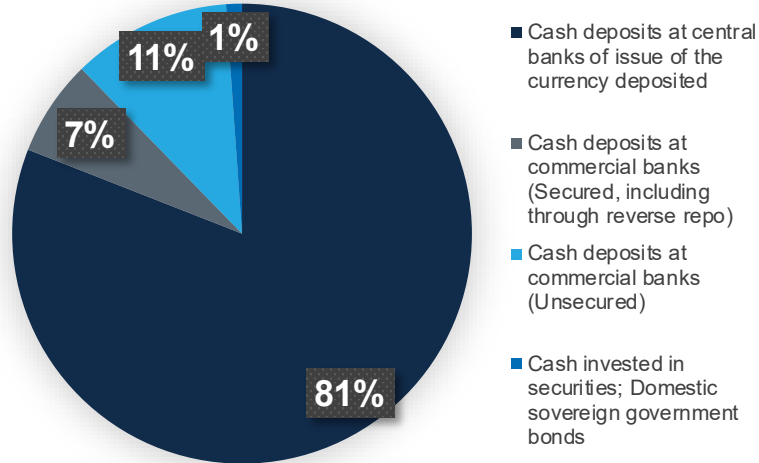


Note, figures provided reflect post-haircut amounts as of the end of Q3 2020.
 PQD References: 6.2.1 thru 6.2.14

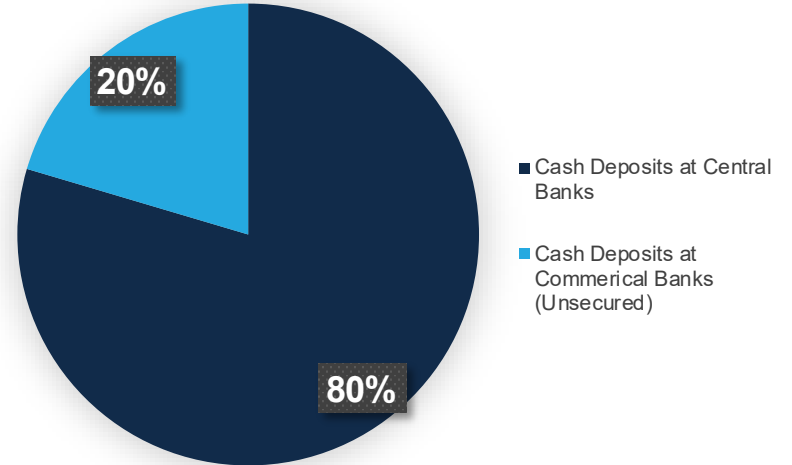
Total Cash Received from Participants – Held/Deposited/Invested

CME Clearing: Q3 2020 Quantitative Disclosures Call

Base



IRS



Note, figures provided reflect post-haircut amounts as of the end of Q3 2020.
PQD References: 6.2.1 thru 6.2.14

Margin Backtesting Results

CME Clearing: Q3 2020 Quantitative Disclosures Call

No margin breaches occurred during Q3 2020

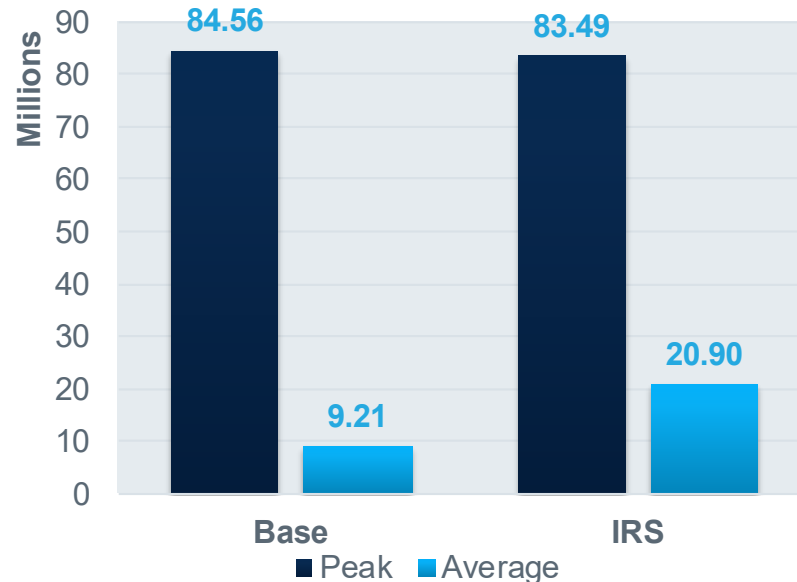
Backtesting Results*

	Base	IRS
# of Margin Breaches	24	28
Achieved Coverage Level	99.90%	99.72%

*Reporting period captures the previous 12 months. Margin breaches disclosed in Q3 2020 occurred during Q1 2020.

PQD References: 6.5.1.1 thru 6.5.5

Uncovered Exposure*

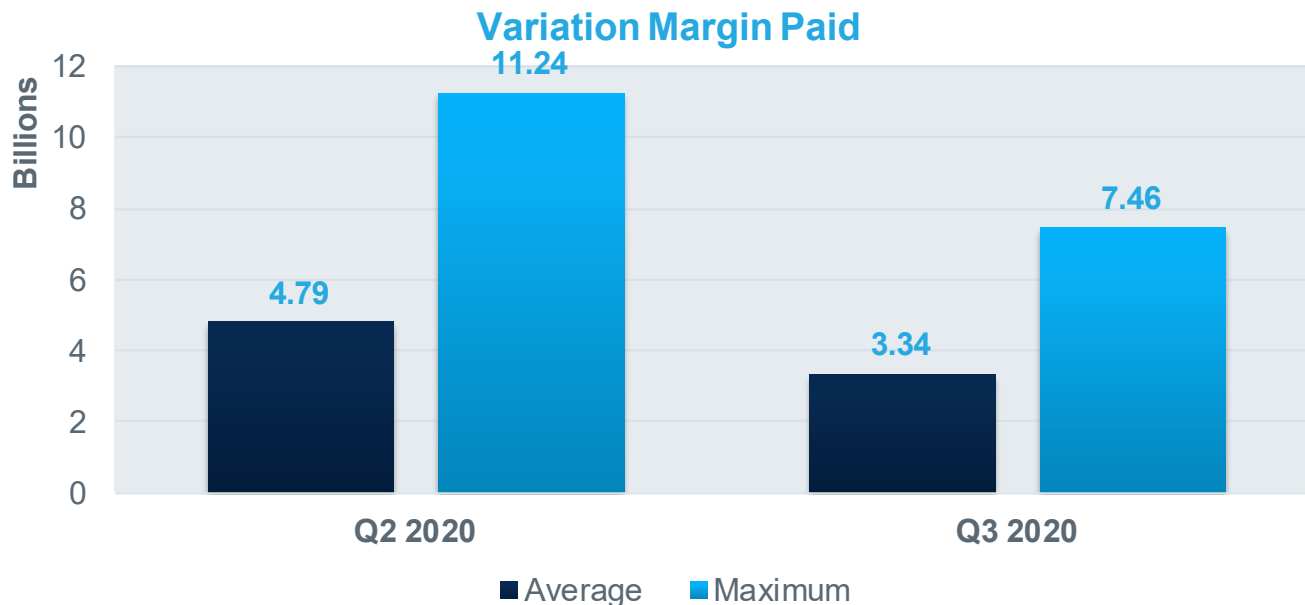


* Reporting period captures the previous 12 months. Margin breaches occurred in Q1 2020.

Settlement Variation Flows

CME Clearing: Q3 2020 Quantitative Disclosures Call

Average and maximum variation paid decreased by 30% and 34%, respectively, in Q3 2020



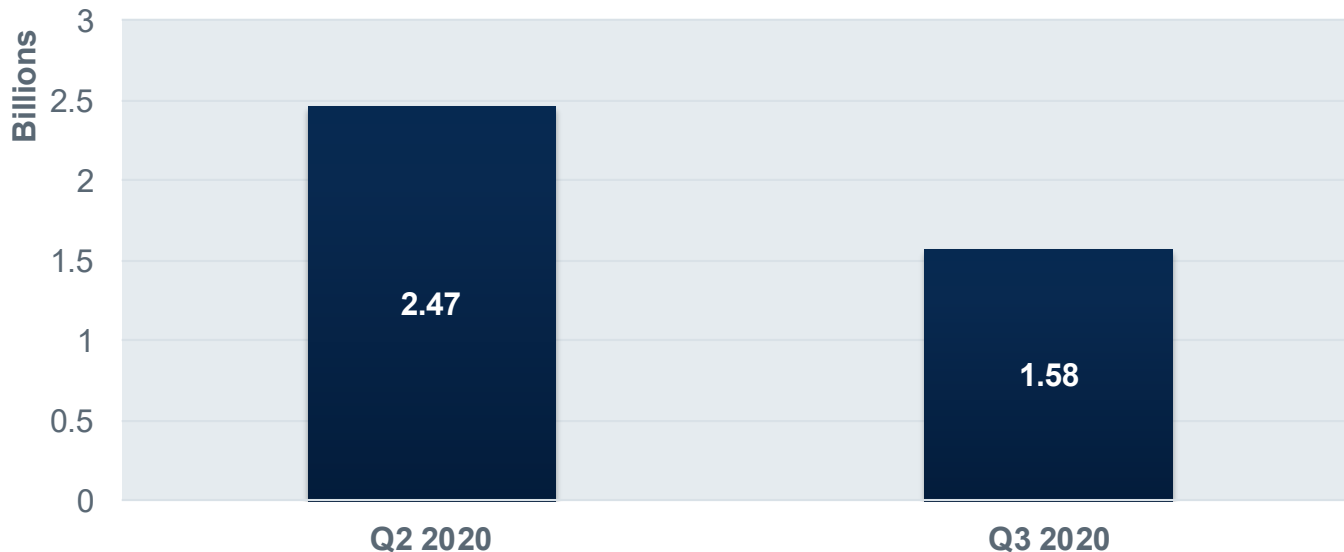
Note, figures include any intraday variation payments. Settlement variation is exchanged on a net basis.

PQD References: 6.6.1 and 6.7.1

Maximum Initial Margin Call Across All Clearing Members

CME Clearing: Q3 2020 Quantitative Disclosures Call

Maximum Total Initial Margin Call



Note, figures include any intraday initial margin payments. Customer initial margin is collected on a gross basis.

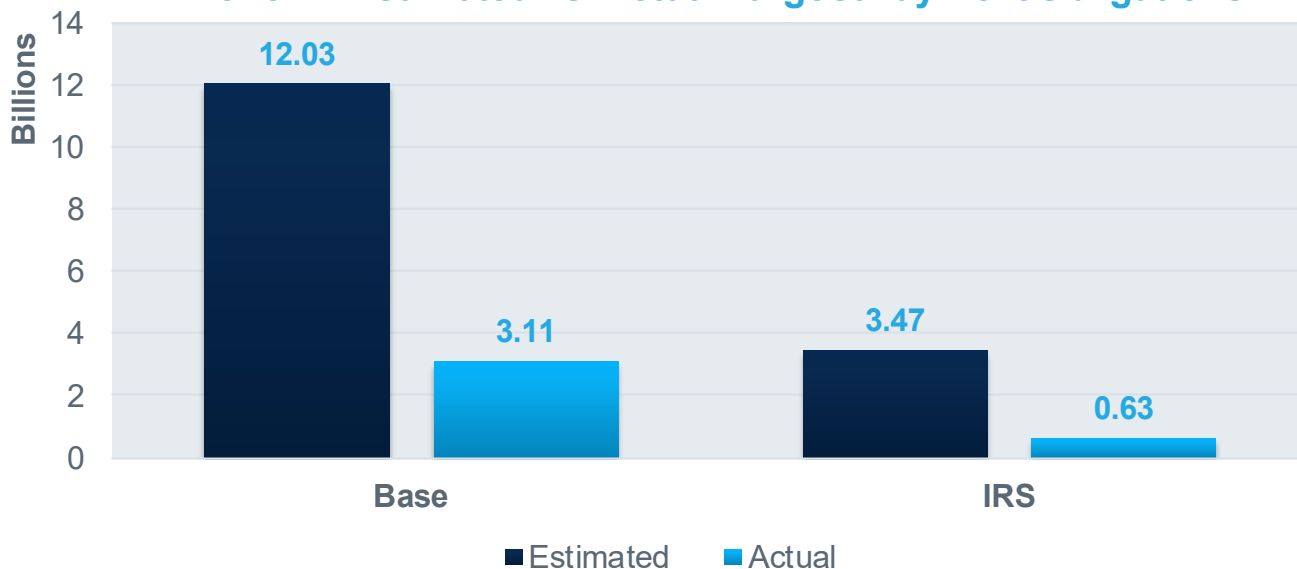
PQD Reference: 6.8.1

Liquidity Stress Testing Results

CME Clearing: Q3 2020 Quantitative Disclosures Call

There were no theoretical or actual liquidity coverage breaches during Q3 2020

Cover 1: Estimated vs. Actual Largest Payment Obligations



*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

CME Clearing: Q3 2020 Quantitative Disclosures Call

Composition of Qualifying Liquidity Resources <i>– as of the end of Q3 2020</i>	Amount
Cash Deposited at Central Bank of Issue	70,662,930,824
Cash Deposited at other Central Banks	0
Cash Deposited at Commercial Banks (Secured) including Reverse Repo	4,850,000,000
Cash Deposited at Commercial Banks (Unsecured)	10,062,717,604
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	83,710,002,087
Total	176,785,650,515

PQD References: 7.1.2 thru 7.1.8

Operational Availability

CME Clearing: Q3 2020 Quantitative Disclosures Call

CME Clearing had 99.99% operational availability across its core systems over the previous 12 months

- There was 1 failure affecting the core systems over the previous 12 months
- CME Clearing's recovery time objective is **two hours**

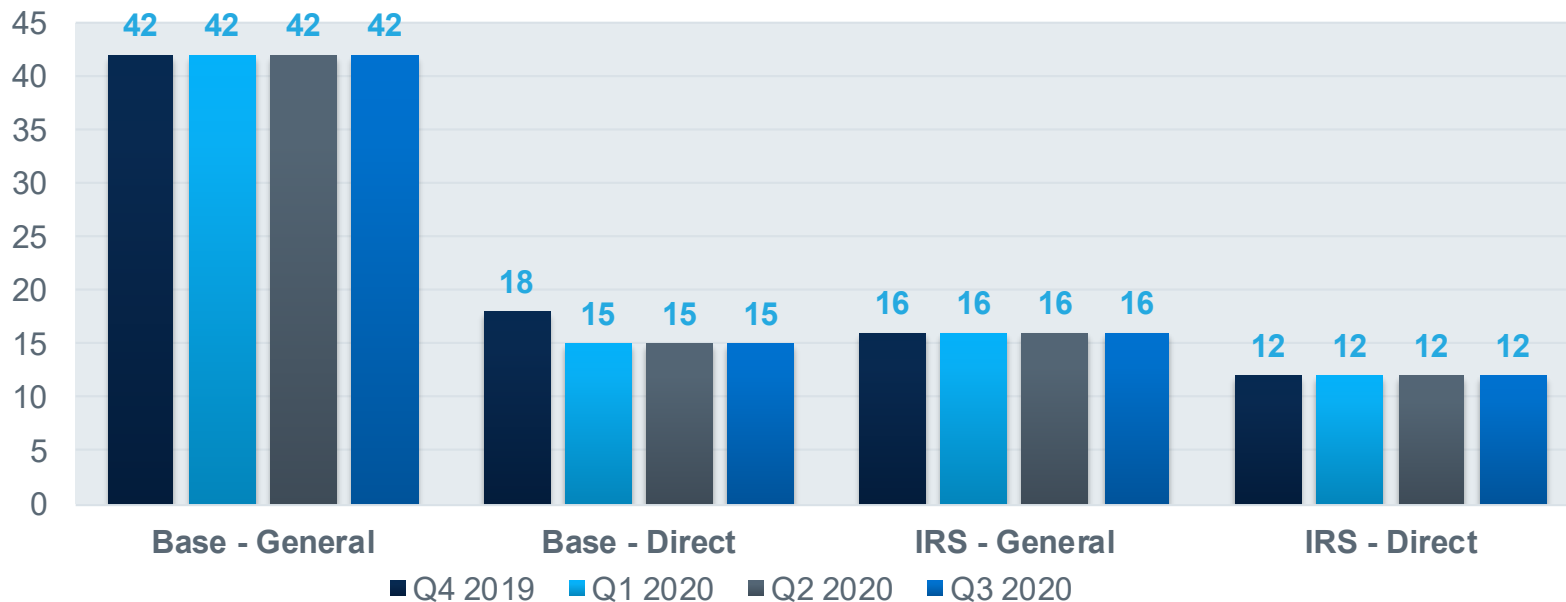
Core Systems		
	Target Availability	Actual Availability
Ability to accept executed trades for clearing	99.00%	99.99%
Ability to view and manage market and credit risks	99.00%	100%
Ability to process and manage settlement and collateral	99.00%	100%

PQD References: 17.1.1 and 17.2.1

Number of Clearing Members

CME Clearing: Q3 2020 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

